

**The Implementation and Potential Impact of Electronic  
Monitoring (EM) of Offenders in the United Arab Emirates: A  
Comparative Case-Study**



## **Abstract**

Electronic monitoring (EM) has become a key feature in the judicial systems of different regions and countries around the world. This study investigates the introduction of EM for the first time in the UAE to further knowledge and understanding of EM as a rehabilitative as well as punitive system in an environment which is new to this approach. Focus is placed on understanding the effectiveness of the pilot electronic monitoring project in addressing the needs of stakeholders within the UAE national, social and criminal justice context. This study adopts a case study strategy that uses mixed methods in a sequential design combining a qualitative approach for primary research and secondary data analysis.

The research identifies critical areas of practice which influence the diffusion and adoption of EM in a new environment. The drivers of EM emphasising political, systemic and technological goals in both UK and UAE contexts highlighted far-reaching implications for the implementation climate. There is significant risk that drivers can lead to bias and imbalance by concentrating the nature and direction of EM towards a narrow agenda. Core challenges impacted on EM diffusion including integration of information and technology, the tension between standardisation and discretion, resource constraints and technical issues.

Overall EM transfer was contingent on interrelated factors including the level of stakeholder knowledge and understanding, knowledge sharing and learning culture and the level of complexity in the implementation context. Stakeholder evaluation of EM consequences pointed to positive impacts on costs, recidivism, behavioural change and social relationships, while negative impacts were perceived on family privacy, stigma and possible net-widening. The centralised, closed and highly planned approach in the UAE may need to allow for greater responsiveness and discretion through adopting a more inclusive and open strategic approach. Realising the potential of EM may depend on an orientation towards a reflexive and emergent approach that promotes inclusivity that can achieve ongoing change and continuous learning.

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# **1 INTRODUCTION**

## **1.1 Introduction**

This study examines the introduction of electronic monitoring (EM) for the first time in the UAE to further knowledge and understanding of EM as a rehabilitative as well as punitive system in an environment which is new to this approach. This chapter establishes the background context and presents an introduction to the research conducted on this topic. The problem and motivation for this study are stated leading to the purpose and research questions that guide the focus of this research. An overview of the structure of the thesis is presented. This chapter is organised as follows: Section 1.2 provides the background of this study while section 1.3 discusses the problem context outlining the issues motivating the research. The next two sections outline the research questions and objectives while section 1.6 explains the significance and contribution of this study. Section 1.7 presents a biography of the researcher and their position within the research context, while the final section provides an outline of the thesis structure.

## **1.2 Background**

Electronic monitoring (EM) has become a feature in the judicial systems of different regions and countries around the world. From its early introduction in the US and Canada, the application of EM has spread to Europe and Australia and New Zealand, followed by countries in Asia (Cho and Kim, 2013; Stacey, 2007) and now in the Middle East. Implementations of EM show that its use has been varied and applied in diverse ways within the judicial process, implemented purely punitively or in conjunction with rehabilitative aims, as a mechanism for promoting substance abuse desistance, or even as a tool for surveillance of risky individuals (Smith and Gibbs, 2013). EM is predominantly used as a mechanism for alternative sentencing however significant differences are discernible in the application of EM at different judicial stages such as pre-trial and/or post-trial and in the conditions imposed such as exclusion or detention.

The establishment of electronic monitoring within the judicial systems of countries around the world has been motivated by political, economic and social reasons and drivers that are similar in many national contexts. A key political motivation is on the one hand a desire to provide a tough form of community punishment, as a result of a

growing perception that probation services and the emphasis on rehabilitation were ineffective (Mainprize, 1996). On the other hand EM is viewed to fulfil criteria for an alternative sanction allowing reductions in prison numbers, as prison overcrowding is a significant issue in many countries (Mair and Nellis, 2013; Gibbs and King, 2003). The global introduction of EM has also been underpinned by economic drivers, as cutting the costs of public service has been a key ideological commitment for many governments (Nellis et al., 2013; Smith and Gibbs, 2013). Thus EM has been established in the context of fiscal control and constraints as a cost-effective alternative to imprisonment (Mainprize, 1996).

The EM process has gradually developed over decades with multiple forms of technology emerging (Renzema and Mayo-Wilson, 2005). The miniaturisation of electronics as a result of the silicon chip revolution of the 1980s enabled the first offenders to be viably tagged (Robinson and McNeill, 2015). The first generation of EM, based predominantly on radio frequency technologies occurring over twenty years, involved relatively simple methods and had no true tracking capacity (Coyle and Fair, 2015). However the design of electronic monitoring has become more sophisticated, and depending on the technology involved there are two types of EM, active and passive. Actively tracking offenders has been made possible by the development of GPS technologies within EM, allowing for greater flexibility within EM systems to monitor compliance with a myriad of orders including attendance or exclusion orders (Wiseman, 2013).

Evidence shows that the implementation of EM has encountered a range of different challenges in many countries. Technological issues have been a key issue in the UK leading to a falsely high violation rate (Daems, 2015). Legal challenges have emerged related to privacy, offender rights, legal challenges, judicial discretions and oversight (Renzema and Mayo-Wilson, 2005). Issues such as the potential for net-widening are key contentious areas associated with the broader application of EM within judicial systems (Ardley, 2005).

### **1.2.1 UAE Criminal Justice System**

Zahlan (2014) describes the UAE judicial system as operating under the Constitution with each Emirate allowed to decide whether they wish to create their own judiciary or choose to merge with the federal court system. Despite some criticism of

the system as arbitrary or subject to autocracy, the system has underpinned the establishment of a thriving population of emerging international businesses (Zahlan, 2016). There is strong indication that the development of the EM system within the UAE could impact each of the unique judiciaries, whilst serving the needs of the Federal court as well. Furthermore, the overlap in judgements would seemingly benefit from a uniform EM system created and installed on a Federal or national level.

The Federal Court System of the UAE system includes trial courts of first instance, the courts of appeal as well as the Supreme Court (Laycock, 2014). With each branch of the government recognising the limitations and judgments of the others, there is a potentially good fit for an effective offender-aimed reintegration option such as an EM system. The Federal Court considers all cases within the UAE territory as a whole (Laycock, 2014). In the absence of Federal area disputes, local courts are responsible for arbitrating and dealing with offenders throughout the UAE (Zahlan, 2016).

Local courts consider all matters regarding disputes among the people including questions of rights, security and safety (Laycock, 2014). Furthermore, this body is empowered to enforce sentence execution and ensure that judgements are carried out. In each case the criminal law draws to a substantial extent on material from Sharia law, although this legal framework is not officially implemented in the UAE (Zahlan, 2016). This division in legal consideration is exemplified in the choice of individual emirates to only enforce a limited amount of Sharia punishments, seeking to replace them with alternative measures (Laycock, 2014). This shift in doctrine, from strict punishment to possible alternatives is a positive sign for the future of systems such as EM in the UAE for all classes of offenders including adults and juveniles.

Recognised as a juvenile in the UAE, those aged 18 or below are exempt from areas of capital punishment, imprisonment and some fines. Acknowledging that inexperience plays a role in early criminal cases, alternative non-punitive sentences including rehabilitation, reprimand, or putting young offenders under direct or controlled supervision are becoming increasingly common during the sentencing phase of judgement (Laycock, 2014). Following the establishment of the Juveniles law based on a form of Restorative Justice, the emotional needs of the young offender are carefully considered and nurtured during the rehabilitation phase (Zahlan, 2016). However critics have noted that a large number, nearly half, of all crimes in the UAE

are committed by juveniles, perceiving that in large part based on Islamic Law, they would be protected (Bassiouni, 2015).

The impact of the Sharia Courts is currently constrained by the Civil and Criminal Courts, leading to a division of population in some instances (Bassiouni, 2015). Sharia law has been applied to different types of disputes and capital criminal offences, leading to the need to better understand the social drivers of the punishment methods (Zahlan, 2016). Both systems however seek to find alternatives to prison for many offenders. Common crimes considered by these courts include adultery, or alcohol consumption by Muslims of either gender (Zahlan, 2016). An example of the common punishment is the application of lashes as opposed to imprisonment. Areas of verbal abuse can be considered and are punishable by lashes, with many examples of a combination of judgments relating to unique circumstances. Abortion is considered a crime and currently carries a term in jail, leading to high cost and resource use for the nation (Zahlan, 2016). In each case, the use of any EM system will be determined based on the effectiveness of the system going forward (Wodahl et al., 2015).

A provision in Law No.17 (2018) mandates the alternative to imprisonment that allows for the use of electronic tagging and outlines the sentencing guidelines for EM. The application of EM is provided for under pre-trial and trial options monitoring location of persons under investigation or trial; and monitoring of convicted offenders serving sentences. Under this law sentencing options allows the court to reduce fines based on the number of days the person has submitted to electronic monitoring. Provision is made for EM to be applied as replacement for criminal sentences under the following conditions: where the custodial sentence is less than 2 years; health reasons; low probability of reoffending; the offender is the key provider for dependents; or in the case that the offender has regular professional or educational commitments. EM cannot be applied to repeat offenders for the same crime. Under article 380 of the Law 17 (2018), those serving prison sentences that have served half of custodial sentence between 2 and 5 years, may submit a request to serve the remainder of the sentence under electronic monitoring.

### **1.2.2 Attitude to Crime and Punishment**

The introduction of electronic monitoring within the UAE is underpinned by government perspectives that it offers greater potential for offender rehabilitation and

reintegration within the community than incarceration. The UAE Vision 2021 includes some scope for the criminal justice system in which a safe, public and fair judiciary is a critical pillar. Upholding the rule of law and principles of equity and justice are viewed as core goals and are accompanied by key performance indicators. These include instilling a culture of innovation within the criminal justice system and work environment, building a modern penal system, and helping prepare laws and legislation that effectively serve the needs of society for the future (UAEgov, 2018).

This view reflects a broader central emphasis on the use of new methods of criminal justice to achieve rehabilitation goals. Rehabilitation is embedded within wider Arabic cultural and religious perspectives which incorporate rehabilitation as a key theme within justice (Waqas and Qaiser, 2014). Islamic criminal jurisprudence is acknowledged to place emphasis on individual dignity and to support opportunities for rehabilitation by removing barriers to reformation (Hascall, 2011). Rehabilitation is perceived to best occur not in prison but within the community (Waqas and Qaiser, 2014). For minor and younger offenders in particular importance is placed on alternative forms of punishment. However until recently UAE judges had few sentencing choices except prison terms or a fine (Zacharias, 2017).

EM has spread throughout the world including nations such as the UAE that adhere to the Islamic faith. In Arab and UAE society, characterised by deep family and tribal ties and highly influential codes of honour and shame, a prison record can have substantial social consequences for the offender and their wider family including limiting employment and marriage prospects (Zacharias, 2017). Therefore to reduce the negative impacts of imprisonment critical recent changes include the replacement of jail terms within the UAE penal code with community service for minor offences meriting no more than six months in prison (Salama, 2016). There is a gradual acceptance for EM as a process that can mesh with the religious tenets required, lending it more credence as a plausible system.

### **1.2.3 Patterns of Offending in the UAE**

In terms of crime the perspective emerging from disparate data suggests that the UAE is one of the safest countries in the world. Official published data on crime is minimal, and has not been released since 2007 (Ellis et al., 2011) however the global

Violent Crimes Index shows that in comparison with other advanced countries the UAE has the lowest level of violent crimes.

Statistics also show that the occurrence of violent crime has declined over the last few years, decreasing from 119 per 100,000 population in 2011 to 83 per 100,000 population in 2015 (Al Kuttub, 2016). The Crime Index Rate ranks Abu Dhabi as the safest city in the world (Ahmad, 2017) while trends in overall crime rates indicate a recent downward tendency across the emirates, falling by 15% in Dubai and 7% in Sharjah in 2017 over 2016. Sources suggest that property crime is the most prevalent type of crime committed in the UAE. In both Abu Dhabi and Dubai the leading crimes are theft, robbery, burglary and fraud (Al Serkal, 2018; Ahmad, 2017). Traffic offences, scams, petty theft, unpaid wages and bounced cheques also feature significantly as key types of crimes (Ahmad, 2017). This is supported by crime statistics from Abu Dhabi between 2011-2017.

Ministry of Interior statistics for Abu Dhabi in Appendix 1 show that the number of offenders sentenced to imprisonment or detained fluctuated significantly between 2011-2017. As shown in Table 1 for prisoners the percentage change has varied from -37.1% to +28.9% while for detainees the percentage change over the period varies between -38.5 to 15.2%. In 2012 the number of offenders sentenced to prison rose by 13.4%, and experienced only a small increase in 2013 of 2.8% before dropping by a fifth in 2014. This was followed by a sharp rise of 28.9% in 2015 and a further increase of 14.3% the next year before reducing significantly in 2017 by 37.1%.

**Table 1 Percentage Change in Prisoner and Detainee Numbers 2011-2017 Abu Dhabi**

	Prisoners			Detainees		
	Emirates	Foreign Nationals	Total	Emirates	Foreign Nationals	Total
2012	+7.4%	+13.9%	+13.4%	5.8%	-29.6%	-26.7%

2013	+4.5%	+2.6%	+2.8%	-5.3%	-0.9%	-1.3%
2014	-6.8%	-21.7%	-20.6%	-2.3%	+15.4%	+14.2%
2015	-2.2%	+31.8%	+28.9%	6.2%	+15.7%	+15.2%
2016	+4.1%	+15.0%	+14.3%	8.4%	-43.2%	-38.5%
2017	+24.1%	-40.9%	-37.1%	3.5%	+2.0%	+2.1%

Source: Ministry of Interior (2017)

A core element of the UAE crime landscape is the diversity of population with non-nationals from varied national and cultural backgrounds forming a significant proportion of the UAE population. Statistics show that in 2007 UAE citizens committed 15% of total crimes, slightly above their proportional representation in the population, while a range of different foreign nationalities committed the remainder.

Data for 2011-2017 indicates a significant difference in terms of the pattern of offending between Nationals and non-Nationals. Fluctuation in percentage change for prisoners was far greater for non-Nationals than for Nationals varying between -40.9% to +31.8%. For non-Nationals the percentage rate of change differed between -6.8% to +24.1%. Moreover, certain years over the period witnessed divergence in terms of a positive or negative rate of change. In 2015 there was a 2.2% reduction in the number of Emiratis imprisoned while for non-Nationals there was a significant increase of 31.8%. Contrastingly while Emirati numbers rose by nearly a quarter in 2017, those for non-Nationals significantly reduced by 40.9%.

In relation to the pattern of minor crimes committed the data shows a relatively consistent picture. Over the four year period theft, traffic and financial offences have comprised the bulk of minor crime and each accounted for approximately a quarter to just over a third of minor crimes committed. Theft was typically the most frequent crime occurring each year and at its lowest accounted for 31.2% of crime in 2017 while reaching a high point of 39.2% of total minor crime in 2015. While drugs offences accounted for just 9% of crime in 2014, following consistent year on year increases this had doubled by 2017 to 18.4% of total minor crime.

**Table 2 Pattern of Crimes in the Abu Dhabi 2011-2017**

Year	Theft	Drugs	Traffic	Financial
2014	35.9%	9.0%	27.2%	27.8%
2015	39.2%	9.7%	27.2%	23.8%
2016	33.6%	15.3%	27.2%	23.7%

2017	31.2%	18.4%	22.5%	27.7%
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Source: Ministry of Interior (2017)

#### 1.2.4 EM in the UAE

Implementation of the electronic monitoring provisions was announced jointly by the Abu Dhabi Police and Abu Dhabi Judicial Department at the beginning of 2017. A review of the legal framework in the UAE in 2016 led to the establishment of a new police monitoring regulation No. 281 of 2017, which allows the application of the electronic bracelet on offenders following sentencing by the local court of Abu Dhabi. The new sentencing alternative aligned with prior regulations encapsulated within the Penal Code. These required the UAE Ministry of the Interior to establish and enforce police surveillance rules in accordance with Article 79 of the Federal Penal Code, which mandated surveillance for those sentenced to three years' imprisonment or more for theft, forgery, embezzlement, bribery, or undermining state security.

In 2009, the Alternative Sanctions Committee initiated the study of electronic surveillance under the directives of the Minister of Interior. The initiative formed a key pillar of the strategic plan to support the social role of the police through the application of alternatives to imprisonment. The Committee reviewed and analysed local laws to determine how police surveillance can be applied under the law. Several articles of the Penal Code and other laws already provided a basis for applying electronic monitoring in terms of allowing both police surveillance and prohibition from visiting specified locations. Consequently the Ministry of the Interior, through the Alternative Sanctions Committee, adopted the Police Control Rules published through Resolution No. 147 of 2013. However, the police monitoring regulation was limited in implementation as a result of the small number of offenders convicted under Article 79. In 2016 the decision was made to separate the Abu Dhabi Police Department from the Ministry of the Interior leading to the creation of a new organisational structure for all Abu Dhabi Police Departments. This change led to the creation of a new police monitoring department within the Abu Dhabi Police and new monitoring regulations.

The introduction of new police monitoring rules has enlarged the opportunity to apply the electronic bracelet to those sentenced for minor cases, as a means of early release or as an alternative to confinement. Thus, the new police monitoring department is able to apply monitoring in all of the following cases:



- Offenders sentenced in criminal cases to imprisonment for three years or more in cases of theft, embezzlement, state security, counterfeiting, fraud, bribery
- Young offenders given alternative sentences to prison under the Youth Law, including probation or exclusion from specific places or prevention from performing certain acts
- As an alternative to imprisonment for offenders under the influence of alcohol or drugs in traffic violation cases
- As an alternative to the rule of deportation in humanitarian cases such as sons of citizens sentenced in criminal cases
- As a means to apply all the provisions of monitoring specified in different articles in the UAE Penal Code

EM implementation in the UAE has been structured around five key actors: the Ministry of Interior, Abu Dhabi Police and their Police Follow-Up and Aftercare Department and Community Service Section. Risk assessment and evaluation of offenders' conduct during the monitoring period is conducted by The Department of Punitive and Correctional Institutions of the Abu Dhabi Police while the Social Support Centre reviews the cases of EM sentenced persons to assess the risks as well as identify the appropriate rehabilitation programmes for monitored offenders. Judicial actors include the Public Prosecution Service, which reviews crime cases and submits them to the court, makes recommendations in relation to EM and deals with cases of breach and reoffending, the Trial Courts of First Instance and the Prison Service. Electronic monitoring is currently being implemented on a total of 35 offenders the majority of whom are adult males. The novelty of the implementation within the UAE and Abu Dhabi means that electronic monitoring has not yet been applied to other Emirates, and the transfer of experience to the rest of the federal cities is viewed to provide an opportunity for improvement and application at the level of the Ministry of Interior.

### **1.3 Problem Statement**

This research is identified as a matter of strategic significance for the judiciary and the wider criminal justice system. The primary motivation for this research is driven by the acknowledgement by strategic decision-makers and stakeholders of the

complexity in implementing electronic monitoring and the need to evaluate the pilot project in Abu Dhabi. International evidence on the effectiveness of electronic monitoring remains insufficient in terms of confirming the efficacy of EM across different contexts and the critical success factors in its implementation. This has placed emphasis on evaluating the implementation of the pilot in the early phases and gaining further knowledge and understanding of EM as a rehabilitative as well as punitive system in the UAE, and to support further development and expansion to other principalities in the country.

The UAE has witnessed significant population growth over the past decade, particularly in terms of the expatriate population which forms 88% of UAE residents (UAEgov, 2017). This is leading to substantial challenge within the UAE criminal justice system in addressing and accommodating increased numbers of offenders and the broad cultural diversity entailed. Statistics show that the prison population is highly reflective of the makeup of wider UAE society, with foreigners forming nearly 88% of the prison population (WPB, 2015).

A key issue in the UAE is significant growth in the prison population and overcrowded institutions. The number of incarcerated offenders has risen 64% from approximately 6,000 in 1998 to a current total of 9,826. However official prison capacity is 7,045, resulting in an over-occupancy of 159% (WPB, 2015). Prison overcrowding has resulted from increasing rates of incarceration of low-level offenders, and high numbers of on remand prisoners. Statistics show that nearly 40% of the prison population in 2014 were pre-trial/remand detainees (WPB, 2015). This problem is exacerbated by rates of recidivism which are viewed as an issue which lacks the support of a system linking antecedents with current crime. Evidence points to potentially high rates of recidivism among youth offenders (Al-Banna et al., 2008). There is a significant perspective within the criminal justice system that to some extent this can be addressed through the implementation of electronic monitoring, viewed as highly effective as a deterrent to reduce recidivism.

From a fiscal perspective, a key issue relates to the costs associated with a rising prison population. While the UAE benefits from significant oil wealth and buoyant public finances it is acknowledged that the country cannot afford to maintain the increases in public spending at the rate normalised over the last decade (Kinninmont,

2015). This has implications for criminal justice budgets and the use of prison as a sanction for minor offences. EM is widely acknowledged to represent a highly cost effective mode of punishment with evidence pointing to significant cost-savings in comparison with imprisonment or other community-based sanctions (Wiseman, 2013).

In terms of policy, the UAE is moving increasingly towards a criminal justice system that incorporates a strong rehabilitative element. The direction of this policy is exemplified in recent legislative changes which shift the focus for minor offences, drug offences and youth offenders from responses based on imprisonment to less or no prison time, community service and rehabilitation (Al Kuttaf, 2016). Even when incarcerated, most prisons emphasise the rehabilitation of prisoners through extensive rehabilitation programmes and new types of prisons have been built with the aim of enhancing the country's status as a leading regional model in modern correction and rehabilitation (Ali, 2013; Bradley, 2008). Addressing these issues thus strongly influences the introduction of alternative forms of punishment to imprisonment that both lower offender management costs and incorporate rehabilitative elements.

The context and issues outlined bring to the fore the role of EM that has resulted in the introduction of the first pilot project. However in this process the UAE has faced a key constraint for EM implementation in terms of the lack of evidence or experience to draw on from other Arab contexts. Few countries in the region have incorporated EM within their judicial systems while implementations in Saudi Arabia and Jordan remain highly incipient (Rahman, 2015; Shaheen, 2011). There is thus limited understanding of EM implementation in the Arabic context and no substantial experience or evidence in relation to what is effective or ineffective in this setting. Moreover in introducing and planning the implementation of EM, given the mixed results emerging from around the world the UAE have found it highly problematic to understand the potential for introduction in the country and to identify and understand the key success and failure factors under different modalities. A major problem is substantial disparities in context and research methodologies constraining the accurate measurement and validation of EM effectiveness for different objectives (Jones, 2014; Wiseman, 2013). There is therefore an imperative to undertake a comprehensive evaluation of this implementation of EM in the UAE to further understanding of its application in this new environment.

## **1.4 Significance and Original Contribution**

There is a significant imperative to generate deeper theoretical insights into EM and to expand knowledge on the effectiveness of EM and its impact across different contexts. Focus is placed on how EM is being implemented and the impact of implementation strategies. The potential for diverse use of EM under different conditions combined with the evolutionary nature of EM and interconnected social system makes the study of EM highly complex. While decades of research contribute valuable insights into the use and effect of EM the evidence is inconclusive. This research makes an original contribution focusing on the implementation process and understanding of why and how EM is applied across multiple phases of its lifecycle. In doing so this study provides a significant contribution to knowledge and practice by contributing insights into the factors that influence the success of EM between differing contexts that may vary on the basis of national context, types, duration, target population, modalities of application and socio-cultural elements. Examining the effectiveness of implementation process would contribute insights into the social context and dynamics in terms of understanding the perspectives and involvement of stakeholders. By focusing on the socialisation dimension of EM and implementation process this research contributes insights into the factors influencing the success of EM under specific contexts. A key contribution is the identification of factors that inhibit and facilitate EM within an Arab criminal justice context.

The research is of major significance to policy making and practices in the field. This contribution will help to guide the design of EM interventions and the development of effective implementation strategies for larger scale deployments. This will provide critical insight into the extent to which strategies address the critical factors at different stages of the implementation process. Undertaking these analyses will further understanding of the contextual factors which affect the implementation of EM. By gaining knowledge of the implementation process financial benefits can be provided by improving practices and efficiency.

A methodological contribution is made in the application of an implementation science framework which provides a structured examination that can be useful in expanding the programme, and inform the implementation of EM in other contexts of the UAE, and the Middle East for countries that share similar cultural contexts. The application of the Consolidated Framework for Implementation Research (CFIR)

constructs can support the development of EM implementation outcomes. The use of a validated implementation science model can enhance the study of EM by progressing research towards a consistent and systematic standard of analysis which can be used by researchers and practitioners in this field.

## **1.5 Research Questions**

Based on the understanding developed this study addresses gaps in knowledge in relation to the use of electronic monitoring in the criminal justice system as a means of alternative sanction. The purpose of this research is to examine the implementation process of EM and evaluate its effectiveness in the early implementation phase, which is the period covered by this study. The central research question is: *How effective has the early phase of implementation of the pilot electronic monitoring project been in addressing the needs of stakeholders within the national, social and criminal justice context of the UAE?* To address this research question several sub-research questions are formulated:

- What are the drivers of implementation of EM in UAE?
- What are the challenges of transferring EM technology and knowledge to the UAE?
- How do different stakeholders evaluate the potential and actual consequences of implementing EM in UAE?
- What can be deduced from this investigation that adds to our knowledge and understanding of EM as a punitive as well as rehabilitative system in an environment which is new to this approach?

## **1.6 Research Objectives**

Several research objectives guide the research:

- To specify the key beneficial outcomes expected by the judicial system when EM is applied.
- To deploy a qualitative approach in the study to arrive at the most accurate and valid findings, from key personnel involved in the process.

- To identify and describe the implementation strategies adopted in the electronic monitoring project.
- To explore and map the strategic planning and decision-making processes in relation to the design and implementation of electronic monitoring. This also incorporates the experience of EM implementation from other countries.
- To include an analysis of the initial pilot conducted prior to the main implementation of the EM system at large, although this is confined to an operational basis.
- To assess judicial stakeholders' efficacy of electronic monitoring and perceptions of the effectiveness of the implementation process.
- To identify the factors that inhibit and facilitate the implementation of EM in relation to achieving key outcomes.

Given that electronic monitoring is in the early phase the scope of this research is focused on the implementation process rather than outcomes of the pilot electronic monitoring project in the UAE in pre-implementation and on-going implementation phases. For this study moreover the scope of the stakeholders participating in this research was limited to personnel involved in planning and implementing EM in the UAE and did not extend to offenders and their families. The motivation for this decision was based on two key reasons. On a pragmatic level, involving only personnel stakeholders ensured access to perspectives that were more immediately accessible and available. Nevertheless arranging and organising permission and availability of personnel from multiple different departments to interview was already a large undertaking in itself. Secondly, while the perspectives of offenders and their families are important for understanding the impacts of EM implementation, there is considerable complexity in terms of the ethics of interviewing potentially vulnerable offenders and their families who could have mental health issues or be suffering from anxiety or stress that requires more expertise and specialist skills. These are associated with principles of connectivity, humanness and empathy (CHE), skills for building rapport, and emotional intelligence that can address the power dynamics inherent in a research setting in which the autonomy of participants is being

purposefully restricted and they may have a range of additional difficulties (Shafi, 2018; Brown and Denahar, 2017).

## **1.7 Researcher Biography**

The researcher is closely involved in the electronic monitoring project in their current role as head of the Abu Dhabi Police Monitoring Section, the section responsible for all current and future types of police monitoring and related programmes in Abu Dhabi. Having worked as Acting Director of Federal Police Monitoring, the relevant directorate at national level, and as Head of the Federal Police Monitoring Section and Head of the Community Service Section, the researcher's experience has placed him in a good position to integrate a holistic perspective in terms of the different operational, legal and social dimensions which impact on electronic monitoring. He is also a member of the Ministerial Committee for Alternative Punishments, the central decision-making body for the pilot project in terms of planning, implementation and oversight, which provides him with excellent insight into the current effectiveness and progress of the implementation. In a professional capacity the researcher has worked in cooperation with other agencies on a range of different planning and implementation issues in relation to EM. This has included preparing the legal framework for the introduction of electronic monitoring in the UAE including contributing to the drafting of several laws and legal amendments, as well as developing the necessary standards and procedures within the Abu Dhabi Police and working in cooperation with Judicial and Prisons Departments on the development of mechanisms and procedures for electronically monitored offenders.

## **1.8 Structure of Thesis**

The report presents the findings from a case study research into the implementation of electronic monitoring in the UAE. Figure 1 outlines the structure and the key components of this thesis. Following the introductory chapter 1, the technological and implementation context of EM is outlined in chapter 2. The literature review in chapter 3 provides the theoretical basis of the research and analyses the relevant literature and establishes the conceptual and focal theory for this research. This is followed by the research methodology in chapter 4 that situates the research within a qualitative case study paradigm and describes the rationale and methodological process employed. The third section of this report presents the research findings and

conclusions from the multiple data sources: chapter 5 presents the findings from the UK analysis as a comparative element of this research; chapter 6 presents the findings from the practitioner interviews, chapter 7 presents the findings from the UAE. Chapter 8 presents the analysis and synthesis of key findings relative to the research questions and literature. Finally, Chapter 9 provides a conclusion to the thesis accompanied by recommendations, implications, limitations and future research.



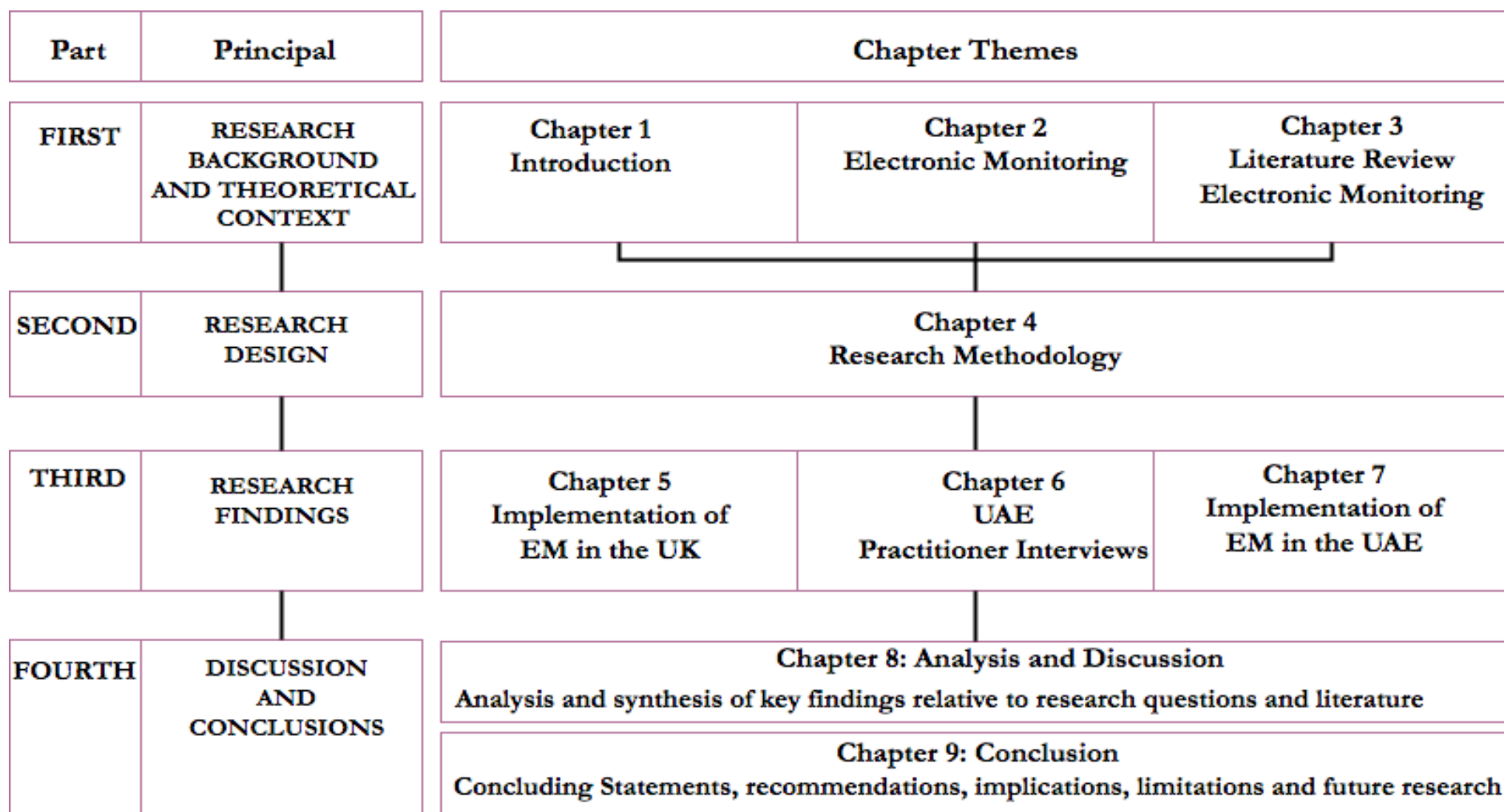


Figure 1 Thesis Structure

## **2 Electronic Monitoring**

### **2.1 Introduction**

This chapter outlines the technological and implementation context of EM. In order to discuss and evaluate the role and implementation process of EM it is necessary to examine its origin and progression and key challenges associated with its use. A definition and overview of EM is presented followed by discussion of the historical context that examines the evolving technological progression across numerous phases of development. In addition key implementation challenges are identified and discussed addressing technological, legal and social dimensions that are sources of significant complexity. The existing evidence from the literature points to the value of exploring the drivers of implementation of EM and to further understanding of challenges associated with transferring EM technology and knowledge to new contexts.

### **2.2 Electronic Monitoring**

Electronic monitoring (EM) is an overarching term that describes modes of surveillance through which the location, movement or behaviour of specific individuals can be monitored within the boundaries of the criminal justice system (Nellis and Lehner, 2012). According to the *Texas Code of Criminal Procedure* (2009, S42.12.2(4)) "electronic monitoring includes voice tracking systems, position tracking systems, position location systems, biometric tracking systems, and any other electronic or telecommunications system that may be used to assist in the supervision of individuals.". Contemporary modes of EM include satellite, radio wave or biometric tracking, customarily consisting of a device attached to the offender and remotely monitored (Nellis and Lehner, 2012).

The UNODC defines EM as an alternative to detention that acts as a further means of surveillance serving to monitor compliance with other sanctions or measures (UNODC, 2013). EM can be and is applied with different purposes and at different stages within the criminal justice process, for example: during pre-trial phases as an alternative to bail, and as an alternative to prison sentences; as a stand-alone criminal sanction or a condition combined with other probation interventions; used within the

framework of early release conditions from prison, and a supervision measure post-release for particular types of offenders (Nellis and Lehner, 2012). In modalities in which EM is implemented as an alternative to incarceration, monitored offenders are frequently considered as prisoners. EM can involve diverse agencies with different roles and levels of involvement in implementation depending on the approach adopted. In some jurisdictions EM is overseen and administered by police, probation or prison services while others partner with the private sector to deliver implementation through a service-provision contract with government agencies (Nellis and Lehner, 2012).

### **2.3 Commercial Drivers for EM**

The introduction of EM within judicial systems has been underpinned by key commercial drivers which have contributed to shaping the implementation of EM in different countries. In the early period of EM implementation a major commercial driver was the need to develop new markets for military surveillance hardware, systems and technologies to offset the reduction in demand following the end of the Cold War (Paterson, 2008). This need was recognised at the highest level, with governments such as that in the US playing a significant role in actively lobbying foreign nations on behalf of defence and private security contractors through the 1980s and 1990s. These activities had particular impact on the nascent criminal justice market in the UK (Lilly and Deflem, 1996). New EM technologies emerged from products initially developed for military use and adapted for the novel market in crime control. A key example is the development of offender satellite tracking integrating the dual technologies of Global Positioning by Satellite (GPS) and Global System for Mobile Communications (GMS) (Paterson, 2008).

Commercial markets in criminal justice and social control have also been stimulated by the growing prevalence of and broader processes associated with neoliberal globalisation that has shifted the justice sector focus from welfarism towards policies of social management (Nellis, 2014). These have resulted in mixed market economies in criminal justice combining market competition, privatised institutions and subcontracted forms of social control (Paterson, 2008). Neoliberalism by itself is not a commercial driver but has opened up a market for the private sector allowing them to identify efficiencies and the potential for a whole range of products and services associated with the increasing adoption of EM. This trend has meant that the market

in crime control is widely predicted to continue to grow and to extend new opportunities for private sector organisations connected to the outsourced criminal justice sector (Paterson, 2008). One key effect of competition in the market is continuing investment in innovation and the generation of new opportunities for the creative deployment of EM based on new EM technologies such as GPS, victim alerts, and behavioural screening technologies (Young, 2014). These initially included high risk offender and domestic violence programmes, but have more recently extended to sexual harm prevention, victim protection schemes in which both perpetrator and victim are monitored, use for counter-terrorism purposes and even for immigration. The introduction of GPS in particular has expanded the uses of EM for offenders (Hucklesby and Holdsworth, 2016; Nellis, 2014; Young, 2014).

Innovations in other technologies and industries have further created opportunities to do more with electronic monitoring. The rapid expansion of software and data analysis technologies such as big data and analytics and other innovations in global communications systems such as GPS are being integrated in EM to provide new capabilities and features which strengthen its usefulness as a criminal justice tool and creates value and attractiveness for different stakeholders. Rich data can be generated from different technologies incorporated from other industries such as satellite tracking, social network analysis, and predictive modelling enabling the detection of previously obscured behavioural patterns and the prediction of prospective outcomes (Heaton, 2016). The opportunity for gathering significant data on offender movements, the identification of patterns, relationships and departure from normal routines is viewed as promoting EM to a new level allowing prompt intervention and opportunities for investigation (Young, 2014). The growing volume of data generated has further created its own market dynamic shown in an increasing need for actionable information and the leveraging of analytics for managing caseloads (Heaton, 2016). Therefore this is increasingly being combined with operational analytics and pattern analysis capabilities to support case management decisions. This further provides opportunities to work in partnership with police and probation services to support intelligence (Young, 2014). As such analytical software development is an increasing focus for EM vendors and a key factor in winning contracts (IoT Business News, 2016).

## 2.4 Technological Phases of EM

The EM process has been developed over decades using several different forms of technology (Renzema and Mayo-Wilson, 2005). The foundation of the EM process began with Robert Schwitzgebel in 1969 driven by the desire to develop an alternative for offenders seeking to reintegrate successfully and that had the potential to radically impact the judicial process in many nations (Shoham et al., 2014). Schwitzgebel continually developed the initial model founded on the missile tracking unit into a wearable device that is consistently able to locate the position of the person (Palermo, 2015). Early EM technical limitations made the system impractical, and it was not until the miniaturisation of electronics afforded by the silicon chip revolution of the 1980s that the first offenders were able to be workably tagged (Robinson and McNeil, 2015). The first example of the EM process in Europe began in the 1990s in Sweden and the Netherlands before implementation spread to other European nations (Jones, 2014). The pattern of development seems to follow a form of trial and error, related directly to the technology, leading to the question of which first. Fears in relation to the technology and the ability for offenders to subvert it are acknowledged to have slowed the further development of the EM process (Nellis, 1991). As Bulman (2016) notes, the early EM systems were thought to be susceptible to manipulation, allowing offenders more leeway. Nevertheless, revived in the United States region of New Mexico, followed by Florida there was a rapid growth of the use of EM in United States with a total of 2,300 offenders reported in the thirty-two states using the EM system (Schmidt, 1998). Demonstrating some success, as well as a reduction in resource use, the use of the EM system was quickly followed by other nations globally including leaders such as Holland, Australia, South Africa, Singapore, New Zealand, and Canada, UK and Sweden (Dodgson and Mortimer, 2000). This has continued to fuel the perception that EM testing is both positive and beneficial (Mrvic-Petrovic, 2015). This seems to indicate that most nations hosting an EM project expect a certain amount of loss, leading to the conclusion that it is the opportunity for advancement in the future that continues to drive expansion and development in the EM market.

The development of EM occurring over twenty years is divided into three distinct groups including the First, Second and Third Phase (Coyle and Fair, 2015). The initial phase occurred between 1960s and 1970s where only the concept was being conceived but its existence was not applied or utilised. The second generation

commonly attributed to the mid-1980s resulted in researches in various aspects of electronic monitoring, creating new and interesting opportunities (Lilly and Knepper, 1993). The third generation technology is satellite tracking EM and which is mostly combined with mobile phone location technology (Coyle and Fair, 2015). Unlike second generation radio frequency that is only used to protect curfew related violations and house arrest, the third generation replaces these elements with a Global Positioning System or GPS receiver tagged to the offender that monitors both the location and movement of the offender (Palermo, 2015).

Early second generation EM methods were quite simple and had no true tracking capacity (Wodahl et al., 2015). The technology evolved to comprise three separate elements beginning with the transmitter, receiver and central computer. The radio frequency transmitter tagged to the offender is attached at the wrist or ankle, using radio frequency signals to maintain a connection to the base, thereby completing supervision (Bulow, 2014). Evidence shows however that this technology could still be bypassed by offenders (Palermo, 2015). Using a central computer this system had a receiver, limited in range to the technology and sophistication of the application (Wodahl et al., 2015). Comprised of the pieces that are wired using toughened plastic optic fibres, the concept was to allow the transmitter to stop emitting the signals once the fibre is cut and an alert is sent to the authorities (Wodahl et al., 2015). This system had rudimentary technology and radio frequency material, with the result that a break on the part of the offender would alert a monitor through the telephone line.

The design of electronic monitoring became more sophisticated, and depending on the technology involved in the application as well as the form of receiver that is being used there are two types of EM, active and passive. Evolution in remote monitoring led to the ability to deploy EM systems in active or passive forms. The passive type is also called a programmed contact system, meaning that the computer is programmed to refer to the proximity of the offender either at random or specific intervals (Steve, 1996; Wodahl et al., 2015). This system is put in place with restrictions unknown to the offender, making the limits more effective leading to the term passive due to the fact that the presence or absence of the offender can only be acknowledged when the programmed computer calls (Schmidt, 1998; Wodahl et al., 2015). However, this is subject to technology that allows for a cheat or a fake answer to the call which the system sought to disarm through voice verification technology (NLECTC, 1999). Voice

verification uses a biometric voiceprint that is recorded during the time of conviction, yet is becoming increasingly ineffective in the face of developing technology (Paterson, 2015). Voice verification form of EM is thought to be a possible method to curb the stigma especially for younger offenders and juveniles because it is not associated with wearing EM devices (NLECTC, 1999; Paterson, 2015). In conjunction with cell phones and GPS the modern technology related to the EM systems has begun to be truly affordable and effective whilst being non-intrusive.

The alternative to passive monitoring is known as active EM, that utilises a continuous signalling system (Schmidt, 1998; Wodahl et al., 2015). Unlike passive monitoring the detection of signal is continuous (Steve, 1996). Whilst the Active EM process existed before passive EM and is dated to have begun in 1987, the initial systems were found to be weak and judged to be less effective than had been planned (Paterson, 2015). By 1996 GPS technology was still under process therefore the technology could only confirm whether the offender was at designated locations where the receivers were present (Wodahl et al., 2015). Yet, in many ways both the offenders and the team of supervisors reported positive responses surrounding the system, increasing the likelihood of continued use and expansion. The active tracking system was initially comprised of an ankle bracelet transmitting a radio frequency signal, a charging base station, battery charger, GPS tracking unit, and a cellular phone (Paterson, 2015). The bulkiness and size of the system is the chief reason for the slower adoption of active EM, yet continues to improve in the face of developing technology (Wodahl et al., 2015). There are four features that make an active system type effective including: ease of use with a user interface that is easy to understand; small size and weight of the GPS tracking unit and transmitters; strong radio frequency that actively links to the tracking unit, combined with the flexibility that allows offenders to be fully responsible for the equipment (Paterson, 2015). The next generation of technology may initiate further improvements and additions.

Despite the fact that the programmed contact system, or passive process came to existence later after the active EM, passive EM became the choice over active EM products from 2003 due to the noted weakness of active systems (BI Incorporated, 2006). Passive EM was considered to be better in terms of cost and technicality as it was blended with the new and advanced GPS technology characterised by less false alerts (Wodahl et al., 2015). The passive EM was also the preferred option by

probation officers because it could only give them alerts at specific times thus not interfering with their mode of operation (BI Incorporated, 2006). In every case, the decision to first use and then depend on these systems is directly related to the state of technology underlying the chosen EM process.

A third generation of EM incorporated both the GPS location tracking alongside mobile technologies leading to the capacity to store and view the material retrospectively. The primary strength over previous generations is that these new generation technologies can be used to monitor compliance with a myriad of orders including attendance or exclusion orders (Wiseman, 2013). Even newer models have incorporated chemicals detectors that can measure an offender's perspiration indicating any drug or alcohol consumption, further supporting the use of the technology in a wide range of instances. The obvious attraction for local law enforcement is the capability of tracking an offender in real time. However a clear technological weakness in the existing hardware is the fact that the offender has to recharge the device on a periodic schedule, making this aspect difficult to manage successfully (Paterson, 2015). There is growing recognition in the field that the GPS process allows tracking that has a far wider application potential as opposed to radio frequency, leading to clear uses in cases such as house arrest and curfews, determining movements of the offender or even detecting when and where an offender goes in real time (Patterson, 2015).

A number of recent trends in EM technology are driving the implementation and expansion of EM beyond traditional uses. The introduction of real time technology has provided a key area of improvement that has increased the confidence of those monitoring the system and decreased the capacity of the offenders to tamper with the technology (Wiseman, 2013). One variant of GPS integrates new technology with police crime report databases leading to a form of monitoring that is real time and current (Jones, 2014). With technology now allowing real time monitoring and tracking there are more specific orders available to the legislator (Paterson, 2015). While this approach is still in its infancy, with consistent improvements in GPS technology there is a trend in the EM field to further include and integrate the tool into working schemes (Di Tella and Schargrodsky, 2013). The use of GPS has been shown to decrease the rate of failure, driving the potential of the application (Jones, 2014). There is a wide



body of new trends all aimed at improving the process with one system in the market able to record entire body movements simply using a watch type of device.

The development of EM technology has also led to its deployment in abstinence orders for offenders. Monitoring alongside breath alcohol testing is increasingly being implemented leading to a system of control on a rising issue of safety in every nation around the world (Mrvic-Petrovic, 2014). Since 2003 an ankle-worn transmitter that transdermally tests for alcohol has been available, monitoring both the presence and the possible absence of the offender as well as uploading alcohol testing information to the supervisor in order for them to remain updated in real time (Jones, 2014). New advances include the sweat patch testing for substance abuse through microelectronic capsules implanted in patches that monitor the amount of drugs in the offender's system (Di Tella and Schargrotsky, 2013).

## **2.5 EM Challenges**

The literature provides a broad range of challenges that have implications for the transfer of EM technology and knowledge. Each type of challenge experienced in different contexts points to factors that can affect the diffusion and implementation of EM in a new environment. Classifying issues faced in EM implementation provides a basis for recognising and understanding a diverse range of determinants of successful technology and knowledge transfer.

### **2.5.1 Technological Issues**

The literature shows EM implementation experience providing examples of potential pitfalls related to the underlying technology and the EM programme.

A key example is that of the UK during the early outset of EM application (Robinson and McNeill, 2015). In this case the technology surrounding the system was insufficient leading to a significantly high violation rate and lack of effective offender supervision, resulting in an impression of failure overall. However in conjunction with the development of technology, the UK system has reinstituted the programme with an offender completion rate of over eighty per cent (Daems, 2015). This progression suggests that as technology and experience in the area of EM continue to accrue, so too does the effectiveness and the potential for further advances in the field. The two technologies have been applied to somewhat different kinds of offenders (Jones,

2014). However weaknesses in both systems could lead to their integration pointing to the potential for further advances. Nevertheless, the potential for increased cost in the need to increase technology and related support structures is a key issue (Bulman, 2016).

### **2.5.2 Legal Issues**

Legal context can be a significant barrier to technology and knowledge transfer, while legal measures can provide both legitimacy and support for the implementation. Key legal issues addressed in the literature are related to privacy, offender rights, legal challenges, judicial discretions and oversight. On balance EM effectiveness seems to be highly dependent on the social and legislative system that is defined. Whilst initial changes were frequently composed of the legal issues that surround the implementation of EM, factors such as technology, human rights and variable national standards have shifted the EM spectrum to impacting economic, social and religious components that in turn affect development (Renzema and Mayo-Wilson, 2005; Robinson and McNeill, 2015). These very issues are at the heart of many of the challenges to EM application, leading to a wide spread of legal issues evident in nations such as Canada and the UK that are actively using the systems (Mrvic-Petrovic, 2015). Challenges related to constitutional and human rights for the offenders, their right to privacy and aspects of equality in the society which were found to be at risk. The results of the EM process are different dependant on the type of technology used in the process, leaving much of the system to the determination of the legislatures in the various nations (Palermo, 2015).

Legal challenges related to the EM system include the assertion of cruel and unusual punishment when used in probation, parole and different forms of community-based supervision (Di Tella and Schargrotsky, 2013). In this circumstance the application of the devices on the ankle is considered as a form of cruelty and an unusual punishment due to the limitations and hindrances placed on an offender's personal being and the potential for humiliation and degradation (Daems, 2015). On the other hand there is a strong view that electronic monitoring is far less restrictive or inhumane than incarceration (Di Tella and Schargrotsky, 2013).

A legal issue commonly discussed in relation to the developing EM system is discrimination (Deuchar, 2011). In many ways the limitations of those enrolled in the

EM programme as well as the demand to remain enrolled in the programme may negatively impact the access of poorer populations to the service since they may not be able to raise the money for the fees imposed in some contexts (Di Tella and Schargrodsky, 2013). This would seem to be contrary to the goals of the programme to enrol more offenders, suggesting that politics are often at play in the application process of the EM system. Alternatively it has been highlighted that EM is an expensive process that the offenders should be willing to pay for themselves (Palermo, 2015). A lack of resources may expose the offender to denial of the opportunity to be enrolled in the programme that makes prison the only other option. This in turn is argued to be a form of cruel and unusual punishment that in many cases should be reviewed prior to implementation (Bulman, 2016).

### **2.5.3 Privacy**

Many nations take pride in the ability for their social fabric to incorporate and promote privacy of their populations (Jones, 2014). However, most nations have founded the EM programme on the conclusion that the offenders should not enjoy the same degree of constitutional protection as the rest of the population (Nellis et al., 2013). Nevertheless there is significant criticism of the loss of privacy for those monitored offenders that have served their sentences and are seeking to reintegrate into society.

Chief among the privacy concerns related to the EM system in the UAE is the ability for the general population to gain access to records or sensitive information for the offenders (Palermo, 2015). This argument also highlights the potential for innocent family members to be caught up in the lack of privacy, leading to additional loss of rights. However, others point out that there is a choice surrounding the technology, and a person that is not required to stay can leave at any time (Robinson and McNeill, 2015). Offsetting this view is the emphasised need for the EM process, considered a pressing social need that outweighs the possible infraction of rights to the individual (Robinson and McNeill, 2015).

A primary argument related to the EM process is that the family home is used as a prison for the offenders, thereby depriving the community of potential resources (Paterson, 2015). Palermo (2015) cites the perception that the EM system

contravenes social interaction and creates a state where the citizens are closely monitored by government agencies thereby hindering rights of movement as well as right to privacy. With references to George Orwell, it is simple to create the spectre of governmental control leading to mass surveillance, however, that would seem to be less than likely when cost and application are considered. Acknowledging these concerns some nations are working to ensure that the privacy issues are addressed in the implementation of EM by requiring the consent of the offenders seeking to be enrolled (Shoham et al., 2014). This is frequently accomplished by asking the offenders to express in writing their full consent to be enrolled in the EM system as an alternative to incarceration. Nevertheless this does little to compensate the family members or innocents caught up in the lack of privacy.

Palermo (2015) argues that the consent of an offender is crucial to ensure that offenders are not coerced into the EM system, thereby ensuring that the motivation to complete the programme is in place. Critics counter that this consent will be given simply to avoid prison and the physical restraint that this would entail, which in turn limits the effectiveness of the process (Robinson and McNeill, 2015; Jones, 2014). However, it is likely that in any case, any option presented to the offender would be preferable to going to prison. Supporters contend that the consent forms play a crucial role in ensuring that there is legal acceptability of EM by the offenders (Palermo, 2015). This increased amount of accountability would seem to be of value by increasing the associated effectiveness of operations. Key elements of consideration for offenders include education and training, social and religious standing and overall perception of the system (Di Tella and Schargrodsky, 2013). This list of related elements seems inherently biased against those that have little funding or knowledge of the system, making coercion in choosing the EM system, and faulty consent, much more likely. In every case, the need for the offenders to understand the terms and agree to these terms by appending their signature is seen as bridging the gap between consent, privacy and the EM programme.

#### **2.5.4 Waiving of Rights**

Many legislators have turned to waivers in their push to provide the EM option to offenders (Jones, 2014). This would mean that in order to participate in the programme, the offenders are waiving their related rights such as consent and search

and seizure in order to ensure that the programme has the latitude to operate. Palermo (2015) illustrates that this approach basically implies that an offenders' rights to privacy and freedom of movement are not considered when enrolled under the EM of offenders, emphasising the concern of equality under the law. Other options are becoming more common in nations that use the EM system including the capacity for warrantless searches in the offender's home at any time, leading to further questions of legality. This is based on the argument that the offenders do not enjoy the same rights and privileges of ordinary citizens which exposes them to practices that cannot be conducted on the general population (Palermo, 2015). Possible bias and unconscious coercion are prominent components in the complaint process, leading to potential offender reluctance in terms of participating in the EM programme in places such as the UK and Canada. In these cases, discrimination and hidden coercion have a substantial impact on the operation of the EM system.

#### **2.5.5 Oversight**

The primary weakness of the EM system is argued to be the inherent requirement for supervision (Al-Shazly and Tinasti, 2016). However, this argument would only seem to be valid if the related technology possessed significant limitations or weaknesses. A key issue noted by Deuchar (2011) is a growing ratio in the number of offenders versus supervisors in the UK, leading to questions of oversight and fundamental effectiveness. This debate is crucial to address for any EM system created for the UAE, with the need to ensure high quality in order to provide the best possible results. A study by Coyle and Fair (2015) shows that the EM process is only effective for low level offenders that do not require strict oversight.

Legislators consistently focus on methods to shift the cost or distribute the issue over a wider population. EM implementation in New Zealand involved 2015 legislation controlling the use of EM on offenders, tying any further use of the system to key oversight (Bulman, 2016). Potentially this additional layer of legislation could slow any implementation, leading to deceleration in application and the ability to positively impact offender management within the nation. An example of the law at work shows the aim to remove barriers to the use of EM on offenders in two major ways, offenders who were found guilty for imprisonment for a term not exceeding 2 years or offenders who were sentenced and required intensive supervision (Bulman, 2016). The legal

framework was dependent on the fact that EM could lead to improvement in public perceptions through the assurance that authorities could obtain crucial information about the whereabouts of offenders. However, there is some criticism that training and associated oversight knowledge is lacking in the new positions, leading to potential loss or offender complication (Al-Shazly and Tinasti, 2016).

### **2.5.6 Stakeholder Perspectives**

Public perception represents a key challenge evidenced in the literature relating to different stakeholders. Many populations still associate negative elements of remote monitoring with government intent to control the community (Bulman, 2016). Jones (2014) points out the primary challenge for any EM programme is the need to properly prepare for and address public safety concerns and the need to maintain that trust. Some are critical of the method citing the impression of leniency and the consistent possibility of the offender corrupting the technology behind the system (Mrvic-Petrovic, 2015).

Another area of potential weakness rests in the relatively quick turnaround many of the EM programmes have possibly providing a lenient experience that unfairly inflates the support for the programme (Paterson, 2015; Daems, 2015). Bulman (2016) shows that any monitoring system will be subject to possible failure, thereby leading to a loss of public trust and safety. There is the potential that any failure will result in someone getting hurt, making the application process very time consuming (Renzema and Mayo-Wilson, 2005).

The rapid rise of EM technology has engendered some critical opponents, citing numerous reasons that the process should be discontinued (Palermo, 2015). These arguments are tempered by the fact that many of those seeking to undercut EM development have other agendas at stake such as the loss of political capital and possible bias (Jones, 2014). In many cases Nellis (2015) argues that the likelihood of any EM implementation being effective will not depend on technological change alone, but on what politicians make of the particular social affordances it provides. Inherent social issues that are focused on the local issues are driving politicians, judiciary members, correction facility employees and other policy and decision makers to embrace reforms (Paterson, 2015). Di Tella and Schargrodsky (2013) show that in some cases local judges differ when making EM decisions leading to questions

regarding propriety and legal standing. This suggests that social and ideological differences have a causal effect on offenders in relation to serving time under an EM process as opposed to being incarcerated.

## **2.6 Summary of Key Findings**

This chapter has outlined the origin and progress of EM over the past decades. The technological development of EM has progressed through different phases over the decades with rapid technical improvements to both hardware and software advancing the capabilities and performance of EM. The introduction of EM within judicial systems has been underpinned by key commercial drivers which have contributed to shaping the implementation of EM in different countries. This chapter has emphasised challenges associated with the technical advancements that present difficulties in developing awareness, understanding and acceptance of the technology by a broad range of criminal justice system stakeholders. Moreover the rapidly changing technological context creates significantly complexity in the implementation and use of EM. This context gives rise to key questions: What are the drivers of implementation of EM in a new context? and What are the challenges of transferring EM technology and knowledge to the UAE? The context outlined and the emerging research questions place emphasis on examination of the social-technical aspects of EM and the social influences and conditions that affect stakeholders' perceptions.

## **3 Theoretical Perspectives**

### **3.1 Introduction**

This chapter presents a review of the relevant literature for electronic monitoring (EM). The emergence of electronic monitoring and its implementation in justice systems presents the context for its growing significance associated with criminal justice goals. The theoretical perspectives underpinning the debate around EM are presented and the vision and goals associated with EM. While the literature notes a dearth in evidence and limitations in undertaking comparative analysis due to divergences in context a number of key themes emerge in relation to recidivism, compliance, cost reduction, rehabilitation and social impacts. This literature reveals significant interrelated complexities confronting the evaluation and understanding of EM due to a number of factors including the diverse modalities, stages of application or target population. The evidence reveals that the effectiveness of EM remains inconclusive and that a major gap in the literature exists on the implementation process. On balance this review emphasises issues associated with implementation approach, technology procurement and management, outcomes, impacts and legal framework. This provides the basis for the conceptual framework that is outlined in the final section based on emerging research questions. Examination of implementation science theory emphasises the importance of employing a comprehensive analytical framework to guide the investigation into the factors that may facilitate or inhibit the implementation and success of EM.

### **3.2 Theoretical Perspectives on Justice**

The progression towards the implementation of EM in many justice systems around the world reflects changing perspectives on justice, appropriate punishment and sentencing and societal good. Traditional forms of justice have mainly focused on punishment for wrongdoing with sentences reflecting the desire to punish. Justice (2014) shows that before 1800, offenders were fined, executed or very often enslaved. However, each of these options leads to social and economic drawbacks for the surrounding population such that there is a call



for increased development and innovation in the field. In short, it has been found that for society execution has generally negative consequences as someone had to support the person's family and debts, which in turn led to an increased social burden for the population in many cases (Abbas, 2007).

### **3.2.1 Retributive Theory**

In retributive theory offenders are believed to morally deserve punishment which should impose some unpleasantness or pain and which is proportional to the crime committed (Cullen et al., 2000; Lattimore, 2017). The key issue for retributivist perspectives in terms of the application of EM is whether it achieves this (Lin, 2000). The requirement for offenders placed on EM to wear a monitoring device day and night could be considered to some extent as objectively unpleasant and some research suggests that EM imposes pain in one way or another (Hucklesby, 2016; Cullen et al., 2005). A further key question is the proportionality of EM to an offender's crime, which is inherently dependent on subjective and contextual evaluations. It is considered possible for the use of EM to be calibrated for proportionality in accordance with retributivism. EM provides flexibility to apply punishment in a range of ways including the time period subject to EM, visibility or size of the monitor and additional restrictions which could make the overall experience of EM more painful.

### **3.2.2 Rehabilitation Theory**

Beginning during the social upheavals of the 1960s, Justice (2014) illustrates how nations across the world became committed to exploring alternatives to offender incarceration. Recognising the value in the rehabilitation of offenders, several nations began to introduce forms of prison centred rehabilitation that have the potential to aid the offender as well as ease the social responsibilities of the larger community (Abbas, 2007). New thinking in terms of the aims of justice and sentencing of offenders is underpinned by the Theory of Rehabilitation (Wiseman et al., 2013), reflected strongly in Scandinavian models based on the premise that better rehabilitation leads to a better and more productive citizen (Abbas, 2007). The best procedures used to achieve rehabilitation are educational and vocational programmes; however this

emphasises the question of whether these programmes should be conducted inside prisons or amongst society. Many jurisdictions have created graduated sanction policies as a solution. The primary criticism of this approach cites the focus exclusively on jail sanctions which bypasses the community forms of sanctions that may include written assignments, treatment programmes or community service hours which many argue can be more effective (Shoham et al., 2014).

Rehabilitation theorists place most emphasis on the future ability of offenders to reintegrate into society (Hart, 1958). Rehabilitated offenders will not return to committing crime, thus rehabilitation principles imply the necessity that an offender is not present in environments encouraging criminal behavior, while on the other hand is provided access to the necessary treatment, vocational or educational programmes that promote their reintegration. Other factors perceived to support reintegration include the maintenance of family and community ties (Hart, 1958).

Theories of rehabilitation are based on the moral justification that rehabilitation provides a humane alternative to the infliction of pain on offenders and makes an investment in the lives of offenders. Ideals of rehabilitation are grounded in the desire to do good for offenders although this desire is not always effective in ensuring crime desistance (Gaylin, 1978). Rehabilitation could be adverse and coercive if applied inexpertly or with malice. However treatment rather than punishment for offenders does not entail greater leniency. Some evidence points to preference for incarceration among some offenders over interventions aimed at less punitive and more helpful measures (Petersilia and Piper Deschenes, 1994).

In the context of rehabilitative principles the usage of EM as an alternative to incarceration may enable the offender to maintain personal and community relationships while avoiding the criminogenic context of prison. However EM is not viewed as possessing inherent rehabilitative qualities (Gainey et al., 2000) but primarily as a facilitating mechanism or tool that can be employed as part of a rehabilitation intervention that may also involve educational programmes, vocational training or cognitive-behavioural treatment (Gainey et al., 2000).

Therefore rehabilitation theory would entail that EM use is a component of an overall programme personalised towards reintegration rather than incapacitation. Evidence has shown that when adopted within tailored interventions EM is experienced as rehabilitative by offenders (Payne and Gainey, 2000).

### **3.2.3 Deterrence**

The justification for incarcerating and executing offenders as a sentence for wrongdoing is based on widely accepted theoretical principles and theories of justice. The deterrence theory of punishment arose from the work of early classical philosophers including Thomas Hobbes (1588–1678), Cesare Beccaria (1738–1794), and Jeremy Bentham (1748–1832) (Dilulio, 2010). Deterrence is asserted to depend on three separate elements of severity, certainty and celerity. Certainty in relation to punishment refers to ensuring that it is always applied in the event a criminal act is committed. The knowledge that their criminal acts will be punished is viewed to encourage individuals to desist from future criminal behavior. Celerity highlights the importance of swift retribution for undesirable acts (Dilulio, 2010).

The deterrence theory assumes that a given sentence will inflict fear and discourage the people of a society from committing the offence (Robinson et al., 2015). Pratt et al., (2006) explains that most persons are likely to think twice and be deterred from choosing a risky course of action. A key assumption is that greater severity of punishment increases the likelihood that a rationally calculating person will be deterred or desist from criminal wrongdoing. Therefore an emphasis on penalties within criminal law is necessary to promote compliance with laws (Dilulio, 2010).

Commonly, there are two types of deterrence; general deterrence is aimed to discourage a whole society from criminality by showing how severe the sentence for offences is, while specific deterrence on the other hand focuses on discouraging a single offender from committing a crime (Gardner et al., 2012). Nellis et al., (2013) highlights that the distinction between the forms of deterrence is critical and in each of these cases there is the need to establish precedent in

order to properly integrate the policy into the social structure. The UK is one example that has chosen to embrace alternative punishment schemes for all levels of offenders, contending that these practices hold the promise of providing the best possible system for offender rehabilitation. This difference in application, yet, similarity of need for many nations has led to this review of related applications.

Palermo et al. (2015) points to numerous critics of the overall efficacy of deterrence theory. Firstly, the assumption that increased severity of a sentence will lead to decreased crime rate is found to be highly questionable due to insufficient evidence. Secondly, individuals and offenders are not always objective and rational in their decision-making. Rationality of offenders is a key assumption of deterrence theory and that deterrents are evaluated objectively and rationally. More broadly, rational choice theory assumes that human beings freely choose their behavior and are motivated to seek pleasure while avoiding anticipated pain and therefore act rationally to maximise their well-being. Renzema (2003) argues that the anticipation and avoidance of legal sanctions is viewed as the key deterrent to crime. Nevertheless this depends on the degree to which offender calculations are high and accurate in terms of the negative consequences of EM as a sanction or whether they are capable of conducting such an evaluation. Rational choice theory would suggest that EM could deter crime during the monitored period, especially when accompanied by the greater consequence of return to prison (Renzema, 2003).

Deterrence theory has considerable relevance for the electronic monitoring context in particular general and specific deterrence concepts (Mitchell, 2012). Justification of EM usage in terms of general deterrence principles depends on provoking sufficient painfulness that potential wrongdoers will perceive punishment as a cost to be avoided (Olsen, 1988). As EM imposes a certain level of pain in terms of loss of freedom, mental anguish and can negatively impact lifestyle and social relationships (Hucklesbury, 2012) EM can potentially function as a deterrent for future criminals. However, critics point out that offenders could perceive that they have obtained a lenient sentence,

including an EM option, which may lead to a lack of fear of punishment and the continuation of crime (Paterson, 2015).

In relation to the specific deterrence of individuals, for EM to fulfil the requirements of specific deterrence theory offenders need to be discouraged from reoffending through fear of being apprehended. In this context deterrence is perceived as fulfilling an incapacitating function (Kucharsen, 2006). EM possesses two key features which underline the possible efficacy of EM in this context of EM technology and the personnel monitoring the devices. Deterrence contentions support the application of EM as an alternative to sending prisoners to jail who do not pose a significant public risk. Notably many low risk offenders could be presently incarcerated were it not for the availability of electronic monitoring technologies.

### **3.2.4 Socio-Cultural Perspectives**

Some theories place a focus on the individual socio-cultural context highlighting routines, relationships and social processes in understanding the behaviour of offenders and impacts of punishments. Routine activity theory places a focus on understanding the individual social context in terms of everyday activities, practices and relationships. This theory, a subset of rational choice theory, also places offenders as the focal actor but includes environmental factors including a suitable target and the absence of a capable guardian to protect against crime to explain its occurrence (Felson and Clarke 1998). This can be useful in understanding the impact and challenges of electronic monitoring and the potential deterrent effect in the application of EM. In the context of EM, the restriction of potential offenders to home and work means that offenders' ability to view and access potential targets is reduced. While potential guardians include police, security guards, doormen, neighbours, and co-workers, electronic monitoring could also serve as a capable guardian. Although the theory underlines significant potential for the deterrence of crime while undergoing monitoring, no ongoing impact is implied once monitoring ends (Renzema, 2003).

While routine activity emphasises an offender pattern of activity, control theory provides useful insight for EM in terms of the strength of offenders' social bonds. Control theory is based on the assumption that in the absence of a range of social constraints human beings would act in a disorderly manner and/or break the law. These social constraints are conceptualised in terms of social bonds which when effective, when an individual feels they have too much to lose, act to constrain antisocial or criminal behaviour (Hirschi, 1969). Conversely, antisocial or criminal behaviour is viewed to take place when some or more of these bonds are ineffective or interrupted in some way.

In terms of the application of EM, some theorists suggest that EM is essentially based on control theory assumptions (O'Toole, 1999). The ability of offenders to maintain family and employment bonds may be effective from the control theory perspective in reducing recidivism. Four core social bonds are identified: attachment relates to the degree to which individuals are concerned with their behavior as a result of their relationships with others, particularly family and other close social bonds; commitment refers to personal investment in past activities such as career and reputation which could be jeopardised by engagement in criminal behaviour; involvement identifies the degree to which individuals are constrained by time and space from committing crime as a direct result of their engagement in law-abiding activities, such as for example attending school for seven hours a day; finally belief referring to the strength of individuals' belief systems in relation to what they consider right and wrong (Hirschi, 1969). Control theory suggests that EM should be accompanied by personal contact with parole or monitoring officers through which a social bond can be created, and monitoring technology should not be a replacement for it (Bales et al., 2010). EM can impose the type of structured lifestyle lacking among many offenders thus supporting the building of attachments to family and positive peer groups. Moreover particularly when applied in a parole setting, house detention with EM could send a signal of increasing societal trust to the offender thus strengthening their bond with society (Gainey et al., 2000).

Meanwhile some theories are important in terms of understanding the individual and community impact of EM. Theories of expressive punishment

place emphasis on penalties designed to shame the offender in a highly public way (Flanders, 2006) and to promote a negative and diminished change in their self-concept (Massaro, 1991). Electronic monitoring could align well as a shaming sanction or expression of blame allowing the transmission of the central message to both the offender and the broader community that the offender's behavior is socially unacceptable and thus subject to punishment (Payne and Gainey, 2000). Device visibility would be viewed as critical to ensuring that the expression of disapproval is clearly manifested, and the use of EM perceived as a component of the punishment of the offender. Evidence shows that some offenders experience EM devices as a source of shame and embarrassment (Payne and Gainey, 2000) and applying EM as a sanction can be argued to send a broader message to the offender and the community.

Labelling theory within criminal justice has also been acknowledged to have key relevance for the application of EM. In particular labeling theory has been used to criticise EM on the basis that the use of a visible device stigmatises the offender and facilitates societal avoidance thus potentially contributing to the internalisation of a deviant self-image, a key argument within labelling theory (Renzema, 2003). Potentially this argument holds in comparison with offender groups in receipt of probation without EM, however when compared to incarceration EM is viewed as less stigmatising (Renzema, 2003). Social labels generally comprise an element of the cultural framework employed by individuals to identify and categorise the social world. A key assumption of labelling theory is that deviant and criminal labels are distinctive due to their stigmatising character implying that specific negative stereotypes or images have been assigned by mainstream culture (Link and Phelan, 2001). An emerging question is how deviant labels are imposed on individuals, with the labels imposed by the criminal justice system highly relevant in this regard. A prominent idea is that disadvantaged groups are considered more likely to experience labelling than others. For example more active policing in more disadvantaged communities encourages the potential for these groups to experience police intervention (Smith et al., 1984).

Castell's theory of network society can provide insights into how EM impacts such as social stigma may arise based on research into the relationships between the combinations of organisation studies, social movements, internet and technology studies, political and cultural elements which shows the close relation between them all (Mrvic-Petrovic, 2015). According to the theory there would be a direct impact from EM components that would cause social stigma and loss of position in society. Any form of change to the basic network form impacts the person and punishment, leading to possible failure to successfully complete the sentence (Wiseman, 2013). Changes have psychological impacts which in turn can potentially fundamentally alter the decision making process of some offenders. Whilst this change could be positive, negative elements related to privacy could serve to alter the perception and the overall effectiveness (Paterson, 2015). In the EM process, this negative element could reduce the overall motivation to complete the course, thereby dramatically reducing efficiency and effectiveness. Castell illustrates that in modern society machines have been replaced with networks, drawing parallels with EM due to the high rate of technology needed in the EM system going forward (Robinson et al., 2015).

Social learning theory provides a further insight into criminal behavior and is important in contributing key insights into EM impacts. The theory underlines how environmental and cognitive factors can impact development and behaviour (Long, 2008) and suggests the importance of understanding the social reality in order to properly understand human behaviour (Engler, 2009) and promote rehabilitation. Social learning theory contrasts the behavioural theorists' assertions that the motive of one's action is environmental factors with a triadic reciprocal determinism. A child not only chooses what he wants but also is affected by his actions and thoughts about himself, with thoughts and knowledge formed from books, media, and other environmental aspects. Furthermore, this behaviour and reaction will likely depend on whom or what the child is observing (Engler, 2009). It is also suggested that human behaviours are not only acquired from praise or punishment but also can be learned from observing a model, and thus the role of a model is important in creating the observer's behaviour (Ganzzaniga et al., 2005). It is posited that through



vicarious reinforcement individuals observe another's action as well as outcome of the action and as a result they learn the consequences (Sansone et al., 2011). The theory is predicated on the assumption that alternate values and different means of satisfaction and fulfillment can be taught to prevent future criminal behavior. The social learning theory of crime identifies all the components necessary for effective intervention and is supported by a significant body of research indicating strong support for the various reinforcement aspects (Brezina and Piquero, 2003; Winfree et al., 1994). Andrews and Bonta (2006) emphasise social learning principles as the predominant theoretical model in effective correctional treatment. For example behavioural techniques derived from the theory and operant conditioning have been key elements of UK probation practice (Vennard et al., 1977). In the context of EM a social learning perspective might suggest that application without an accompanying focus on social learning including finding pro-social peer groups may render the sanction ineffective in reducing future law breaking (Renzema, 2003). Longer periods of EM in conjunction with treatments emphasising skills, values and associations could have a positive effect while negative impacts may ensue if EM is applied in a way which requires individuals to remain in an environment which reinforces anti-social or criminal values or skills. It is expected that to the extent that post-EM offenders re-enter their original environment in which criminal behaviours were learned any post-EM gains would gradually reduce (Renzema, 2003).

### **3.3 Drivers of Electronic Monitoring**

The effort to create an effective form of remote monitoring designed to both ease the burden on the state and control the individual has been a goal of law enforcement since before the rise of the Roman Empire (Jones, 2014). With the development of technology, as well as the ability to protect this technology, effective systems such as an EM system can be realistically employed (Jones, 2014). The potential of EM was acknowledged early and exemplified during its initial inception by Schwitzbegel (1968) who stated that:

*“electronic monitoring greatly increases the possibility of deterring the commission of certain types of offences in the community. When specific, offending behaviors can be prevented, it will no longer be necessary to*

*imprison an offender in order to protect the community. The offender may be safely released on parole, thus increasing his or her freedom, while at the same time the community will be exposed to less risk than under present release procedures” (p.99).*

The adoption of EM systems has been underpinned by a number of key goals but the focus according to Palermo (2015) is cost reduction coupled with improved services (Palermo, 2015). Bulman (2016) shows that for administrators criteria for success related to the EM programme are to ensure that offenders comply, are easily locatable, that it is effective in reducing recidivism and efficient in protecting the public. In the beginning, the EM process was not aimed at those seeking rehabilitation (Nellis et al., 2013). Yet, in many cases the developing technology is providing a method that is both cost effective and upholding of the public trust in aiding rehabilitation, both critical areas of success related to any EM programme.

Nevertheless, in spite of the strategic emphasis on cost reduction EM is associated with a range of other costs related to both the technology adopted and the modes in which it is implemented. Nellis (2013) provides evidence of additional costs associated with the collection and analysis of information, new and repair of existing systems as well as triggering of alarms which all contributed to the high cost issue. Data over-burden, a term created for this specific circumstance is both connected with GPS observing and a GPS pilot reporting period that shows that the emphasis on checking offenders takes a toll on the resources of the supervising office (Nellis et al., 2013). Perhaps the single greatest expense continuously repeated in research is the recurrence of false cautions, although these may be the result of intrusion, erroneous readings or even just the loss of battery power (Nellis et al., 2013). However, the need to increase effectiveness and decrease associated cost and housing for offenders seems to drive many governments to continue to invest in and develop this process.

With the potential for further upgrades to continue to lessen expenses including the process of checking, extended battery lives and increasing effectiveness of alerts, developments are likely to ensure that any emerging EM

system is a lesser weight to both the nation and the offenders (Robinson et al., 2015). Looking to capitalise on the capacity to lower cost, many nations adopting the EM process have begun to look beyond the simple offender model (Paterson, 2015). Some countries and EM schemes regularly make the offender pay fees to contribute to EM expenses (Daems, 2009). Users such as the UK and Canada have actively instituted payment schemes that compel the offenders to pay much of the cost of EM application (Jones, 2014). This leads to the condition that the offender must manage the cost issues that may include changing batteries and false cautions (Daems, 2009). However, many nations are observed to have a large population of poorer offenders that are unable to help with the expense of even the most basic outlay (Wodahl et al., 2015). Recently, the rapid expansion of the EM system is criticised as reliant on the inflow of finance from the participating offenders, rather than primarily focusing on reforming and reintegrating offenders (Jones, 2014).

### **3.4 Implementation Strategies**

Evidence on the implementation of EM in different countries globally highlights different implementation models that have evolved over time and experience. Early UK experience shows a rapidly developing technology not yet tamper resistant, and seeming to reflect a desire that outpaced the actual development of technology (Deuchar, 2011). Efforts to clarify and improve the EM process are prevalent across many international borders and it has become a tenet of many nations' sentencing structures (Jones, 2014; Di Tella and Schargrodsky, 2013). A wide range of factors involved in the creation of a working EM process including compliance without revocation to the end of the monitored period, and recidivism after release from monitoring (Palermo, 2015).

In some countries implementation models are characterised by a focus principally on the technical aspects of supervision, with agencies choosing to fully rely on the emerging systems and reducing human supervision to a level where only understanding of equipment installation and maintenance aspects is needed (Daems, 2015). Critics including Deuchar (2011) highlight variable methods of conducting business with some agencies using one employee to supervise the offender and others for the installation and maintenance tasks,

while other countries are quick to subcontract their needs, reducing their overall exposure to both the offender and the process. A modern EM operator is required to have a high level of understanding of how the current technologies work as well as the innovations soon to be put into use (Daems, 2015). However this implies considerable burden on any single supervisor or agency in the EM system which holds the potential to weaken the oversight system.

Theories and evidence suggest a progression towards a more personalised application for offenders. Sklaver (2015) consistently argues against dependence on any single EM system, but rather seeking a perpetually developing alternative that takes each person's situation into account. This basic perception appears prevalent among many advanced nations adopting EM emphasising the question of how best to apply the system in differing contexts. Prior studies support the important role of a person's unique mental, social and religious health in the factors surrounding the EM application (Vanhaelemeesch et al., 2014). With these results supported across a variety of national contexts including the UK, EU and US, individualised or personalised application remains a key factor in implementation (Mrvic-Petrovic, 2015).

Daems (2015) argues that a method of classifying and profiling offenders should be a primary element of any emerging EM system. This process assists in the correct delineation of punishment and supervision to the offenders, whilst limiting the potential risk for recidivism through restricting opportunity (Palermo, 2015). In the UAE, a classification process may assist in ensuring that the class of low risk offenders do not receive a punishment contributing to recidivism. Palermo (2015) notes an important consideration in the negative potential of the classification system to influence juries and judges, leading to a need to create a comprehensive system. There is therefore the potential for abuse, underlining the need for considered and long term legislative solutions to create and maintain an effective EM system.

### **3.5 Applications of EM**

The evidence highlights the application of EM in a range of different judicial stages in different jurisdictional contexts. Recent technology has allowed some

nations to use the EM method for pre-trial release in cases ranging from simple theft to non-capital murder (Nellis et al., 2013). Used as a safeguard with pre-trial detainment, it is suggested to lead to an effective method of ensuring that a possible offender obliges by any and all orders of the court (Robinson et al., 2015). Furthermore this avenue is commonly regarded as a way to make possible parole accessible to offenders that have been judged to be socially hazardous (Wiseman, 2013). A current weakness in the EM process is the identification and application to offenders with complicated circumstances, for example, offender success on monitoring can depend on mental health and addiction problems (Paterson, 2015).

The early choice of legislators was to overwhelmingly use the EM systems on safe or compliant offenders, effectively discounting any violent offenders from the programme (Bulman, 2016). However evidence in the literature increasingly points to a widening application of EM for different types of offenders. This stretching of the traditional boundaries of the method is seen in the wide range of ages of those monitored, from juveniles to the elderly (Robinson, 2015). Nellis (2015) indicates that those nations developing progress in the EM system combining both GPS and RF capacities are seeking to impose it not just on low risk offenders but also use the EM process for high risk offenders and domestic violence perpetrators. Nevertheless debate in the literature shows limited consensus in relation to its efficacy for high risk offenders. A key issue noted is broadening application to larger numbers of offenders under the supervision of an already stressed local police force (Nellis, 2015).

Current trends in the EM field offer choices in the application of conditions such as restrictions to specific areas, notifications if the offender leaves a certain area without permission, or conversely devices can also permit a large area of travel that can be directly instructed to rule out specific locations (Jones, 2014). Nellis et al., (2013) notes this can lead to an overly complicated application that leaves significant room for error. The EM process has also led to the trend as an option to enforce certain non-custodial approvals including day fines and group administration (Shoham et al., 2014).

### **3.5.1 Violent Offenders**

In relation to the application of EM on serious or violent offenders there is a lack of consistent evidence overall in relation to its applicability. When faced with offenders of more violent crimes the data remains inconclusive and incomplete (Jones et al., 2014) with most evidence focused on the low level offender (Palermo, 2015). This has led to claims that an EM process is not viable for highly dangerous criminals. The high number of low risk offenders on EM has been noted, viewed to create the impression that this is not a programme for violent offenders, which would limit its use in many nations (Nellis et al., 2013). Statistics suggest success in the system when it is applied to nonviolent offenders or in a limited environment, whilst still leaving questions related to the effectiveness of the EM system across the entire spectrum. Until recently, EM technology was acknowledged to be both limited and suspect to tampering (Palermo, 2015). However Renzema et al., (2005) argues that EM can be most effectively applied with higher risk offenders drawing on evidence from twelve separate studies. Paterson (2015) shows that there is credible evidence that supports the position of high risk offenders in the EM process in conjunction with cognitive behavioural treatment which when combined led to lower recidivism.

Sex offenders are a population that many countries have found difficult to appropriately manage in the criminal justice context. In most cases the public desires close supervision with rapid reactions to each alert, accompanied by anxieties in relation to the occurrence of further offences (Pastwa et al., 2011). Limitations in terms of timely response to alerts of EM violations are a clear area of weakness for this class of offender, entailing effective administration in order to ensure that the offenders do not approach schools, parks, and other open spaces with rapid and effective responses for when they do (Daems, 2009). The expansion of the EM system to incorporate sex offenders is argued to have led to a multi-level effort to reduce supervision and increased effectiveness on a very sensitive set of crimes (Bulman, 2016). With a high degree of effectiveness the EM technology offers the potential to actively track and prevent offenders from proximity to schools or parks, which may effectively result in the banishment of offenders from populated residential areas (Renzema et al.,

2005). Evidence has shown that sex offenders demonstrate a reduced rate of recidivism when engaged in EM (Deuchar, 2011). Daems (2015) notes that the positive nature of the effectiveness of the EM programme on these classes of offenders has served to overcome doubts associated with the nature of their crimes.

Contrastingly Bulman (2016) suggests that EM is not always effective among high-risk offenders, including groups such as sex offenders. The UK has been reluctant to use the EM system for serious offenders such as sex offenders, potentially leading to a higher state of public trust in the system (Jones, 2014). Standing in contrast is the United States which uses their system in a successful manner to monitor sex offenders, leading to the argument that it is the system that is at question not the goal (Nellis et al., 2013).

A developing trend in EM systems is the variant of continuous surveillance that has been used in domestic violence cases where the offender is restricted from having contact with the victim (Di Tella and Schargrotsky, 2013). This form of monitoring is conducted by giving a receiver to the offender that makes an alarm which in turn leads to telephoning the police if the offender's transmitter approaches anywhere close to the restricted residence. However a lack of evaluations related to this form of application has been noted with several lawsuits resulting from failures leading to an ongoing reassessment of the programme (Jones, 2014). Recently the lowering of equipment cost as well as the increasing reliability of the technology has begun to make this a more attractive option for dealing with domestic violence.

### **3.6 Impacts of EM**

This section examines the key themes that are discussed in the existing literature in relation to the potential and actual impacts of EM identified. The main themes address recidivism, compliance and completion, cost reduction and reintegration and rehabilitation of offenders. Wiseman (2013) argues that the development of the EM process has led to positive advances in fields related to the probation, work-release and parole of offenders, offering a new and possibly better method of integration and supervision. Some emerging studies

have outlined the positive potential and effectiveness of the developing EM systems on current offender populations (Mrvic-Petrovic, 2015; Shoham et al., 2014; Wodahl et al., 2015).

A critical point in the overall debate regarding the effectiveness of EM are the disparities that exist in terms of context and in terms of research methodology that point to a significant gap in validating the effectiveness of EM for different goals (Jones, 2014). The primary issue in the EM testing process currently rests on the fact that there is a general lack of comparison evidence, and many of the initial EM studies are deemed incomplete or weak in methodology and quality and lacking clearly matched control groups (Mrvic-Petrovic, 2015; Pattavina et al., 2009).

Meanwhile, Di Tella et al., (2013) argues that although EM could be standardised, offenders in evaluated programmes often receive a wide variety of treatments of uncertain quality and duration, leading to questions of differing influences and the ability to properly evaluate. These reports commonly show basic results lacking any specific information, leading to the contention that they are less than effective at gathering good evidence (Daems, 2015). Bulman (2016) argues that current studies do not make comparisons with other forms of sanctions in terms of the ability to prevent flight, which in many cases is the core purpose of the programme, showing a need for further research. Despite the wide acceptance and application of various EM programmes, the overall effectiveness is therefore difficult to establish with unique political environments providing a challenging context in which to accurately measure these programmes (Wiseman, 2013). Primarily based on the merits of the offenders completing their terms, these studies define effectiveness as a simple conclusion of the sentence rather than a true reintegration into society, leaving much to be desired in the overall development of the EM system for possible UAE use. Despite the lack of consensus a number of key themes are discussed in terms of the potential benefits of EM.



### 3.6.1 Recidivism

Agnew's General Strain Theory is a branch of criminology related to offering possible opportunities and areas of possible exploration for offender behaviour and recidivism (Ackerman, 2015). The theory is widely accepted and aims to encompass the full range of possibilities for sources of strain in society, in many cases focusing on offenders (Ackerman, 2012). The theory contends that progress occurs as social structures including punishment schemes serve to highlight socially desirable and positive goals, however frequently no viable path to reach those goals is provided, thereby creating stress and recidivism. In many cases the practical impact of this condition is that to achieve material success the offender must commit crime. Furthermore, the theory argues that any form of negative experiences leads directly to stress and possible issues for many offenders, identified within three separate categories. These include the inability to achieve the offender's goals, the threat to remove positively valued stimuli and any condition that presents a threat to the offender alongside negatively valued stimuli (Ackerman, 2012). In each case, this theory offers a possible explanation that holds the opportunity for EM to alleviate some issues.

Pattavina (2009) shows that there may be an emerging role for such systems adding to the persuasion of offenders to maintain a positive record. Statistics offset many negative aspects of the EM system with Bulman (2016) showing a consistent drop in the rate of recidivism through the use of EM. This is supported by other evidence showing that EM monitored offenders had lower recidivism compared to those not monitored (Bonta et al., 1999).

One EM programme in Newfoundland, Canada indicated an initial associated recidivism rate of 32.1% (Nellis et al., 2013). After a year of EM application the recidivism rate in Newfoundland dropped to an all-time low and further was credited with financial savings and the successful social integration of offenders (Palermo, 2015). Building on this, a secondary study in Canada shows that most of the participants successfully completed their sentence (Nellis et al., 2013). Evidence from Europe and the United States both cross-sectional and longitudinal indicates positive impact on recidivism (Wiseman, 2014; Bulman,

2016), and a marked reduction in recidivism in Florida led to state expansion of the programme (Padgett et al., 2002). In South America, there have been several advances in the EM process leading to studies that suggest long-term recidivism reduction (Palermo, 2015). These studies compared the recidivism of offenders over a period of ten years that had experienced EM with others released at the same time. Standing in contrast to many other studies, there were no restrictions on the level of crimes the offenders could be accused of. Despite the system being open to high risk offenders in the prison system, 22% of former offenders failed compared to only 13% of those who had experienced the EM process (Di Tella and Schargrodsky, 2013). In Florida evidence shows that offenders on EM are returned to prison less often than other offenders that have been placed under Community Control (Palermo, 2015).

Meanwhile, EM trials in Sweden and Switzerland support findings that show success in lowering the rate of recidivism among offenders (Jones, 2014; Wodahl et al., 2015; G4s, 2016). These studies illustrate that offenders released from prison under EM supervision have a substantially lower reoffending rate compared with other offenders, as well as a distinctly lower chance of financial difficulty or family breakdown. Moreover comparative evidence shows that early release offenders not subject to EM returned to a state of custody at a rate 38% higher than the EM group (Bulman, 2016). EM's positive impact on recidivism is linked to the mental state of many offenders, showing the importance of maintaining a positive goal (Coyle et al., 2015). Those placed in non-EM programmes were found to be more likely to have committed new crimes as well as have their parole revoked more often than did those using the EM system (Bulman, 2016). This evidence adds to the argument that EM application is successful in contributing to desistance from crime by allowing offenders more time to think on their errors whilst limiting their ability to travel to potentially negative environments. A study by Marklund et al., (2009) indicates similar results in a comparison of early-release prisoners subject to EM and non-monitored convicts released at the end of their terms. This study showed that EM had greatest impact on middle-aged offenders, leading to the question of whether older offenders responded better than younger offenders (Robinson, 2015). However the generalisability of the study findings is considered to be

limited given Sweden's employment, housing, social, and medical services that were available to both the EM and control groups (Jones, 2015).

Despite positive evidence to the contrary the UK has consistently generated studies that have shown that the EM process has not had a significant impact on recidivism (Robinson et al., 2015). Wodahl et al., (2015) found that success factors directly related to existing prison populations hold the potential to be similar for both prison sanctions and EM based programmes. These factors are summarised as:

- Sanction type did not influence following violations
- Jail sanctions proved ineffective.
- Sanction form did not reduce the time until the next violation (Wodahl, 2015).

Critical of studies showing only the successes of the EM process, Wodahl (2015) shows that in some cases the form of sanction did not change the rate of recidivism for the person completing supervision. These results stand in contrast to others that indicate opposing results, or at the least a modest improvement in attendant behaviour (Jones, 2014; Di Tella and Schargrotsky, 2013; Wiseman, 2013).

### **3.6.2 Compliance and Completion**

In terms of the effect of EM on compliance and completion of the EM programme there is some evidence of positive impact. Paterson (2015) found an improvement in the monitored population who were far more likely to appear for a court date than those that committed equal offences but were not part of the programme. This supported earlier findings from Canada (British Columbia) showing that 89.3% of participants completed the programme successfully (Bonta, 1999).

Compliance from the offender perspective is driven by the desire to succeed. Quantitative analysis from Ncjrs.gov (2016) shows decreases in the failure rate for all groups of offenders using the EM process. This is attributed to the assumption that the offenders are motivated to properly complete their

sentences and if given the opportunity will do just that. Specifically the Ncjrs.gov (2016) analysis shows that using the EM system reduces offenders' risk of failure by 31 per cent and increases their opportunity for success by 69 per cent. However, Bulman (2016) reflects that a quantitative study will not include the interpretative elements needed to properly understand the EM environment.

Wiseman (2014) outlines a plausible premise that using an EM in a pre-trial scenario decreases social cost whilst increasing social compliance, with the tracking technology able to effectively reduce the flight risk and in some cases aid in the recovery of fugitives. This secondary success factor of locating fugitives on bail holds the potential to again decrease related cost and increase subsequent compliance (Di Tella and Schargrotsky, 2013et al., 2013).

### **3.6.3 Cost Reduction**

A primary element of the EM process for many nations is the capacity to reduce the funding necessary to supervise offenders whilst maintaining safety and security for the general population (Jones, 2014). Thus a primary driver for the use of EM seems to be the reduction in cost related to the ability to better serve the electorate. Advantages attributed to the EM programme in many nations include savings in prison costs and reductions in overcrowding (Maedel et al., 1993; Di Tella and Schargrotsky, 2013). However Palermo (2015) argues that the EM process should not be founded on economic principles alone.

EM application can potentially have a positive impact on governments such as the UAE by reducing cost and associated upkeep outlays. Cost reduction in the judicial system is a key government objective related to the introduction of EM systems (Di Tella and Schargrotsky, 2013). However directly related to cost issues are elements that include diverse populations, differing points of use in the criminal justice system and a wide variety of technologies often leading to the contention that EM systems are costly to install and maintain (Deucher, 2011). Cost is directly impacted by the need for personnel to oversee and conduct day to day operations within the EM process (Daems, 2015) and can vary depending on differences in processes such as daily offender checks compared to those that choose to only see the offender for a monthly equipment

check. Nevertheless in comparison with the continued current cost of housing and oversight within prisons, the use of less resources overall within EM will serve to benefit the larger community and nation.

In 1999 the estimated supervision cost for the EM programme amounted to between \$5 and \$25 for each offender on a daily basis (NLECTC, 1999). Charges are estimated as ranging from \$1,825 to \$9,125 annually for each offender, with the costs forecast to rise dramatically over the next ten years by a factor of five (Palermo, 2015). However, this increase in cost is still modest compared to the housing, feeding and constant supervision that is found in the traditional prison system. In every case, unique cultural and social factors directly impact the issue of cost which can vary depending on the context. For example, cost can become an issue in regions that lack funding leading to the contention that the cost becomes an unbearable burden on the lower class, making many of the possible benefits of the EM system moot. The variable length of sentencing is a further key issue related to cost in the system (Bulman, 2016; Daems, 2015). Nevertheless Wiseman (2013) shows that those taking advantage of the EM programme found substantial financial savings compared to the more traditional custodial or community sanctions. Statistics from the Home Office reviews of EM between 1996 and 2001 show that the cost for EM was between a third and a half less expensive than custody (Bulman, 2016). Other evidence shows a large difference in cost consumption from \$5.50 to \$10 daily for the EM programme compared to \$100 to \$160 daily for detention facilities (Di Tella and Schargrodsky, 2013). Directly impacting the population and their obligation to fund the operations, the burden and associated taxes have the potential to be rapidly reduced.

Different EM types and technologies have different cost implications, however the cost of GPS is more onerous, as in every case capital expenses are required to create and apply the EM programme. Although in many cases the GPS systems do require labour, different nations directly implement this in an in-house or outsourced method (Daems, 2015). However, it is noted the cost for GPS monitoring is decreasing as technological advancement continues, and the price of tracking the offenders who are serving their sentence under EM is

found to decrease. In the case of implementation the overall GPS cost is crucial in the calculation of the cost for the programme (Daems, 2015).

Cost related issues are directly related to the form of observation adopted which include dynamic or detached observing, leading many nations to choose the best possible method to reduce cost (Wodahl et al., 2015). In the US three forms of EM were considered with radio frequency (RF) monitoring found to be the least expensive in terms of technology and officer workload (Wodahl et al., 2015). Nevertheless it has been noted that RF has less controlling capacities than the typical GPS system, and as such is more qualified for low-level offenders (Andrews et al., 1998; Wodahl et al., 2015). The bulk of the costs of inactive GPS are in post-trial supervision that required review nearly three times more than dynamic GPS with many of the alerts considered false (Robinson et al., 2015). California's EM monitoring programme was deemed a success due to the fact that it is lower than the cost of moving offenders to another form of indefinite civil commitment (Nellis et al., 2013). Examples of reduction in cost for the government in this environment include reducing prison programmes which can cost an average of more than \$100,000 in the United States each year for every offender (Bulman, 2016).

#### **3.6.4 Reintegration and Rehabilitation**

Nellis et al., (2013) builds the perception that EM programmes can play a significant role towards achieving a key goal of effectively re-integrating offenders into society. Perhaps the clearest advantage attributed to the EM system is the concept that rehabilitation becomes more effective where cognitive behavioural therapy can be offered to the offenders (Nellis et al., 2013). With results consistently indicating that jail sanctions do not outperform community-based sanctions, many negative impacts of jail can be negated and the opportunity for positive resolution improved (Bulman, 2016; Di Tella and Schargrodsky, 2013).

Evidence globally points to the potential effectiveness of EM for rehabilitation and integration. In Europe research is beginning to show potential benefits of a working EM service for rehabilitation (Marie, 2015). Statistical data from Canada

indicates over eighty per cent completion rate in their programme, aiding the perception of EM as both a plausible and effective solution (Jones, 2014). Nevertheless qualitative evidence from the United States reveals potential pitfalls that could influence success: over one-quarter of the offenders on EM said they were simply doing time, leading to a clear perception of ennui, boredom and possible resentment. This holds the inherent potential of leading the offender to remain disenchanted after the sentence is complete, which could lower the potential for reintegration.

The EM process has assumed a primary role within many recent offender rehabilitation strategies, with a constant drive to find more and better uses for the technology (Mrvic-Petrovic, 2015). *Usage of EM as a rehabilitative tool is based on a positive incentive experience as opposed to the negative form of punishment common with the technique (Shoham et al., 2014). This approach stresses the need for the offender to create pro-social community ties that aid in the effort to avoid slipping back into previous behaviours (Shoham et al., 2014). This underlines the critical social ties that have the potential to help or hinder EM application.*

The potential for EM to support psychological development and rehabilitation represents a key argument in support of the effectiveness of EM. Psychological studies by Rubin (1990), sought to gauge attitudes and the eventual outcomes of US offenders who had completed the EM process with the majority approving of the method of reintegration and punishment. Qualitative data from Mainprize (1995) reinforces the concept that many offenders appreciate the idea that EM is an alternative to jail. In this study the average time in the EM process remained brief, with clear focus given to situational factors that have the potential to directly impact the offenders' experiences with EM (Mainprize, 1995). More importantly the research highlighted common coping styles, leading to the need to observe and integrate positive attributes into new or emerging EM systems. For example some offenders became sedentary whilst others used the new-found time productively, some become loners or preferred isolation whilst the healthier offenders began to reach out more in a social manner (Mainprize, 1995). This points to the need for careful examination of the unique

needs of the offenders under the sentencing scheme. The mind-set and psychology of the person had a definitive impact on whether the programme was a success or not with some offenders viewing EM with trepidation and great concern (Di Tella and Schargrodsky, 2013et al., 2013).

Furthermore, the EM process is only consistently successful when the mental capacity of the offender is taken into account, leading to a more empathetic legislative infrastructure (Palermo, 2015). Showing that social circumstances have a direct impact on the success of any EM implementation Mainprize (1995) reveals that a substantial portion of the offenders used social isolation as a method of concealing their offender status from others, particularly co-workers, leading to a real concern regarding their ability to maintain employment.

Key elements reinforcing social isolation are reflected in components of the EM programme such as inflexible schedules, limits on socialisation as well as the perception that EM status needed to be concealed. Nearly every offender taking part in the Mainprize (1995) study attempted to conceal their EM status, nevertheless preferred EM over incarceration and would hope to accept EM again if it were offered after another offence (Mainprize, 1995). Mainprize (1995) points out that EM programmes had largely minor, manageable impacts on the overall normal conditions of living.

### **3.7 Individual and Social Impacts**

#### **3.7.1 Behavioural Change**

In many scenarios Shoham et al., (2014) posits that a proper EM policy brings stability to an offenders' sometimes chaotic lifestyles, lending support to the possibility of associated social success factors. Echoing earlier studies, Shoham et al., (2014) illustrates that the capacity to keep offenders away from places and acquaintances associated with previous offences is a clear benefit for the person and programme. Furthermore, this initial success can be built upon to aid in the subsequent breaking of related habits and help to create more positive habits for the long term. A study of EM by Andersen et al (2014) in Denmark compared the impact of EM or incarceration on subsequent



employment finding a substantial impact of EM on a decrease in social welfare the first year.

From a community perspective developing EM schemes can be less disruptive to family and community ties (Nellis et al., 2013). These elements would seem to smooth the transition from penalty to productive citizen, thereby leading to a more successful social environment. Evidence shows that in cases of offender and family support, the EM process has the potential to assist the family to control the offender, leading to a successful conclusion of the sentence scheme (Wodahl et al., 2015). This reinforces the view that families are positive elements of any EM programme. Nevertheless while studies point to social and familial forms of cohesion as an aid to EM progress, there is a failure to account for offender circumstances in terms of support and help that may potentially promote a lack of success and recidivism (Wodahl et al., 2015). Paterson (2015) suggests that the EM system provides the offender with a highly structured lifestyle yet keeps the responsibility for its imposition far outside of the typical. In many ways, the loss of control has the potential to lead to less stress in the day to day experiences of the offenders and their families, which will in turn lead to further progress and potential success. This clearly shows that the EM process may be beneficial for the offender as well as for the family with which the offender lives.

The impact of family environments on the offender is therefore a key question for any application of EM monitoring. Daems (2015) illustrates the argument that social and familial perception is a primary concern of the EM process and the reintegration process. It has been argued that family members and those closest to the offender suffer the most, causing the need for continuous development and renewal of the process (Palermo, 2015).

There is a body of research which suggests that there are negative impacts on families which need to be considered in any implementation of EM. Work by Bales et al., (2010) shows that almost half of the offenders experienced a negative impact on relationships, children, and friends. In particular there appears to be increased strain and stress on families living with an offender under EM. Coyle et al., (2015) finds evidence that supports the increased strain

placed on the family unit, often leading to unhappy conditions for the offender and their family. Muncie (1990) notes that EM may increase cases of family violence due to the monitoring the offender in that home is exposed to. Common examples of stress factors related to the EM process that cause familial friction include late night calls, checking on the location of the offender or the need to attend a meeting taking priority over other matters that the family members may deem important (Daems, 2015). In each of these cases, the additional stress placed on the family as a whole could impact the successful completion of the programme. Some critics of the EM system have come to this same conclusion, holding out that the expansion of the programme is premature at best (Jones, 2014).

A clear disadvantage that is acknowledged to place stress on both the offender and their family is the loss of privacy (Deuchar, 2011). This event has been cited as the underlying cause of a high stress home environment, which in turn makes the life and reintegration efforts of the offender that much harder. Heggie (1999) used an exit interview for respondents in Australia leaving the EM process. In the context of this study the single most disruptive aspect of the EM process was the monitoring calls. Furthermore, alongside the increased disruption is the financial strain that the family experiences and blamed for increased stress (Bulman, 2016).

Studies have shown however that families experiencing EM were also able to work past the hindrances and into a positive rehabilitation environment (Mainprize, 1995). The study by Mainprize (1995) is significant due to the fact that different reactions to the EM experience suggest no long term harm to either offender or the offender's relationships. Furthermore, Mainprize (1995) goes on to suggest that nearly all of the negative impacts could have been alleviated if the EM process had been better planned.

### **3.7.2 Social Stigma**

Social stigma is a key individual and social impact that can potentially arise from application of EM to offenders. Deuchar (2011) questions the efficacy of EM citing the influence of social stigmas and the increased need for

technological resources as clear weaknesses preventing any large scale use of the system. With critics including Palermo (2015) and Maquire et al., (2002) noting the tagging of offenders as a method of control social stigma holds the potential to negatively impact the offender unfairly. Supporting the notion that social perception is a primary part of the EM process, studies show offenders who were either embarrassed or humiliated by wearing monitoring bracelets or who considered the devices to be a badge of honour (Jones, 2014). Furthermore, sex offenders may be tagged which could extend negative connotations to all offenders subject to the tagging process (Jones, 2014).

Common among the emerging EM processes is the charge of discrimination among the offenders and their families, creating a social and perceptual obstacle from the very beginning (Di Tella and Schargrotsky, 2013). Some argue that the system is set up to exclude the individual from family events. Research shows that the key issue for women and married men under EM centred on shame and social stigma (Gainey et al., 2000).

Bales et al., (2010) examines the issue of stigmatisation and employment problems related to GPS tracking systems for paedophile abduction/murders within laws that authorise lifetime GPS (Bales et al., 2010). Consistent subjection to these systems as Palermo et al., (2015) notes entails the loss of privacy for the individual and related family, leaving them open to exploitation and stigma in the larger social sense.

### **3.7.3 Psychological and Emotional**

Psychological and emotional impacts are a key area of social concern. Shoham et al., (2014) indicates a primary issue of EM use is the direct attachment to the human body, leading to an impression of physical intrusion and distaste in many cases. A potential next step is the development of tags implanted directly under the offender's skin (Paterson, 2015). Whilst this is still to be developed, there are issues in relation to human rights and legal challenges which promise to be important issues for the EM industry over the course of the next decade.

The challenges that the offenders may be exposed to in terms of emotional and mental distress may result in further issues later for the offender (Coyle et al., 2015). Evidence shows that the EM process has an impact on employment, psychological health and social relationships to those close to the offender (Nellis et al., 2013). Studies have shown that some offenders on EM experienced a slight form of depression (Wohdal et al., 2015). Gainey et al., (2000) conducted a qualitative EM study in the US drawn from insights from associated administrative staff. Findings pointed to privacy issues, shaming issues, disruptiveness, social restrictions, with EM conditions excluding exercise, running errands, socialising or meet friends, and eating out (Gainey et al., 2000). These elements were among the most disruptive, lending clear stress levels to the EM experience. Further secondary issues related to work problems including the absence of overtime and law enforcement phone calls at work (Gainey et al., 2000). With this study focused on the negative and punitive measures of the EM, results identified the perception however that the EM system was superior to incarceration.

Another qualitative study showed that mostly single mothers had a much harder time succeeding in the EM process, leading to questions of stress alleviation. This result extended into circumstances where the male was in the house with most of the women going through the EM process burdened with childcare and maintaining the home in addition to earning money (Maidment, 2002). Maidment (2002) interviewed women in order to compare responses to a random sample of men that had completed the same EM process. A similar study by King et al., (2003) shows results that support the same conclusions despite the low number of offenders and sponsors interviewed. Whilst the pool of respondents included probation officers, security managers, and prison board members, there was a clear consensus that monitored women appeared to be more burdened by EM than men (King et al., 2003). Furthermore, females were far more subject to the shame of social stigma that accompanied wearing the anklet, with many asking for more support from the correctional agency as a method of offsetting the experience. Many women reported that they undertook the sponsor role for the sake of their children, whilst still others experienced

tension in their relationships in the form of more arguments and increased stress (King et al., 2003).

### **3.8 Implementation Science**

This research draws on implementation science theory to inform an analytical framework that is sufficiently comprehensive to guide the comparative analysis of the implementation of EM in the UK and UAE.

Theories and models of Implementation Science (IS) focus on how innovation is diffused organisation wide and maintained in daily practices. Implementation science goals are directed towards providing enhanced understanding of which and why implementation strategies are effective, and in what contexts (Grimshaw et al., 2006). Schoville (2015) highlights that IS models are principally deployed to introduce the key innovation of evidence-based practice and as such identify approaches to facilitate successful implementations for a wide variety of evidence, settings and individuals. It is argued that IS models are thus easily transferable to other types of implementations including technology. Similar processes are highlighted, such as the critical role of leaders in building an organisational culture that promotes and facilitates the use of the technology and provides strong clarity on roles and teamwork (Schoville, 2015). Implementation of technology is argued to be contingent on the context in which it is conducted (Abbott et al., 2014).

Until now the literature has not provided a generalised implementation theory however a wide diversity of implementation models have been proposed (Schoville, 2015) and acknowledged to differ in implementation processes and precision. The introduction of innovation as a dependent variable represents a common feature shared by all implementation models. IS models principally focus on the design of implementation strategies aimed at ensuring research is translated into practice (Schoville, 2015). Various IS models have been introduced and used in the real world. Table 3 outlines the application of different implementation science frameworks to support, guide and evaluate implementation of technologies in different contexts. There has been limited application to the field of criminal justice with the large concentration focused on

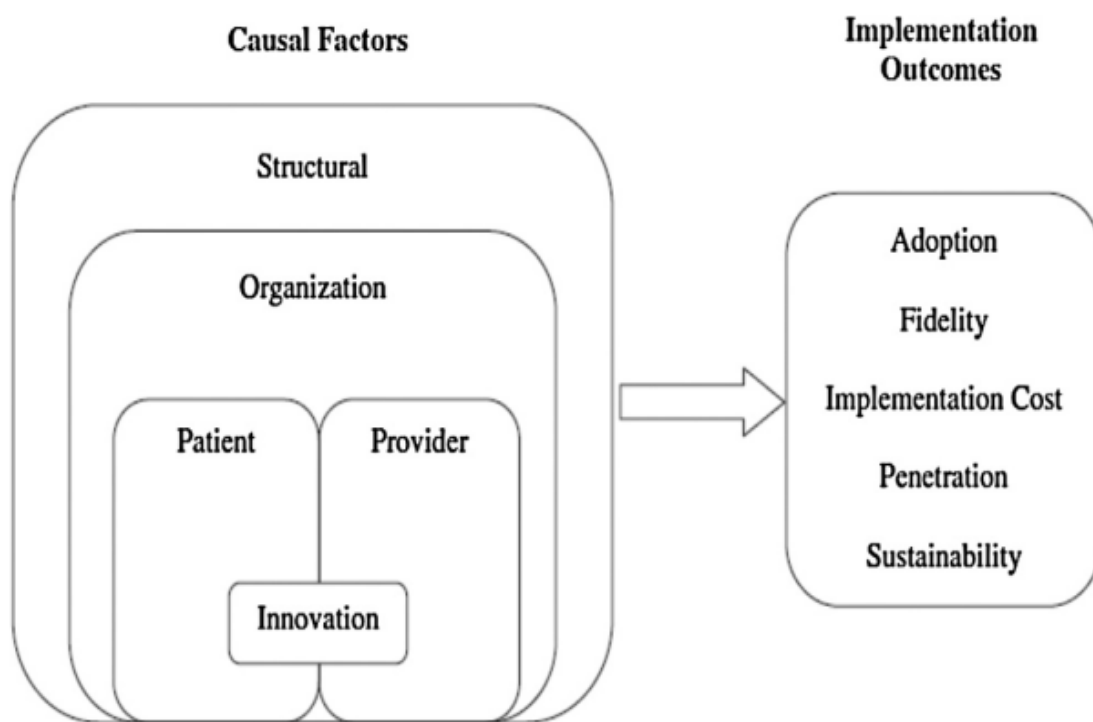
health sector implementations. Nevertheless many of the dimensions and factors are generalisable to this research.

The Knowledge-to-Action and Unifying Model of Innovation frameworks are shown to incorporate policy makers as potential users (Schoville, 2015). Evidence further shows that the Translating Research into Practice (TRIP) model has been used to support implementation of a care management solution (Tschannen et al, 2010). The TRIP model was found to successfully assist in complex clinical issues such as pressure ulcer prevention and treatment (Tschannen et al, 2010). Other studies have adopted a multi-level framework forecasting the outcomes of implementation based on user preferences in relation to electronic medical records and quantitatively identifying the significance of factors promoting and constraining innovation (Struik et al., 2014). A key finding showed that during the implementation of the new technological innovation different users had different needs.

**Table 3 Implementation Science Frameworks**

Author	Framework	Sector	Description
Damschroder et al., (2009)	CFIR	Health	Consolidated framework for implementing evidence-based practice in the health sector based on synthesised CFIR research findings
Abbott et al., 2014	CFIR	Health	Evaluation of implementation of best practice in health IT innovations
Aarons et al., 2011	Multi-level four-phase model	Public Services	Advanced a conceptual model for implementing evidence-based practice in the public services sector
Greenhalgh et al., 2005	Unifying Model of Innovation	Health	Empirically tested integrated model for innovation diffusion in the health sector
Schoville, 2015	Integrated Technology Implementation Model	Health	Empirically tested model integrates implementation science and technology adoption frameworks for health IT implementations
Klein et al., 1996	Innovation Implementation Framework	General	Conceptually specifies the antecedents of complex innovation implementations
Jacobs et al., 2015	Innovation Implementation Framework	Health	Provides quantitative confirmation of model fit and effectiveness for implementation outcomes
Tschannen et al., 2010	TRIP	Health	Used to support implementation of a care management solution
Wilson et al., 2011	Knowledge-to-Action framework	Health	Provides evidence-based practice for translating scientific knowledge into action in the health sector
Rycroft-Malone, 2004	PariHS Framework	Health	Framework for guiding implementation of evidence-based practice in health services
Aarons et al., 2012	Dynamic Adaptation Process (DAP)	Social Services	Empirically tested framework for implementing planned adaptations to evidence-based practices

The multilevel framework for implementation research comprises a set of measures for assessing different constructs theorised as influencing implementation outcomes, such as structural, organisational, patient, provider and innovation-level factors, as shown in Figure 2 (Chaudoir et al., 2013). Under this model implementation outcomes provide the focus of evaluation against multilevel causal factors. According to Chaudoir et al., (2013), the set includes 62 existing measures that are highly relevant to implementation science applied to Health Information Technology (HIT). The technology focus is compatible with the technology context of EM implementation.



**Figure 2 Multi-level Framework for Implementation Research**

Source: Chaudoir et al., (2013, cited in Abbott et al., 2014, p. e14).

Technology adoption theory provides a further perspective in terms of analysing implementation of new technologies. Technology Adoption Models (TAM) are viewed to focus primarily on an individual level of analysis, in contrast to Implementation Science models centred on analysis at organisational level, and bounded by health systems, the influence of external factors such as regulations and the implementation strategies introduced in literature. Multiple IS models focus principally on describing the implementation process. TAMs



however concentrate on individual perceptions of ease of use, usefulness and actual use (Schoville, 2015). Table 4 provides an outline of the differences and similarities between IS and TAM models (Schoville, 2015). In terms of electronic monitoring evaluation the elements of these models contribute analytical components in terms of the technology adoption factors.

**Table 4 Differences and Similarities in IS and TAM Models**

Comparison	IS Model	TAM
Level of Analysis	Organization	Individual
Dependent Variable	Adoption of EBP	Adoption of Technology
Implementation interventions	Yes	No
Context	Healthcare	Information technology & other technologies
Assess for Barriers	Yes	No
Patient Experience	Yes	No
External Factors Considered	Yes	No

Source: Schoville (2015, p. 42).

### **3.8.1 Consolidated Framework for Implementation of Research (CFIR)**

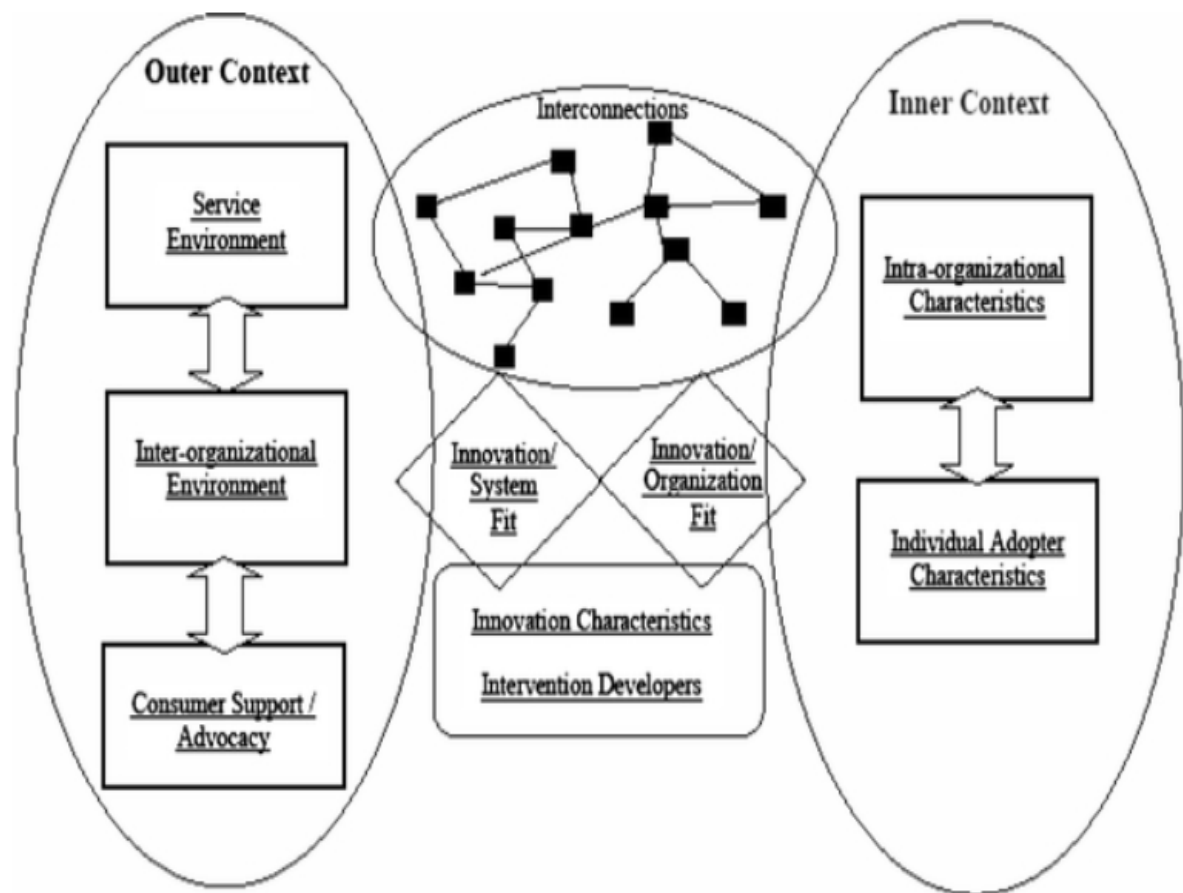
The Consolidated Framework for Implementation of Research (CFIR) is argued to provide an overall typology to facilitate the development of implementation theory and substantiation of what strategies work, why and where (Damschroder et al., 2009). CFIR has emerged from a comprehensive meta-analysis of implementation theories including the PARIHS framework (Kitson, 1997), the conceptual model by Greenhalgh et al., (2005) identifying the determinants of diffusion of innovation, the framework for Transferring Research Into Practice (Simpson, 2002), the Technology Implementation Process Model (Edmondson et al., 2001), and the Multi-level Conceptual Framework of Organisation Innovation Adoption (Frambach et al., 2001). CFIR is aimed at clarification and generating an implementation knowledge base drawn from different studies and settings (Damschroder et al., 2009). The CFIR

comprises five key pillars of: intervention characteristics; outer- and inner-setting; characteristics of the people included, and the process of implementation. Each pillar is associated with defining constructs and appropriate methods for measurement (Ferlie and Shortell, 2001). The model identifies four constructs associated with outer setting such as patient needs, and twelve constructs associated with inner setting such as culture and leadership engagement. In relation to individual characteristics five constructs are determined while an additional eight constructs are related to process including planning, evaluation and reflection. Detailed definitions are provided for each construct (Damschroder et al., 2009).

The CFIR is argued to provide a practical structure for approaching real-world multi-level, complex, interactional and temporary construct states through accepting and consolidating critical concepts from implementation theories presented in the literature. The authors assert its usefulness for guiding formative evaluations and generating further knowledge on implementations in diverse studies and contexts (Damschroder et al., 2009).

### **3.8.2 Exploration, Preparation, Implementation and Sustainment model (EPIS)**

The EPIS model proposed by Aarons et al., (2011) focuses on the role of public service delivery organisations and the public service systems within which they operate within implementations. The model proposed is a multi-level, four phase framework of an implementation process in the context of public service delivery based on existing literature. The model considers the factors of two key dimensions of the outer and inner context for public sector service systems that are likely to be influential globally and at different phases of implementation (Aaron et al., 2011). In the outer context these are identified as Sociopolitical/Funding, Client Advocacy and Inter-organisational Networks while the inner context is associated with influencing factors such as Organisational Characteristics and Individual Adopter Characteristics (Aarons et al., 2011). Figure 3 outlines the conceptual model of global factors considered to impact implementations within public services in which the two dimensions of outer context and inner context are shown to be interconnected (Aaron et al., 2011).



**Figure 3 Model of Global factors Influencing Public Service Implementations**

Source: Aarons et al., (2011, p.5).

The model further identifies the importance of inner and outer contextual factors at four different implementation phases of Exploration, Adoption/Preparation, Implementation and Sustainment, proposing that different elements of the inner and outer context may assume greater significance or influence or emerge differently during different implementation phases. Table 5 provides further detail of the conceptual model of implementation phases and the factors influencing public sector implementations (Aarons et al., 2011). The outer context is argued to be influenced by socio-political/funding factors as well as inter-organisational networks. In the exploration phase, socio-political and funding contexts and initiatives at the state and federal level are suggested to influence exploration of implementations while state legislatures, the private sector, and professional

bodies are all acknowledged to shape the context for exploration of implementations. Encouraging exploration of implementation the influence of inter-organisational networks with which the agency is involved is recognised, as best practices and new innovations among other organisations are likely to be perceived leading to increased implementations. In the adoption phase socio-political factors include impetus towards adoption from new legislation or legislative changes, while national level organisations that advocate on the behalf of service clients may also be highly influential in shaping the socio-political context towards adoption both in terms of conceptualisation and legislation. In the implementation phase, formal and informal inter-organisational networks, such as professional bodies for service providers, are proposed to be significant sources of knowledge and information and assistance on the implementation. In the final sustainment phase, socio-political dimensions such as leadership and policy become important in addition to funding, and public-academic collaboration. Policies to support ongoing sustainment of practices are considered vital at this stage and can emerge at legislative, system or organisational levels (Aarons et al., 2011).

**Table 5 Conceptual Model of Factors Influencing Implementations at Different Phases**

Exploration	Adoption/Preparation	Active Implementation	Sustainment
<b>Outer Context</b> <b>Sociopolitical Context</b> <ul style="list-style-type: none"> <li>○ Legislation</li> <li>○ Policies</li> <li>○ Monitoring and review</li> </ul> <b>Funding</b> <ul style="list-style-type: none"> <li>○ Service grants</li> <li>○ Research grants</li> <li>○ Continuity of funding</li> </ul> <b>Client Advocacy</b> <b>Interorganisational networks</b> <ul style="list-style-type: none"> <li>○ Direct networking</li> <li>○ Indirect networking</li> <li>○ Professional organisations</li> <li>○ Technical assistance centres'</li> </ul> <b>Inner Context</b> Organisational characteristics <ul style="list-style-type: none"> <li>○ Absorptive capacity</li> <li>○ Knowledge/ skills</li> <li>○ Readiness for change</li> <li>○ Receptive context</li> </ul> Culture <ul style="list-style-type: none"> <li>○ Climate</li> <li>○ Values, Goals</li> <li>○ Social Networks</li> <li>○ Perceived need for change</li> </ul>	<b>Outer Context</b> <b>Sociopolitical</b> <ul style="list-style-type: none"> <li>○ Federal legislation</li> <li>○ Local enactment</li> <li>○ Definitions of "evidence"</li> </ul> <b>Funding</b> <ul style="list-style-type: none"> <li>○ Support tied to federal and state and policies</li> </ul> <b>Client advocacy</b> <b>Interorganisational networks</b> <ul style="list-style-type: none"> <li>○ Organisational linkages</li> <li>○ Leadership ties</li> <li>○ Information transmission</li> <li>○ Formal</li> <li>○ Informal</li> </ul> <b>Inner Context</b> Organisational characteristics <ul style="list-style-type: none"> <li>○ Size</li> <li>○ Role specialization</li> <li>○ Knowledge/skills/ expertise</li> <li>○ Values</li> </ul> Leadership <ul style="list-style-type: none"> <li>○ Culture embedding</li> </ul> Championing adoption	<b>Outer Context</b> Sociopolitical <ul style="list-style-type: none"> <li>○ Legislative priorities</li> <li>○ Administrative costs</li> </ul> Funding <ul style="list-style-type: none"> <li>○ Training</li> <li>○ Sustained fiscal support</li> <li>○ Contracting arrangements</li> <li>○ Community based organisations.</li> </ul> Interorganisational networks <ul style="list-style-type: none"> <li>○ Professional associations</li> <li>○ Cross-sector</li> <li>○ Contractor associations</li> <li>○ Information sharing</li> <li>○ Engagement in implementation</li> </ul> <b>Inner Context</b> Organisational characteristics <ul style="list-style-type: none"> <li>○ Structure</li> <li>○ Priorities/ goals</li> <li>○ Readiness for change</li> <li>○ Receptive context</li> <li>○ Culture/climate</li> </ul> Innovation-values fit <ul style="list-style-type: none"> <li>○ Structural fit/ideological fit</li> </ul> Individual adopter characteristics <ul style="list-style-type: none"> <li>○ Demographics</li> <li>○ Adaptability</li> </ul> Attitudes	<b>Outer Context</b> Sociopolitical <ul style="list-style-type: none"> <li>○ Leadership</li> <li>○ Policies</li> <li>○ Federal initiatives</li> <li>○ State initiatives</li> <li>○ Local service system</li> <li>○ Consent decrees</li> </ul> Funding <ul style="list-style-type: none"> <li>○ Fit with existent service funds</li> <li>○ Cost absorptive capacity</li> <li>○ Workforce stability impacts</li> <li>○ Public-academic collaboration</li> <li>○ Ongoing positive relationships</li> <li>○ Valuing multiple perspectives</li> </ul> <b>Inner Context</b> Organisational characteristics <ul style="list-style-type: none"> <li>○ Leadership</li> <li>○ Embedded EBP culture</li> <li>○ Critical mass of EBP provision</li> <li>○ Social network support</li> </ul> Monitoring/support <ul style="list-style-type: none"> <li>○ EBP Role clarity</li> <li>○ Fidelity role system</li> <li>○ Supportive coaching</li> </ul> Staffing

Source: Adapted from Aarons et al., (2011, p.5).

According to Aarons et al., (2011) the inner context is influenced by organisational characteristics and inner adopter characteristics. At the exploration phase of implementations, three key organisational characteristics are identified as influential of absorptive capacity, readiness for change and receptive context. Important characteristics of individual adopters include social networks, the perceived need for change and values and goals. In the adoption stage, organisational characteristics such as roles, structure, leadership, and values and size are argued to have greater significance. During the implementation phase individual characteristics such as training, demographics, innovation attitudes, and adaptability are among significant influencing factors. In the final sustainment phase, leadership and ongoing training and support are some of the factors considered vital at this phase to sustain and embed practice within organisational culture. Overall, the four phases are asserted to offer a framework for approaching both the challenges and opportunities of implementations in public services. It is suggested that possessing increased understanding of the challenges likely to emerge during implementation phases could help support multiple stakeholders to more successfully navigate the complex process of service implementations (Aarons et al., 2011).

### **3.9 Theoretical Framework**

The different themes and theories in the literature can be drawn upon to provide a theoretical framework for investigating the implementation of EM in the UAE. The literature review has examined the emergence of electronic monitoring and adoption globally and the evolution of different generations of technology. In terms of the objective and benefit of EM the body of evidence for recidivism, cost, compliance and social and individual impacts is inconclusive. While the literature identified key areas of applications for EM and the relative merits and driving factors for the application of EM for different offenders, its perceived applicability and process of implementation requires further research. In particular, the discussion in the literature reveals a knowledge gap in terms of understanding the factors that influence the success of EM between different contexts.

The debate surrounding the role and effectiveness in implementing EM is grounded in theories of rehabilitation, deterrence, separation, societal strain, and social learning.

The primary research focus of this study is on *How effective has the early phase of implementation of the pilot electronic monitoring project been in addressing the needs of stakeholders within the national, social and criminal justice context of the UAE?*

Criminal justice theories discussed are important in framing how different stakeholders evaluate the potential and actual consequences of implementing EM in UAE. They help in explaining the potential challenges and impacts both positive and negative of the implementation of EM. They place a focus on understanding the offenders' personal and social context in terms of different potential effects: deterrence, learning and development, rehabilitation, psychological or routine activity (Palermo et al., 2015; Wiseman et al., 2013; Felson and Clarke, 1998).

To determine the effectiveness of EM in a new context it is instructive to ask *What are the drivers of implementation of EM in the UAE?* To address this retribution and rehabilitation theory provide a focus on that society's philosophical position and attitude to criminal behaviour and justice. These theories can help in understanding the drivers of EM implementation in the new context and in evaluating the extent to which public attitudes to punishment and rehabilitation shape acceptance and support for EM. Existing research from different countries shows that the strategic impetus and benefit associated with its implementation has been identified in terms of reducing prison populations, costs and recidivism (Bulman, 2016; Wodahl et al., 2015; Jones, 2014).

While EM is discussed as a criminal justice tool, importance is placed on understanding and integrating a broader perspective of the public, professional and political sentiment towards the role of electronic monitoring. This relates to the question of *What are the challenges of transferring EM technology and knowledge to the UAE?* Further, is it possible, in these theories, to explain what are the different stakeholders' perspectives on the potential consequences of EM in asking *How do different stakeholders evaluate the potential and actual*

*consequences of implementing EM in UAE?* The discussion emphasised the importance of knowledge awareness, support and engagement of diverse stakeholders beyond those who have expressed interest in the implementation of EM as a critical factor. In order to understand the efficacy of EM within the criminal justice context, it is important to identify and further understand the complex and dynamic factors that impact EM and the implementation process. The influence of localism and professional attitudes is one element that emphasises the need to understand the importance of local cultural contexts and the associated challenges that affect the transfer of EM to a new context. This aspect places focus on understanding local characteristics and factors that influence support for EM.

Additionally, this frames the investigation of EM in terms of capabilities and advantages for rehabilitation within the new context. Deterrence theory can be instructive to explore EM's impacts and perceived effectiveness in terms of offenders' compliance and behavioural change. This discussion indicated that some theories place a focus on the individual socio-cultural context highlighting routines, relationships and social processes in understanding the behaviour of offenders and impacts of punishments. Routine activity theory places a focus on understanding individual social context in terms of everyday activities, practices and relationships (Felson and Clarke, 1998). This can be useful in furthering understanding of the impact and challenges of electronic monitoring application of EM within new contexts. A review of challenges from the literature provides indication of a diverse range of technological, legal and social factors that have been experienced in different EM implementations.

Meanwhile, the dearth of practice-based evidence in support of the effectiveness of EM in spite of the decades of adoption underscores the value in exploring the application of EM technology and knowledge to new contexts, and in understanding the effectiveness of EM and evaluation of EM implementation. The lack of evidence on electronic monitoring effectiveness in criminal justice (Mrvic-Petrovic, 2015; Daems, 2015; Jones, 2014) is underscored by the contrasting attention electronic monitoring has received in healthcare literature which shows a significant body of work on the effectiveness of EM in different areas of healthcare (Lancaster et al., 2018; Albahri et al., 2018;



van Heuckelum et al., 2017). In particular within the implementation science literature there has been limited application to the field of criminal justice with the large concentration focused on health sector implementations (Schoville, 2015; Abbott et al., 2011; Wilson et al., 2011). Existing research has yet to apply an implementation science approach in understanding the diffusion of EM to new contexts. Applying a comprehensive implementation framework can provide key insights to address the question of *What can be deduced from this investigation that adds to our knowledge and understanding of EM as a punitive as well as rehabilitative system in an environment which is new to this approach?*

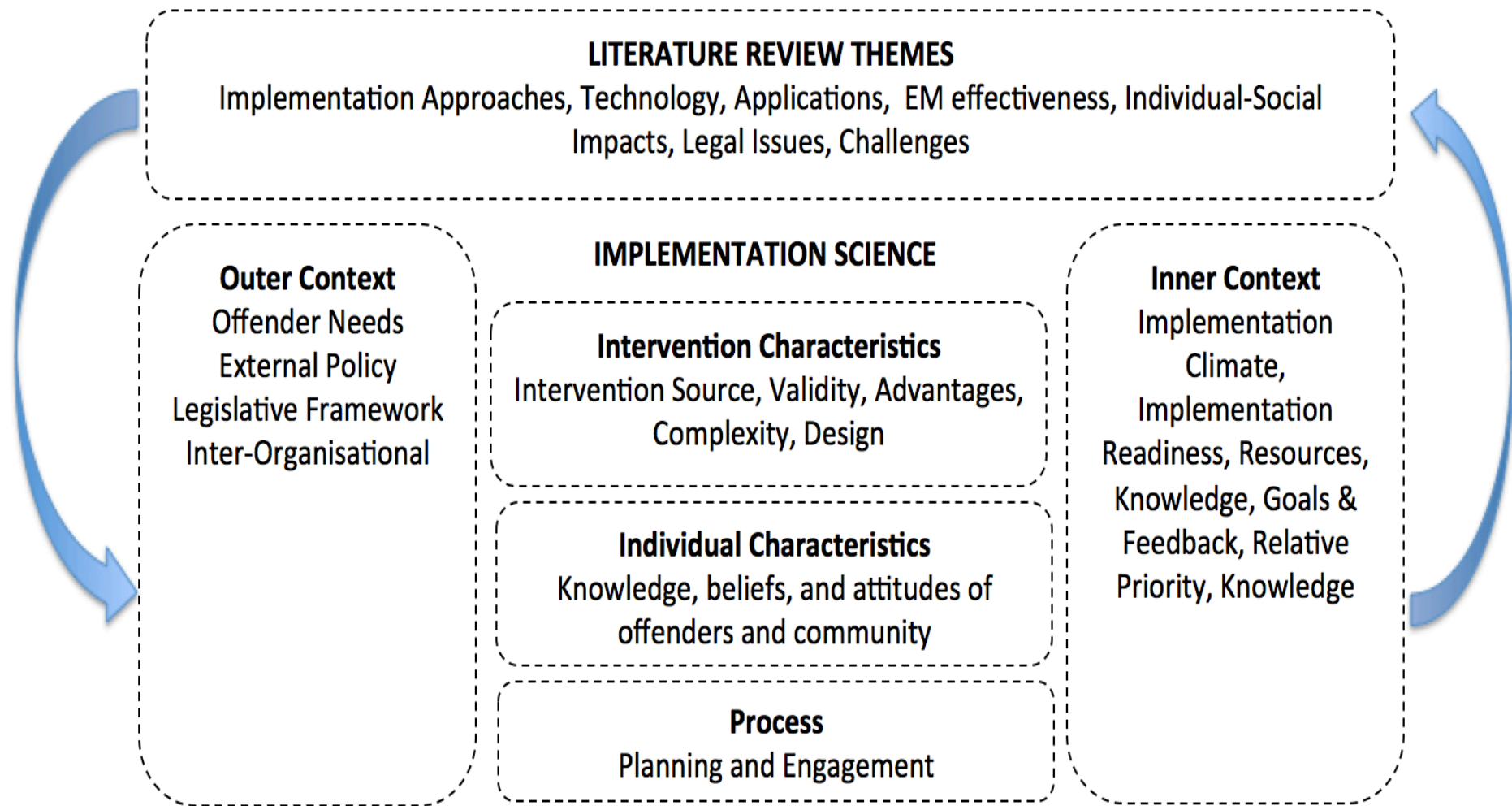


Figure 4 Theoretical Framework

**Table 6 Analytical Framework for Electronic Monitoring**

<b>Intervention Characteristics</b>	
Intervention Source	Stakeholder Perceptions about Electronic monitoring
Validity of Intervention	Stakeholders' perceptions of the quality and validity of evidence supporting the belief that the intervention will have desired outcomes.
Relative Advantage	Stakeholders' perception of the advantage of implementing the intervention versus an alternative solution.
Complexity	Perceived difficulty of implementation, reflected by duration, scope, radicalness, disruptiveness, centrality, and intricacy and number of steps required to implement.
Design	Characteristics, technology adoption and technology barriers
<b>Outer Context</b>	
Offender Needs	The extent to which offenders needs, as well as barriers and facilitators to meet those needs, are accurately known and prioritized
Legislative Framework	Legislative needs, priorities and provisions
External Policy	A broad construct that includes external strategies to spread interventions, including policy and regulations (governmental or other central entity), recommendations and guidelines
Inter-organisational	Organisational linkages. Formal and informal inter-organisational networks, such as agencies, professional bodies for service providers, are proposed to be significant sources of knowledge and information and assistance on the implementation
<b>Inner Context</b>	
Implementation Climate	The absorptive capacity for change, shared receptivity of involved individuals to an intervention, and the extent to which use of that intervention will be supported, and expected within the criminal justice system
Relative Priority	Individuals' shared perception of importance of the implementation within the organization.

Goals and Feedback	The degree to which goals are clearly communicated, acted upon, and fed back to staff, and alignment of that feedback with goals.
Readiness for Implementation	Tangible and immediate indicators of organizational commitment to its decision to implement an intervention.
Available Resources	The degree to which practitioners and organisations have awareness of electronic monitoring the level of resources dedicated for implementation and on-going operations, including money, training, education, physical space, and time.
Access to Knowledge & Information	Ease of access to digestible information and knowledge about the intervention and how to incorporate it into work tasks.
<b>Individual Characteristics</b>	
Knowledge & Beliefs	Individuals' attitudes toward and value placed on EM as well as familiarity with facts, truths, and principles related to the EM.
<b>Process</b>	
Planning	The degree to which a scheme or method of behaviour and tasks for implementing an intervention are developed in advance, and the quality of those schemes or methods.
Engagement	Attracting and involving appropriate individuals in the implementation and use of the intervention through a combined strategy

Adapted from CIFR and Aarons et al. (2011)

Application of the CFIR framework provides a list of constructs to examine implementation factors and through these factors be able to formulate deductions that can further understanding of EM. A review of implementation science frameworks and their application is conducted to inform the analytical framework for this research. This is integrated into the conceptual model in Figure 4. Drawing on this literature an analytical framework can be formulated that prioritises the factors and draws on key concepts from implementation science and technology adoption theory.

The different implementation science frameworks point to a comprehensive range of factors that should be considered to evaluate implementation of technology. This is advanced in terms of the critical success factors and conceptualisation of key factors at the different stages of implementation. However the broad range of factors cannot be practically implemented and it is therefore important to select those factors that are most relevant for the particular context of electronic monitoring in the UAE. Thus the analytical framework that will guide this research will be based on an integrated framework drawing on the CFIR construct. The analytical components are outlined in Table 6. Combining these models the analytical components of these models can be pragmatically applied to focus on areas on interest. This considers those factors out of context and in context and a particular phase of implementation both in the UAE and in the UK.

The literature reveals aspects of the implementation process that may negatively impinge on formative and summative outcomes. In terms of the outer context external policy can be analysed to understand the extent to which it facilitates the transfer of EM. The literature emphasises key legal issues of privacy, offender rights, legal challenges, judicial discretions and oversight as well as issues of legitimacy in the application of EM within the overarching debate of punishment in society. From a social perspective, emphasis is placed on the management and welfare of the offender in examining the behavioural, psychological and emotional impacts on the offender, the risk of net widening as well as the family and broader social consequences of EM.

Analysis of the inner context and individual characteristics can provide insights to stakeholders' perception, acceptance and the support for EM. This can be viewed in terms of the perception of EM as a legitimate form of punishment as well as the efficacy of EM in terms of achieving outcomes from the perception of multiple stakeholders: offenders and offenders' families; a wide range of criminal and social justice institutions and professional bodies, and government, politicians and public interest groups. Perceived efficacy should be emphasised in terms of understanding the degree to which different stakeholders believe in the ability of EM to achieve their result. Low efficacy can undermine the implementation process and the effectiveness of EM in numerous complex and interrelated ways. The implementation process potentially influences the relative perceived advantage of EM. Understanding the factors that underpin perception and acceptance of EM can provide key insights into the factors that facilitate or inhibit its' adoption and application. Therefore efficacy can represent a useful starting point to understanding the overall utility of electronic monitoring.

Notably the use of EM emerges as highly complex, the success of which depends on interdependent and interconnected social and technical dimensions that interplay in unknown ways to influence its implementation. The evolving and highly technical nature of this intervention combined with the social element debated within the literature would suggest that this area of study would benefit from a socio-technical perspective. As the previous chapter has evidenced EM is a dynamic technology that has continually evolved over decades and will continue to develop during the different phases of implementation.

### **3.10 Summary of Key Findings**

The research on the implementation of EM in different countries globally highlights different implementation models that have evolved over time across a range of contexts. The technological evolution of EM was critically discussed in relation to the implementation approaches and the relationship with the strategic and criminal justice system priorities. The selection of the implementation approach can vary between technically focused implementation to a socio-technical approach that adopts a more human element in recognising the personal factors of offenders.

Furthermore, strategies relating to use of EM, modalities of electronic monitoring identified and target population influence a broad range of contexts resulting in interactions between different agencies and impacting in various ways on individuals, families and communities. The selection of the target population and the implementation of EM have been debated in relation to the decision-making processes and perceptions of stakeholders (including law enforcement, judiciary, prison, probation, and social services). In terms of implementation a key question emphasised by the literature is the degree to which stakeholders are engaged and support the strategy and process. Their views for instance on the appropriateness and effectiveness of EM for different contexts, to understand factors that may support or inhibit the success of EM.

The emergence of EM in the United States is a development that has been adopted and applied for different motivations and different contexts around the world. However after many decades of implementation quantitative evidence on the benefits and outcomes of EM is inconclusive. This chapter presented a review of the literature and identified key areas of evidence and discussion on the issues surrounding the use and implementation of electronic monitoring. Core areas of debate and theoretical perspectives point to emergent issues and research gaps that direct the focus of this study. Overall literature reveals that electronic monitoring has been evolving and in spite of several decades of application in many countries and numerous contexts its effectiveness has yet to be firmly established. The findings from numerous studies provide often diverging results on its impact and effectiveness and lack of insight into the role of the implementation process.

The chapter concluded with a review of implementation science and outlined a broad range of internal and external contextual factors that inform an analytical framework for conducting a comparative analysis of EM implementation between the UK and the UAE. Implementation science theory suggests that the CFIR framework can be employed as a structured approach for examining the implementation of EM and understanding complex contexts. The planning and implementation of the UAE pilot project provides a specific context to examine the issues discussed by utilising the key constructs of the CFIR framework that

address intervention characteristics, outer context and inner context, individual characteristics and process.



## **4 Research Methodology**

### **4.1 Introduction**

This chapter addresses the research design and approach employed to address the research questions and objectives of this study. This study adopts a case study strategy that uses mixed methods in a sequential design combining a qualitative approach for primary research and secondary data analysis. The research design is presented for all phases of the research process supported by discussion of the research issues and rationale for adoption. The chapter begins with a discussion of the research philosophy and suitability of the selected approach. This is based on the assumption that understanding and knowledge of the EM implementation process and transfer of EM technology can be best understood through a constructivist approach to obtain rich qualitative data from relevant insider experiences. This leads then to a discussion of the choice of the research strategy and the research methods that are employed. The final sections of this chapter detail the data collection and analysis procedures adopted and address key considerations of reliability, validity and ethical dimensions. These elements are discussed in relation also to the positionality of the researcher and the insider role of the researcher as a senior member of the EM implementation process.

### **4.2 Research Philosophy**

All research is based on an underlying philosophical approach which guides the design of the research (Saunders et al., 2009). Positivism and constructivism are two basic theories reflecting basic divergences in perspective. Positivism asserts an objective and permanent reality external to human consciousness and able to be explained through establishing causal laws (Bryman and Bell, 2007). While a positivist approach influences objective measurement, it is constrained in understanding subjective and individual perspectives in relation to electronic monitoring. Constructivism is associated with opposing philosophical assumptions in which the continuous activities and practices of social actors constitute social reality. Each actor is believed to construct meaning in their own way of a specific phenomenon, with the resulting multiple realities all considered valid however potentially contradictory (Bryman

and Bell, 2007). The adoption of a constructivist approach supports the provision of a more holistic account of EM project implementation through the emphasis on exploring multiple perspectives (Cresswell, 2007). This enables a complex and detailed understanding to be developed of the phenomenon.

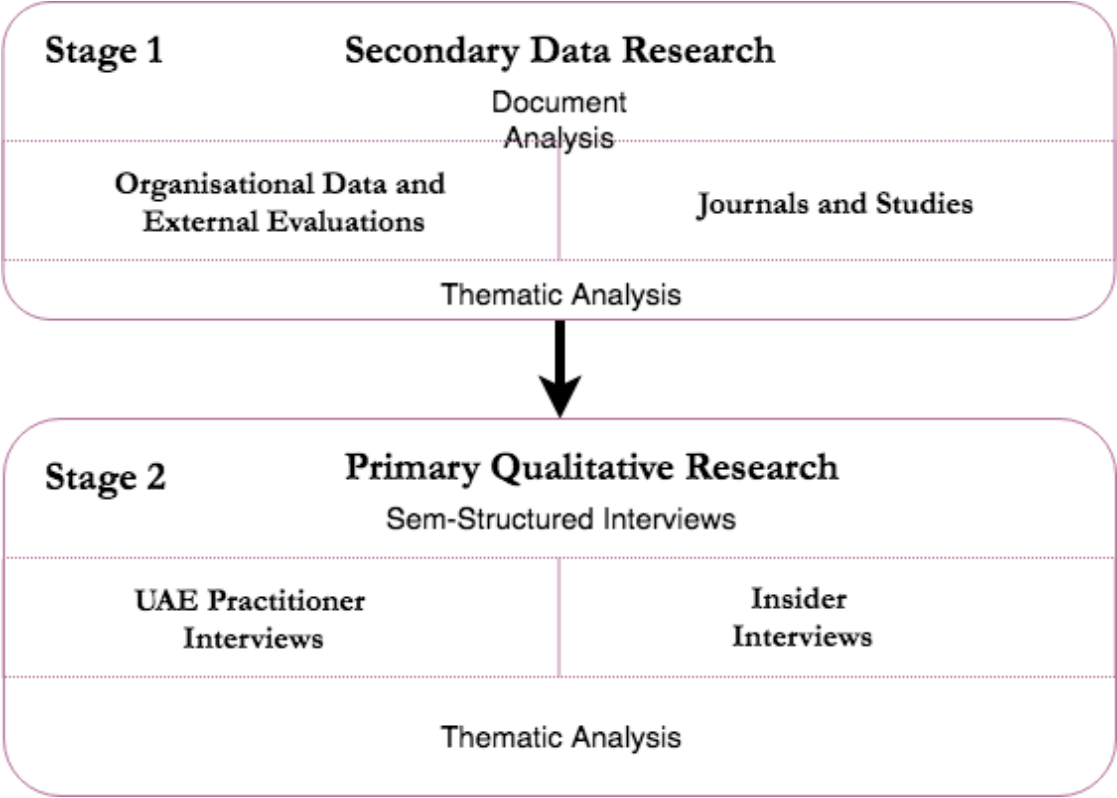
### **4.3 Research Strategy**

This study adopted a single case study strategy in order to reveal the detail of the experiences and interactions of participants involved in the implementation of the EM project in the UAE. A case study is a scientifically-based inquiry that can examine a phenomenon that is the implementation of EM within its contextual reality while accounting for unclear boundaries between context and phenomena (Yin, 1994). This approach provides opportunity to generate qualitative data from across multiple sources that is critical to support the active search for evidence and enabling data triangulation within the EM implementation process. Case studies are highly appropriate strategies when the aim is to gain in-depth explanations of complex issues related to social behaviour and have been applied across many different areas and disciplines (Saunders et al., 2009; Yin, 1994).

The choice of a single case study design has been constrained due to the fact that the case in question is the first and only implementation of EM in the UAE. A case study strategy provides a high degree of flexibility in the choice of multiple methods of data collection (Yin, 1994). Figure 5 provides an overview of the case study methodology which for this research combines both primary and secondary research methods including semi-structured interview, insider research, and secondary data analysis to gather qualitative data.

This case study is focused on the single case of a pilot implementation of electronic monitoring in the UAE, an environment new to this approach. Nevertheless the strategy includes a strong comparative element in the use of secondary data on UK EM collected from external reports and journals to uniquely compare and contrast a single live, ongoing project implementation in the UAE with the lengthy and broad implementation experience of the UK. A comparative design element supports the identification of effective practices or policies (Collier, 1993). The UK provides a rich source of experience with

electronic monitoring implementation that is beneficial for comparing different aspects and dimensions of implementation to learn lessons and identify and compare critical success factors and implications that impact on EM knowledge and technology transfer.



**Figure 5 Mixed Methods Sequential Research Design**

The single case study design encompasses the collection of both primary and secondary qualitative data. As Figure 5 shows in stage two the primary data was gathered using a combination of methods of insider accounts and semi-structured interviews that occurred in different phases of research. Insider accounts formed the predominant data for this study generated from qualitative interviews with key criminal justice actors and stakeholders involved in the actual planning, design and implementation of the electronic monitoring pilot in the UAE. Prior to this phase semi-structured interviews were conducted to explore the broader perspectives of senior actors in the UAE criminal justice system on the potential impacts of EM for the UAE. For the stage one secondary data collection the main focus was the UK experience of EM implementation sourced from official, government and academic sources and reports. Internal organisational documents were used for the purpose of supplementing broader

knowledge and insight into the UAE implementation of EM. The data gathered was then subject to analysis and interpretation using key thematic analysis techniques.

#### **4.4 Overview of Research Design**

The key elements of the research design are outlined in Figure 6 including the research guide for the focus of the analytical framework and the data collection. The five research questions are addressed by literature review themes and the development of the five components of the analytical framework adopted from the Consolidated Framework for Implementation Science. This framework which is informed by deductive themes arising from reviewed literature guides the development of data collection and analysis.

## Research Questions

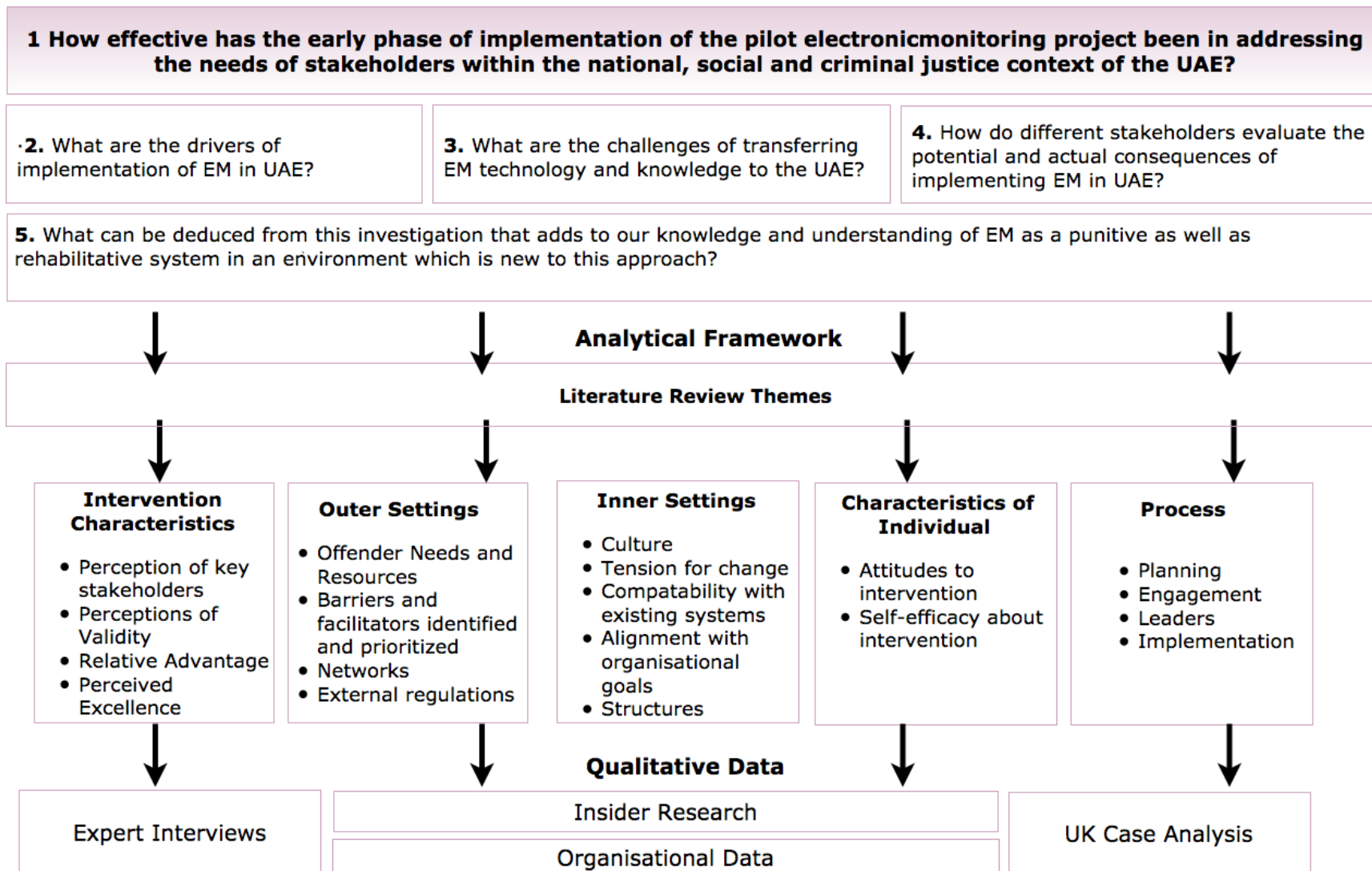


Figure 6 Overview of Research and Analysis

## 4.5 Research Methods

The research process utilises multiple methods for data collection: semi-structured interviews, insider accounts, and secondary data analysis.

Predominantly an insider account method was utilised with the aim of generating an in-depth, qualitative account of the implementation of electronic monitoring in the UAE. Increasingly adopted across a growing range of fields, insider research involves the investigation of one's own social group, culture or organisation of which the researcher is additionally a member (Greene, 2014). To collect insider data qualitative interviews were conducted with key actors and stakeholders with significant relevant experience in the planning, design and implementation of EM in the UAE. Participants were beneficially drawn from across the criminal justice spectrum encompassing a range of different key government agencies and bodies. This provided the opportunity to obtain diverse insights and uncover different perspectives and experiences to provide an in-depth and holistic account of the actual and potential consequences of EM implementation in the UAE and the challenges and critical success factors that affect EM knowledge transfer. Interviews included six participants from different departments within Abu Dhabi police, four senior judicial actors, and two representatives from the Ministry of Interior in addition to social work and prisons agency representatives.

A key advantage of insider research is the knowledge it can provide from "thick descriptions" of the research phenomenon by enabling collection of rich and insightful data (Wolcott, 1999). The adoption of an insider approach in this study was driven by the unique position of the researcher to study the issue of EM in depth and with specialised knowledge (Costley et al., 2010), allowing the generation of a specific, detailed and holistic account of the EM implementation. Significant knowledge advantages exist in terms of embeddedness in and pre-existing knowledge of the research context, phenomena and participants (Costley et al., 2010) which allowed this researcher to merge into situations while not disturbing social settings (Aguiler, 1981). In relation to participants there is greater potential for a more authentic and truthful understanding, especially as insider researchers can use established intimacy to ask more

meaningful questions and gain greater access and acceptance, especially to more marginalised perspectives (Merriam et al., 2001).

The insider accounts were preceded by semi-structured interviews conducted with a sample of senior and leading criminal justice actors to gather professional perspectives and insights from across the criminal justice system on the potential for EM in the UAE, its consequences and impacts within the UAE judicial system and the challenges and issues that may affect implementation. This method combines a pre-arranged set of open-ended interview questions with the opportunity for interviewers to choose to investigate further specific responses or themes (Saunders et al., 2009). The method is widely acknowledged as a highly flexible tool which can enable a rich and in-depth data set to be obtained in relation to EM in the UAE which can support meaning and understanding (Yin, 2013; Creswell et al., 2003).

Secondary data analysis was employed to gather both quantitative and qualitative data on the UK model of EM implementation. Secondary data analysis is a systematic analysis of extant data gathered by others to uncover answers to address research questions (Johnstone, 2014) and is a central method in criminal justice research (Kleck et al., 2006). Multiple different sources may be examined to acquire secondary data (Easterby-Smith et al., 2012). For this research data was collected from across academic studies and grey literature that included seminal UK and cross-national research and reports, government-commissioned research, key texts, UK official statistics, and academic articles. Much of this literature explored the effectiveness of EM for outcomes such as reoffending, compliance, and reducing costs. In addition primary qualitative data for the UAE was supplemented by secondary data from organisational documents and records mainly related to legal guidelines and EM policy and procedures.

The frequently high quality of secondary data is widely acknowledged, allowing access and use of larger sets of data and samples entailing greater representativeness of the target population, and integrating significant breadth. This further supports the increased generalisability and validity of the findings (Bryman and Bell, 2007). A key benefit is the cost-effectiveness and

convenience the method provides, which helps overcome the time and geographical constraints inherent within this study (Smith, 2008).

#### 4.6 Instrument Design

Two instruments were developed for the data collection for the semi-structured interviews and the schedule for insider research. The instruments were theoretically grounded in the literature themes and the validated instrument related to implementation science.

The question items for the semi-structured interviews have been formulated based on the key themes to have emerged inductively from literature and theory. Aligning with these themes, interview questions focused on areas found to impact EM implementations such as social factors, technology and the processes used. Each of six key question items were supported by a number of follow-up questions designed to elicit in-depth and detailed observational information. The question items and sources are detailed in Table 7:

**Table 7 Question Items**

Interview Themes	Source
How and why EM is implemented in the UAE	Palermo, 2015; Bulman, 2016; Jones, 2014; Wodahl et al., 2015
The implementation processes involved	Palermo, 2015; Nellis, 2013; Robinson et al., 2015; Paterson, 2015; Renzema et al., 2005
The extent of integration with other services and agencies	Daems, 2015; Wiseman, 2013; Deuchar, 2011
Offenders' and families' perspectives	Coyle et al., 2015; Daems, 2015; Deuchar, 2011; Bales et al., 2010; Muncie, 1990
Challenges and issues	Bulman, 2016; Mrvic-Petrovic, 2015; Jones, 2014; Di Tella and Schargrotsky, 2013; Renzema et al., 2005



The EM technologies and system deployed	Coyle et al., 2015; Paterson, 2015; Jones, 2014; Di Tella and Schargrodsky, 2013; Bales et al., 2010
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The design and conduct of the insider interviews drew on and was shaped by the Consolidated Framework for Implementation Research (CFIR), a widely implemented framework for the assessment of implementations across multiple disciplines and fields and which has emerged from a comprehensive meta-analysis of implementation theories (Greenhalgh et al., 2005; Simpson, 2002; Edmondson et al., 2001; Kitson, 1997). This focuses on key intervention characteristics such as intervention source and stakeholder perceptions, outer and inner setting, process and individual perspectives and perceptions to provide a basis for exploration of the implementation from the insider's perspective. Appendix 4 presents the interview schedule based on prioritised dimensions, sub-questions and question items adopted from the CFIR.

#### **4.7 Sampling Strategies**

Sampling strategies were considered for the research methods utilised in this study of insider accounts and semi-structured interviews as well as secondary data analysis. This is a qualitative study which are generally associated with smaller sample sizes than quantitative research (Saunders et al., 2009). For a case study such as this based on a single case study examining the implementation of EM in a single context, a large sample size would be unwieldy and potentially fail to address the research goal to examine the research phenomenon in-depth. There are no defined rules for qualitative sample size which may be most optimally determined by the study objectives, the time allocated and the resources available (Patton, 1990). A non-random sampling strategy was considered the most appropriate approach as addressing the research questions required the contribution of the views and perspectives of targeted key actors from a range of different but relevant organisations playing critical roles within the implementation of EM in the UAE.

Non-probability purposive and convenience sampling strategies were used to select participants. Purposive sampling involves the deliberate selection of a specific type of research participant possessing the characteristics the study

aims to explore (Saunders et al., 2009). For the insider accounts both a purposive and convenience sampling strategy was used. A total of 16 participants listed in

Table 9 from a cross-section of organisations provided insider accounts. Purposive sampling ensured that key actors with relevant insider knowledge were selected while a convenience strategy was also adopted based on the proximity and accessibility of insiders to the researcher (Easterby-Smith et al., 2012). This strategy was utilised due to the significant restraints placed by the busy time schedules of both the researcher and participants who occupy senior professional positions within their respective departments and ministries. Convenience strategies are useful where gaining data may not be possible using probability-based techniques (Saunders et al., 2009). A total of 16 participants were interviewed as shown in

Table 9 selected from multiple agencies involved in EM implementation including judges, senior police officers, senior social workers, senior prison personnel and government representatives.

A purposive sampling technique was adopted for the semi-structured interviews with leading criminal justice actors to ensure access to knowledge, experience and perspectives of individuals that have specific expertise. A total of 11 individuals were interviewed as listed in Table 8. Purposive sampling is particularly beneficial when there is a high level of uncertainty and a lack of empirical evidence in a particular area (Saunders et al., 2009). The interview participants were comprised of criminal justice actors idrawn from across the criminal justice spectrum such as judges, senior police officers, prison service officers, legal affairs officers, prosecution members, and officers from the juvenile detention centre.

**Table 8 Expert Interview List**

<b>No</b>	<b>Position</b>	<b>Area of Expertise</b>	<b>Responsibilities</b>
1	Judge; Abu Dhabi Criminal Court	Judicial; 36 years' experience in the legal profession; formerly Advisory Board Member at the Criminal Court	Overseeing the work of Abu Dhabi Criminal Court
2	Prisoners Affairs Branch Officer, Abu Dhabi Police	Prisoner Affairs; many years' experience in the field of prisoner affairs in various roles	Supervising the provision of all prisoners' needs while serving prison sentences
3	Social Worker, Prison Department, Abu Dhabi Police	Social work with offenders; 8 years' experience; completing PhD in Alternative Punishments	Preparing prisoners and families for release
4	Prosecutor; Abu Dhabi Public Prosecution	Legal; 19 years' experience in Public Prosecution	Supervises, assigns, reviews and participates in the work of Prosecutors
5	Prosecutor; Abu Dhabi Finance Public Prosecution	Legal; 6 years in Abu Dhabi Public Prosecution, and 9 years in Finance Prosecution	Supervision of the prosecution and investigation of financial cases
6	Strategic Adviser, Abu Dhabi Police	Police Operations; 30 years' experience in UK policing and 7 years' experience with Abu Dhabi Police	Policing Operations and Community Policing Philosophy
7	Major; Prison Department, Abu Dhabi Police	Social work, community policing; several years' experience as a social worker at Social Support Centre; 3 years awareness officer at community police department.	Prisoner Affairs
8	Judge; Penal Appeal Department at Abu Dhabi Court of Appeals	Judicial; 34 years' experience in the legal profession	Overseeing the work of the Penal Appeal Department
9	Technology expert, Abu Dhabi Police Follow up Department	Criminal justice technology; 12 years US experience in criminal justice as prison officer; pre-trial officer supervising defendants; supervising substance abuse testing and electronic monitoring.	Identifying the latest technological security solutions
10	Judge; Appeal Court in the Criminal Department	Judicial; 37 years' experience in the legal profession	Overseeing the work of the Appeal Court
11	Senior Advisor/Consultant	Community Security, Policing and Policing Operations; 40 years' experience in policing working for	Senior Security Advisor

		the Community Police & Police Science Institute; Metropolitan Police Service and several other UK Police Forces	
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**Table 9 Insider Participant List**

<b>No</b>	<b>Insider Position</b>	<b>Organisation/Department</b>	<b>Perspective</b>
1	----	Ministry of Interior	Goals and motivation
2	----	Ministry of Interior	Strategy
3	Lt. Col.; Abu Dhabi Police	Policing Welfare and Follow Up Department	Offender monitoring and rehabilitation
4	Major; Abu Dhabi Police	Policing Welfare and Follow Up Department	Offender monitoring; coordination with judiciary; breach protocols
5	Major; Abu Dhabi Police	Technology Section; Policing Welfare and Follow Up Department.	Management of electronic monitoring technologies
6	Major; Abu Dhabi Police	Prisons Department	Prisoner rehabilitation and reintegration programmes
7	Prisoner Affairs Branch Officer	Prisons Department	Prisoner needs and rehabilitation programmes
8	Social Worker	Prisons Department	Prisoner risk assessment and evaluation
9	Judge; Abu Dhabi Criminal Court	Judicial Department	EM legislation and sentencing
10	Judge; Penal Appeal Department	Judicial Department	EM legislation and standards
11	Chairman	Public Prosecution, Judicial Department	EM legislation and application in the courts
12	Chief Prosecutor	Abu Dhabi Public Prosecution	EM case management
13	Captain; Abu Dhabi Police; Children and Juvenile Branch Manager	Social Support Department	Risk assessment and monitoring of performance for juveniles
14	Social Worker; Abu Dhabi Police;	Social Support Department	Offender rehabilitation, performance monitoring and family liaison
15	Social Worker	Juvenile Welfare Department	Social support and protection of juveniles

16	Psychologist	Juvenile Department	Welfare	Delivery of rehabilitation programmes; behavioural change; family liaison
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The sample for the secondary data analysis focused on the UK, and was limited to reports and analyses from the two different legal jurisdictions of England and Wales and of Scotland within a twenty-year time frame ranging between 1997 and 2017.

#### 4.8 Data Collection

To collect data for the insider accounts multiple interviews were conducted with key actors involved at a high level in the implementation of the EM pilot project. The interviews were conducted after pilot implementation had commenced in 2017 and the first cohort of offenders had been processed and released at the end of 2018 so that evidence was available of the entire implementation where a quantity of offenders had progressed through the programme from the sentencing stage.

Interviews were undertaken with insiders to enable in-depth discussion and exploration of the implementation in the light of the CFIR framework. Before the interviews took place the insiders were fully briefed on the background, the aims, relevance and potential benefits of the research findings for the UAE overall to maximise the interviews and ensure informed consent. The interviews were conducted face-to-face at a convenient location and time for the participants. The interviews commenced with a reiteration of the study objectives and an explanation of the participants' rights to confidentiality and privacy in the treatment of their responses. The interviews, which lasted for approximately 90 minutes each, were recorded with digital audio equipment for the purpose of later transcription. An interview guide was adopted in both cases containing a number of themes and topics with relevant prompts and follow-up

questions. Other follow-up questions arose spontaneously as a result of the insiders' responses.

Prior to this phase of research qualitative data was collected from a sample of leading criminal justice actors using semi-structured, face-to-face interviews. Similar procedures and protocols to insider interviews were followed in terms of full disclosure of research aims and objectives to gain their consent, explanation of participants' rights, scheduling a convenient time and location for interview and recording of interviews to enable accurate future transcription and to increase reliability. Interviews were conducted individually using a predefined guide of themes and topics to explore and lasted for approximately 40-60 minutes. During the interview, practitioners' responses were probed and explored with follow-up questions and prompts to gather further in-depth data.

A review of the UK evidence on electronic monitoring was conducted with the scope focused on evidence from the two separate jurisdictions of England and Wales and Scotland. To collect the data, an online search was undertaken to identify all UK studies on electronic monitoring within a ten-year time frame ranging between 2007 and 2017. A number of relevant search engines and databases were reviewed including Google, Google Scholar and Criminal Justice Abstracts, Criminal Justice Periodical Index, and ERIC. The online search included keyword searches using terms associated with electronic monitoring. From the search results 55 files were shortlisted based on certain criteria. The final selection focused on reports and studies that reported on or evaluated the implementation and progress of electronic monitoring in the UK.

#### **4.9 Data Analysis**

This study utilises a thematic analysis method to analyse the qualitative data collected from both the semi-structured interviews and insider accounts. Thematic analysis is defined as "*a method for identifying, analysing and reporting patterns within data*" (Braun and Clarke, 2006, p.79). The analytical framework was based on literature themes and the CFIR implementation framework.

Patterns within the data are identified and assigned a theme or code which

through an iterative process are regrouped into higher order themes. The method provides a structured and systematic means for data analysis which can contribute to enhancing the reliability and validity of the data (Saunders et al., 2009). The approach is widely acknowledged for providing flexibility and accessibility in treating large amounts of qualitative data and the generation of in-depth and detailed accounts of complex issues (Braun and Clarke, 2006).

Initial steps involved the transcription of the interviews following which they were imported to Nvivo to facilitate coding and analysis. A code is a word or short phrase that is ascribed as a symbolic description or summary of relevant content and passages of text to denote essential meanings (Ryan and Bernard, 2003). Following in-depth reading of the transcripts to achieve a level of familiarisation with the data the first round of coding involved the identification of patterns based on predefined themes identified from the literature and themes emerging inductively from the data relevant to the research objectives. An iterative process of open coding was applied to the entire dataset, succeeded by a second phase of coding during which certain codes were reconfigured and recombined and then applied to most of the same content and across larger sections of data (Ryan and Bernard, 2003). A third stage of coding advanced the clarification and refinement of codes and theme reconfiguration allowing the creation of final themes and subthemes (Ryan and Bernard, 2003). This stage reflects the patterns of participant responses for the dimensions under investigation which may form the basis for the development of theoretical conclusions and the generation of meaning (Ryan and Bernard, 2003).

#### **4.10 Reliability and Validity**

Reliability and validity are critical elements and an area for scrutiny in any research and represent a critical consideration in the process of developing knowledge on the implementation of EM in the UAE (Bryman and Bell, 2011). Validity relates to whether the findings truly represent what they are intended to (Bryman and Bell, 2011). Reliability relates to the extent to which the data collection and analysis procedures undertaken will result in consistent findings in terms of: yielding the same results on other occasions; similar observations can be made by other observers, and transparency in the interpretation of the raw data (Saunders et al., 2009).

This research focuses on a specific case analysis where insider accounts of EM implementation form a significant part of the qualitative data gathered. There has been criticism of qualitative research to be sufficiently valid and reliable that is associated with the perceived lack of scientific robustness, transparency and potential bias. The validity and reliability of qualitative methods and data and case study research has been questioned due to the potential for bias and subjectivity. Qualitative research is associated with some key sources of error: from the researcher, the study participants, the social context or situation and the methods of data collection and analysis (Brink, 1993). In addition, for this research the positionality of the researcher in the context of this research should be acknowledged firstly in terms of the dual role of the insider and researcher and also in terms of the power and political context of the researcher as a senior member in the organisation and lead member of the EM project design and implementation. It is acknowledged that the position of the researcher can have implications for the different elements of the research process in the way participants are sampled and the data collected (Cassel et al., 2017) that may impact on the validity and reliability of protocols and the overall findings. Thus this section discusses these issues and clarifies the procedures adopted to support judgements to be made on the soundness of deductions and conclusions made on the implementation of EM.

#### **4.10.1 Rigour in Qualitative Research**

In terms of transferability thick descriptions recommended by Guba (1981) were adopted. For qualitative research Yin (2009) suggests that reliability is increased if researchers document the procedures of case studies and as many steps within the procedures applied as possible. Ensuring a robust research design is a key measure supporting the reliability of any research (Saunders et al., 2009). In establishing research that is predominantly qualitative there is a requirement to demonstrate the findings are trustworthy, authentic and credible and their accuracy is checked and supported by the utilisation of certain procedures (Cresswell, 2014).

The researcher has also clarified any bias perceived to have been brought to the study by means of self-reflection on their background, culture, gender and



position within the research context. Self-reflexivity is considered potentially the most important tool to ensure validity in insider research, involving taking into account the researcher's own consciousness (Van den Hoonaard, 2002). Reflexivity was incorporated in this study through the writing of an in-depth methodology section, inclusive of an acknowledgement of my own position as an insider researcher and how reflexivity was practiced in my research as well as the methodological and ethical implications.

A rich, thick description has been used to convey the study findings incorporating multiple perspectives on the theme of EM which has produced a rich and realistic account (Cresswell, 2014). Moreover the accuracy of the findings have been checked through a procedure known as member checking in which participants are provided with all or parts of the final analysis to determine if this accurately reflects their views (Cresswell, 2014).

#### **4.10.2 Positionality and Dual Role of the Researcher**

One of the main issues of validity and reliability in qualitative research is connected with the challenge in achieving objectivity as a consequence of the significant extent of subjective involvement. A large body of this research relied on insider research accounts. The inherent bias of insider research is contended to conflict with the positivist view that research should be objective (Workman, 2007). The degree to which insider research can be viewed as objective can impact scientific reliability and validity.

The insider status of the researcher may impact both the collection and interpretation of data. According to Drake (2010) the privileged access and closeness of the insider can potentially compromise the ability to critically engage with the data. There was further complexity in this research process due to the dual role of the researcher as a senior member of the organisation and involvement in the EM implementation.

This is evident firstly in relation to the sampling process and the identification and selection of participants. As a senior member of the organisation participation is subject to bias and there may be a tendency to negotiate and access contacts that are aligned with the researcher's political, social position

or convenience. This affects the objectivity of the selection of candidates that may hold key insights on the research topic. The selection of the candidates may also be affected by the researcher's subjectivity in terms of the purposeful selection of candidates who have experience and knowledge. Therefore to address these issues significant emphasis was placed on purposive sampling to include a diverse range of informants and perspectives and extended field engagement over time (Brink, 1993).

Meanwhile, from the perspective of potential participants, awareness of the researcher's position may impact on their decision to participate. In this context therefore a range of measures can be undertaken to increase response validity. Clear information on the nature of the research was provided to include the motives for the study, the subject, the process of data collection and how the data will be used. In line with Brink's (1993) guidance there was attempt to first establish a trust relationship with participants. While this insider researcher was well-known to the informants prior to study commencement, the culture of the organisation through leadership encourages open participation and discussion of the implementation process based on a philosophy of continuous improvement. This supported a more open and honest expression of views by personnel of the implementation process.

Lengthy engagement identifies the investment of adequate time to get to know the culture, to build trust and to check for distortions in either oneself or participants (Lincoln and Guba, 1985). It is advocated that insider researchers focus only in detail on the elements and characteristics which are most relevant to the problem under the focus of study (Lincoln and Guba, 1985). This approach was adopted for this research conducted over 12 months of data collection from the case organisation and prioritising of key themes identified in the literature and the implementation science framework (CFIR). Additional measures advocated in the literature was the arrangement of both formal and informal interactions between the research team and the insider researcher. Meetings and discussions with research supervisors were arranged regularly to discuss research progress as well as the research committee which was kept informed of progress through formal documentation. The researcher further engaged in a process of peer debriefing in which elements of the research and

findings were shared with colleagues. This enabled the researcher to undergo a process of critical thinking in relation to the research, and recognise and attest to any feelings that could impact judgement and objectivity (Guba, 1981).

Positionality also has the potential to influence the validity and reliability during the interview process. The introduction of bias can result from informant characteristics or particular responses. The lack of detachment from the context and participants within insider research when compared to outsider methods suggests a clear disadvantage that could compromise validity. The researcher was aware of power dynamics and relationships in interviews with a range of informants at different organisational levels, units, departments and organisations and different dynamics between the various participants. It is true that the rapport in each interview and insider account was different and was influenced by the pre-existing connection. It is acknowledged that the power dynamic with participants may result in answers believed to be expected or desired; or information may also be deliberately withheld or distorted (Brink, 1993).

Reliability also involves consistent practices or responses in using the method or rating the results and factors related to the credibility, trustworthiness, applicability, value, truth, consistency and confirmability of data (Glaser and Strauss, 1967). Thus while each interview was unique during the interview process there was conscious reflection on the dynamic and the use of consistent techniques to promote more open interaction. While the power dynamic cannot be neutralised the researcher can be proactive in encouraging interviewees to speak freely and in providing assurance that responses will be treated confidentially. The interviewee preparation and interviewer training especially in relation to understanding of biases also increase reliability.

#### **4.10.3 Triangulation**

Triangulation is acknowledged as a powerful tool to strengthen the validity of qualitative research through the utilisation of several sources, theories and methods (Lincoln and Guba, 1985). This study has clearly explained and justified the research design, methods applied and the processes and

procedures used to collect, analyse and interpret the data enhancing the overall reliability of the research.

Furthermore the insider account has been shaped by a widely used valid and reliable framework from the field of implementation science for the analysis of implementations, the CFIR (Fernandez et al., 2015), while themes identified for discussion in the interviews were theoretically grounded in the literature. Comparing the results with other evidence obtained in addition to confirming the findings and analysis with the informant can support validity. Finally ensuring accurate and detailed field notes are maintained is important for noting variations in responses over time (Brink, 1993). Triangulation identifies the use of two or more data sources, methods, or approaches to analyse a single phenomenon which is then validated by evaluating their congruence. The key aim is to avoid researcher bias and surmount the limitations inherent within single-method, single researcher or single theory studies therefore increasing study validity (Denzin, 1989). An active search for evidence to disconfirm what is believed to be true can also be conducted. The validity of a proposition is increased if it endures following attempts to disconfirm it (Cronbach in Lather, 1986, p.67).

#### **4.11 Ethical Considerations**

Adhering to ethical principles during the entire course of the research is essential for ensuring the quality and validity of the findings (Saunders et al., 2009). As this research involved human subjects specific ethical dimensions required consideration. Within criminal justice research protecting the subject and subject matter of the study is a key ethical concern particularly in view of the sensitivity issues and potential vulnerability of offenders and personnel that are part of the research.

It is therefore of vital importance that the researcher position is irreproachable when administering the research. This entails that the researcher adopts as objective a position as possible when viewing the subject matter and remains impartial (Hagan, 2007). A critical consideration is determining how far the researcher may interact with the subject under study. The specific implications of insider research and the duality of the researcher who also assumes a senior

position within the case organisation has been discussed in the previous sections. A key issue is related to power influenced by the lead role of the researcher in the organisation. This aspect was particularly challenging and required a number of measures to address this issue. In this process there was conscious effort given to the dual role of the researcher who as head of the electronic monitoring project also presented himself as an advocate or co-investigators to peers and colleagues for the purpose of reducing any power differentials between him and research participants (Breen, 2007).

The research process has been founded on a key overarching principle of beneficence, obliging the maximisation of the benefits of the research for society, while minimising the risk of harm to participants (Adams, 2013). This research will contribute significant knowledge to the implementation of a new model of offender treatment within the justice system and potential wider benefits for the understanding and progression of EM within the UAE.

Further, ensuring the minimisation of risk of harm to participants in the conduct of this study has been a guiding principle (Saunders et al., 2009). Criminal justice research presents multiple different ethical concerns in terms of the civil rights of parties who may be vulnerable (Jones, 2012). Although this study did not involve direct offender participation, there is still potential for the research to compromise or harm them in some way if ethical principles are not upheld.

Maintaining the autonomy of participants is a key dimension, in this research context viewed as the right of individuals to decide in what they will or will not participate (Adams, 2013). Participants were therefore fully informed of the nature of the study, what their participation would require and the possible risks and benefits, and opportunities were provided for participants to clarify any questions they may have. Participants were also apprised of the voluntary nature of their participation and their right to withdraw at any point. This enabled a reasoned judgement and the provision of informed consent (Bloomberg and Wilkins, 1977). Informed consent is considered to comprise the provision of this information to all participants in order that they can legally and with

foreknowledge consent to participation in the research in the absence of coercion, duress or deception (Erlen, 2010).

Participant privacy is another fundamental ethical principle given significant consideration in this research. The confidentiality and anonymity of participants were viewed to be strong imperatives (Saunders et al., 2009), given they include government officials and representatives from the justice ministry and other public bodies. Measures were implemented to make certain that research records remained confidential and all identifying participant details were anonymised (Easterby-Smith et al., 2012). Data was stored securely at all times and only accessible to authorised persons. These measures have minimised the risk that sensitive information is not disclosed to those outside of the research project (Adams, 2013).

Moreover criminal justice research frequently requires the disclosure of information that is sensitive and relevant to criminal activity (Jones, 2000). Within this research process it is likely that the insider researcher may at some point be the recipient of confidential information either about colleagues or the organisation under study, with the potential for this to impact relationships (Bell, 2005). Thus discussions with colleagues could become uncomfortable. This emphasised the need for reflection and consideration of the potential consequences that “professionalising the personal” could have (DeLyser, 2001). A related ethical issue is the use of incidental data such as overheard conversations or informal chats to which access has not been formally negotiated. In this study use of such data was considered an abuse of trust and access in line with the ethical practices of other qualitative researchers (Campbell, 2002).

#### **4.12 Limitations**

A number of limitations are acknowledged in relation to this research. The single case study design can have limitations in terms of representativeness and overall generalisability (Yin, 2009). However this was not the aim of this research which was to provide an in-depth exploratory account of a specific research phenomenon in a specific research context. Moreover, while the high context and focus on the single case of the pilot project limits generalisability,

there is significant value in identifying transferable findings that can be applied in similar contexts and findings that have commonalities that are relevant in unrelated contexts.

A number of challenges are linked with qualitative insider research that can impact how it is undertaken and analysed. Insider research has been criticised for being inherently biased, as being close to the research subject may inhibit the raising of more provocative questions (Merriam et al., 2001). Van Heugten (2004, p.207) notes that the choice of a topic which reflects a personal interest and the selection of colleagues as subjects emphasises the potential for insider bias. Thus the insider accounts that represent a major source of evidence may further present issues of researcher bias. For insider researchers it is acknowledged as easy to make assumptions in relation to participants' views and attitudes, the meaning of certain events and to overlook specific routine behaviours. Participants may also assume that the researcher possesses the same tacit knowledge (Unluer, 2012). To mitigate this bias as far as possible the research was considered within a reflective process and the research process and researcher role was robustly clarified (Unluer, 2012). The purposive sampling strategy is associated with further potential for researcher bias acknowledged as a key disadvantage of this approach nevertheless was minimised as far as possible by basing selection judgements on clear criteria (Saunders et al., 2009).

#### **4.13 Conclusion**

This chapter discussed potential approaches to the research and identified constructivism as the most appropriate for fulfilling the research aims using a qualitative approach employing a case study strategy. The research methodology was developed to explore the implementation process of EM and evaluate its effectiveness in the early implementation phase. Three key methods were described and justified of practitioner interviews, insider accounts and secondary data analysis and the data collection procedures were outlined. Subsequently the research procedures in relation to the population and sampling were discussed followed by an outline of the techniques adopted to analyse the qualitative data. Next reliability and validity were explained, followed

by a discussion of the ethical considerations and measures adopted to ensure that ethical obligations are met. In conclusion this chapter presents a systematic and robust research design to examine the implementation of EM to provide holistic insight into the early phase of implementation and how effectively this is meeting the needs of stakeholders.



## **5 RESULTS I - IMPLEMENTATION OF EM IN THE UK**

### **5.1 Introduction**

This research incorporates a comparative analysis of EM implementation between the UK and the UAE. This chapter presents a review of the UK evidence on electronic monitoring with the scope focused on evidence from the two separate jurisdictions of England and Wales, and Scotland. The data gathered draws on secondary data sources based on an online search undertaken to identify all UK studies on electronic monitoring between 2007 and 2017. This data contributes evidence on the effectiveness of implementation of EM in England and Wales and Scotland.

The results based on secondary data are structured in accordance with the CFIR constructs outlined in the theoretical framework in chapter 3. Analysis was undertaken in relation to the source of the EM and strategies adopted; the application of EM; inter-agency co-operation; perspective on the effectiveness of the EM implementation across multiple dimensions, and impacts of EM. Further, the results for each construct address the central research questions of the study providing key insights into the drivers of implementation of EM; revealing different stakeholder perspectives of the potential and actual consequences of EM and implementation factors that influence the success of EM; and identifying key challenges that impacted on the transfer of EM knowledge and technology to new contexts such as the UAE.

### **5.2 Intervention Characteristics**

#### **5.2.1 Intervention Source**

Analysis of the intervention source provides an insight into the drivers of implementation for the UK. Longitudinal evidence indicates that the primary driver for EM was the goal to reduce high prison populations and costs (Hucklesby and Holdsworth, 2016) and as an option for punishment in the community. This is associated with the ideological philosophy of neoliberalism and the principles of privatisation and reduced role of the state (Mair and Nellis, 2013; Paterson, 2008).

A key challenge for knowledge transfer relates to the narrowness of scope of the intervention source which did not reflect broad consensus from stakeholders. Stakeholders were not fully engaged in the development of EM projects which was predominantly driven by the Ministry of Justice vision to be world-leading in EM, leading to a primarily externally developed and technology focused approach (NAO, 2017; Hucklesby and Holdsworth, 2016; Nellis, 2014). Across both jurisdictions minimal consensus existed on EM objectives and goals and suitable targets for EM (Graham and McIvor, 2016; Hucklesby and Holdsworth, 2016; Lobley and Smith, 2000). The lack of engagement is acknowledged in evaluations and has resulted in recommendations to broaden implementation and goals towards a more integrated approach.

### **5.2.2 Evidence Strength and Quality**

Stakeholders' perceptions of the quality and validity of evidence supporting the belief that EM will achieve the desired goals were generally negative and varied significantly (House of Commons, 2006; Mair, 2005). Key criminal justice actors had limited knowledge and awareness of EM or the actual consequences of EM implementations and had negative views of the potential impact of EM (Hucklesby and Holdsworth, 2016; Armstrong et al., 2011; Barry et al., 2007). Technological issues significantly hampered perceptions in relation to EM implementation quality and future potential to achieve goals (NAO, 2017). This evidence highlights the social process and the interaction between agencies and professionals in exerting some influence in the technology and knowledge transfer of EM, and suggests a gap in terms of the development of sustainable and long-term relationships that can facilitate flow of knowledge and understanding.

### **5.2.3 Relative Advantage**

Perceptions of relative advantage provide insight into how UK stakeholders view the consequences of implementing EM versus an alternative solution. There were negative perceptions of EM advantages in terms of recidivism and cost-effectiveness among key criminal justice actors. For instance, for the

probation service EM did not provide advantage over community service alternatives due to a perceived lack of rehabilitative elements in the standalone model applied. However, evidence from monitoring agencies conversely indicated that EM can be key in promoting desistance and positive peer influence.

#### 5.2.3.1 Desistance

UK debate is ongoing whether EM actively supports desistance processes (Graham and Mclvor, 2015; Nellis, 2013; Geoghegan, 2012). Official evaluations over the last quarter century have shown either a neutral effect or a slight improvement in desistance (Lockhart-Mirams et al., 2015; Marie et al., 2011; Audit Office, 2006; Hucklesby, 2005). Any improvement in desistance is indicated to arise from the capacity of EM curfew orders to reduce anti-social capital and enhance pro-social capital (Barry, 2013; Hucklesby, 2008, 2013a, 2013b). A significant evidence base has been noted that suggests that secure employment is a strong factor in desistance behaviour (Hucklesby, 2009; Farrall, 2002; Farrall and Calverley, 2006).

A key challenge for the transfer of knowledge is the limited research conducted on the impact of EM in the UK as a whole (Graham and Mclvor, 2015, 2017; Marie, 2011; Mair, 2005). However in spite of benefits and positive impacts the existing evidence suggests potential disadvantages and negative impacts for offenders and families emphasising a complex picture (Graham and Mclvor, 2016; Nellis, 2009). Desistance through EM is found contingent upon different factors, particularly the context in which EM is applied as most desistance processes were found to have significant association with close social and family bonds and positive influence from positive peers (Howard, 2018; Graham and Mclvor, 2016; Hucklesby, 2008). In the absence of family support or in a strained or aggressive relationship evidence highlights possible negative effects on the offender accentuated by home curfew due to programme restrictions, and potentially acting as a trigger point frustrating offenders' prospects of both compliance and desistance (Graham and Mclvor, 2016).

Some stakeholders highlight the importance of a discretionary approach as necessary for desistance to account for young people and family contexts. The

issue of identity desistance emerged in studies, which can involve losing the status associated with committing crime and a struggle to establish a new, more positive identity with similar social standing (Graham and McIvor, 2016). Evidence suggests that this could negatively influence the ability to maintain any act of desistance so far achieved (Graham and McIvor, 2016).

#### 5.2.3.2 Behavioural Change

In terms of behavioural change, evidence suggests that for some people EM acts as a catalyst or triggering event in the initial stages of desistance from criminal behavior by providing constraint, discipline and a structure that helps offenders to exert a higher degree of self-control (Graham and McIvor, 2016; Nellis, 2009). Partly EM provided a protective and socially legitimate reason among peers for reducing or ceasing past peer associations and behaviour patterns (Howeard, 2018; Graham and McIvor, 2016). In the absence of positive social supports to act as catalysts for change, evidence showed that offenders may desist wrongful actions during the monitoring period but continue to maintain peer associations and their established personal identities (Graham and McIvor, 2016). This reduced the potential of EM to change behaviour among offenders.

Hucklesby and Holdsworth (2016) note the ability of offenders to have access in monitoring centres to a central, always available point of contact to answer queries and provide broader support as a key strength and critical success factor of UK EM operation that potentially influenced behavioural change.

#### 5.2.3.3 Cost Analysis

Stakeholders have evaluated the impacts of EM in terms of quantifying its cost-effectiveness in comparison with alternative sentencing options. Nevertheless a key challenge to the diffusion of EM knowledge can be noted in an overall lack of analysis of the value for money, cost benefits or cost effectiveness of EM for the UK criminal justice system as a whole (Audit Office, 2017; Lockhart-Mirams, 2015). Cost effectiveness of EM programmes has further been shown to vary according to the type of offence EM is used for and programme objectives (Lockhart-Mirams, 2015).

A direct comparison of costs between EM and incarceration in England and Wales shows that EM is a significantly lower cost option. The daily costs of EM services per subject is £12 - £13 compared with the reported average costs of imprisonment of £90 (Audit Office, 2017). However a more complex picture is presented when other factors are considered. For example evidence suggests that the overall cost of bail curfews may outweigh the overall cost saving to custodial remands as EM may be used more extensively (Hucklesby and Holdsworth, 2016; Airs et al., 2000). One study shows that about half of the bail curfew target group would not have received a prison sentence anyway (Airs et al., 2000). Moreover releasing prisoners from jail is shown not to inevitably result in short term cost savings (Ministry of Justice, 2011).

Recent recommendations on embedding cost analysis and higher quality information to support understanding of cost-effectiveness within any EM programme implementations and evaluations (Audit Office, 2017; Lockhart-Mirams, 2015) could support more effective knowledge diffusion on EM if implemented.

#### **5.2.4 Adaptability**

UK experience reveals that the extent to which an EM intervention can be tailored and refined according to local needs can positively or negatively impact on the adoption and support of EM. EM in the UK was largely characterised by a standardised approach that limited flexibility and discretion in application and addressing the individual needs of offenders (Hucklesby and Holdsworth, 2016; Graham and McIvor, 2015). Significant emphasis was placed on the core conditions of curfew and location monitoring supported by standardised conditions which reflects a greater acknowledged emphasis on EM as an essentially punitive mechanism. Curfew hours are normally rigidly applied for 12 hours a day, in the evenings, seven days a week (Hucklesby and Holdsworth, 2016; Nellis, 2009). Standardised use is perceived to facilitate easier and lower cost management for EM contractors, while contrastingly greater diversity in practice may imply increased costs and operational challenges (Hucklesby and Holdsworth, 2016).

Similarly compliance and breach protocols in the UK are characterised by a high degree of regulation and standardisation (Hucklesby et al., 2016; Graham and McIvor, 2015; Walter, 2002). In England and Wales procedures for managing breaches are precisely defined in official documents and follow a routinised approach in which there are strict mandated timescales for contractors to inform authorities when breaches occur (Hucklesby and Holdsworth, 2016). Breach policies are noted to focus on the type of violation and do not refer to the monitored individuals, implying minimal discretion available for showing flexibility within breach responses according to individual offender circumstances. This contrasts with other European jurisdictions in which breach response is undertaken on the basis of the risk and priority level of the individual rather than the type of violation committed. Contrary to the UK model explanations are elicited from individuals before formal breach procedures are instituted (Hucklesby et al., 2016).

A standardised approach can impede the flow of ideas and knowledge that underpin knowledge transfer and stifle more creative and individualised use of EM (Hucklesby and Holdsworth, 2016; CJJI, 2012; Barry et al., 2007). However allowing scope for discretion in itself does not appear to result in tailored approaches and suggests some challenge in the degree of regulation. Legislation in England and Wales does not preclude using curfew changes during the lifetime of EM orders as a structured and phased re-integrative/exit strategy or as a reward for compliance. Nevertheless there is minimal evidence of adoption of this practice, with curfew hours nearly always remaining unchanged and no existing mechanism for reward (Hucklesby et al., 2016). Meanwhile, areas of flexibility have resulted in variability in application of breach protocols between modalities. The involvement of the probationary service in EM is associated with more discretionary processes (Hucklesby and Holdsworth, 2016). In England and Wales, breach response within standalone curfews monitored solely by contractors is noted to be stricter than that within integrated community orders involving probation staff decision-making. This has led to the situation in which breach protocols are more strictly enforced for offenders sentenced for less serious offences (Hucklesby and Holdsworth, 2016).

In addition it is acknowledged that discretionary procedures would inevitably add to the existing administrative burden, presenting challenge for the acceptance and uptake of EM. UK evidence shows that EM has created additional workload for the police, courts and probation services in comparison with less rigorous supervision methods. EM was associated with more incidents requiring investigation, and more violations of sentence conditions (Audit Office, 2017; Armstrong et al., 2011).

### **5.2.5 Trialability**

Examining the trialability of the intervention can offer greater understanding of the challenges and success factors that potentially affect wider EM adoption. Evidence showed a failure to pilot new implementations in the UK for the majority of programmes which exposed the implementation to greater risks and challenges (NAO, 2017). Evaluations of pilots that had been conducted proved useful in identifying critical issues that impeded the adoption and implementation of EM. They provided early indication of lower than expected demand for EM across multiple pilot schemes with implications for the findings from these trials. They also revealed perspectives of different criminal justice actors on application of EM to target populations and how EM is to be used in different implementations (NAO, 2017; Mair, 2005; Mortimer, 2001; Dodgson and Mortimer, 2000; Mortimer and May, 1997; Mair and Nee, 1990). Trialling identified significant complexities of decision-making and issues related to coordination and collaboration.

From a technology perspective, the significance of pilots was acknowledged following delays in national implementation of GPS tagging due to critical issues and problems. This has prompted the UK government to adapt its implementation approach in England and Wales to include greater piloting and building the evidence base on the effectiveness and cost-effectiveness of EM implementations (Audit Office, 2017). However, evaluation of long-term UK evidence and government responses shows that the Home Office has consistently ignored its own research evidence (Mair, 2005). Lessons from decades of schemes were not reflected in the introduction of new EM schemes.

### **5.2.6 Complexity**

The complexity of the intervention may present significant challenge for the acceptance and diffusion of EM. In the UK the extensive use across multiple different modalities has had implications in terms of significant complexity (Hucklesby and Holdsworth, 2016; Graham and McIvor, 2015). Hucklesby et al., (2016) note the impacts of broad strategy on practices at strategic and operational levels, requiring the involvement of different agencies in different combinations according to the modalities used with implications in terms of increased work load across the criminal justice sector.

Further challenge is evidenced in England and Wales in the potential confusion towards monitored offenders subject to different modalities simultaneously or at various times (Hucklesby and Holdsworth, 2016). As a result concurrent or consecutive EM application has led to a need to manage different breach thresholds and overall monitoring periods that were longer than prescribed maximums (Hucklesby and Holdsworth, 2016). Processes to modify individual orders in response to changes in circumstance are shown to be complex, inflexible, lengthy and unresponsive and indicated to increase the likelihood of non-compliance and breach proceedings (Hucklesby and Holdsworth, 2016; Hucklesby et al., 2016).

Complexity is noted in evidence indicating that increasing numbers of offenders subject to EM over time is associated with more limited involvement of probation services and necessitates greater staffing and resources, although Hucklesby et al., (2016) suggests benefits in terms of economies of scale and more standardised practices.

Procurement has also emerged as a complex area for the UK, which has experimented with several forms of delivery model and encountered problems when contracting multiple suppliers, challenging effective commercial and programme governance (Audit Office, 2017).



### **5.2.7 Design Quality and Packaging**

In terms of the design of the EM intervention two key themes under this construct could be distinguished: the mode of implementation; and the degree to which EM is integrated. The results indicate that the manner in which EM is designed appeared to impact on perceived relative advantage and the support for its adoption.

UK implementation of EM spanned across multiple judicial stages of pre-trial and bail, within probation and intermediate sanctions and utilised post-release (Lockhart-Mirams et al., 2015; Graham and McIvor, 2015). This appears to be a key factor challenging knowledge transfer as exposure to multiple stages generated planning and management and operational challenges. This is reflected in the significantly lengthier period of implementation in the UK.

Evaluations identified a potential key factor positively affecting EM acceptance in the need to benefit from technological advancements and innovation to enhance the EM programme (Audit Office, 2017; Geoghegan, 2011). The Ministry is currently focusing on sustaining and improving the current curfew monitoring systems before gradually implementing advanced GPS-enabled location technologies. A more pragmatic and simplified approach is also being adopted towards EM procurement, shifting from bespoke tags to commercially available technologies (Audit Office, 2017).

#### **5.2.7.1 EM Modalities and Target Groups**

The pattern of implementation of EM indicates that it has been employed in a variety of ways within the UK criminal justice system with multiple groups subject to EM under different modalities. Comparative research shows that the application of electronic monitoring in England and Wales by far exceeded that of other jurisdictions with usage approximately five times higher than the second higher user of Belgium (Hucklesby et al., 2016).

EM authorities in England and Wales may employ EM using a wide range of different curfew orders: in pre-trial stages as a condition of bail; imposed as a sentence for a criminal offense; within probation, or within intermediate

sanctions such as work release or day-reporting programmes. There is also the option for EM to be utilised post-release with the aim of gradually expanding the responsibilities of those exiting prison (Lockhart-Mirams et al., 2015). The range of offenders to which EM can be applied extends broadly from petty offenders to those serving longer sentences, juveniles and children, and those undertaking drug testing and abstinence requirements. Approximately 25,000 offenders were subjected daily to EM between 2011-12, with Community Orders imposed as alternative sentences accounting for half, followed by bail orders and releases (Lockhart-Mirams et al., 2015). Ministry of Justice data showed the number of tagged individuals reduced by 40% in 2014-15 with reductions continuing into 2016 (National Audit Office, 2017). Multiple requirements, including curfew orders and other sentence elements such as community service, accounted for 29% of EM use and 22% was accounted for by single, curfew-only community orders. The majority of subjects (92%) were male adults (National Audit Office, 2017).

The diverse approach has had impacts on the acceptance and diffusion of EM. Evidence shows for example that the degree to which inclusion and exclusion criteria for the application of EM are defined has impacts on the adoption of EM by judges. In the case of Home Detention Curfew (HDC) orders the iteration of multiple exclusion criteria has limited their use with the criteria perceived as a key barrier to wider adoption (Hucklesby and Holdsworth, 2016).

In comparison Scotland has experienced limited use of electronic monitoring despite more than 15 years of implementation. Initially EM was only available to offenders serving sentences of less than four years, later extended to longer-term prisoners (Graham and McIvor, 2015). Table 1 indicates the different ways in which EM has been used in Scotland between 2005 and 2013. In this period EM was mainly used in Home Detention Curfew (HDC) for those released early from prison and Restriction of Liberty Orders (RLOs), an alternative sentence stipulating EM conditions that ensure offenders remain or stay away from a specified place for a specified period of time for up to 12 months (Graham and McIvor, 2015). EM has been applied in very few cases involving probation, or under-16s as shown by the figures for ISMS. The proportion of Home Detention

Curfews is low, representing 284 out of a prison population of 7,955 (Graham and McIvor, 2017).

**Table 10 EM Modalities in Scotland 2005-2013**

Type	2005-06	2006-07	2007-08	2008-09	2009-10	2010-11	2011-12	2012-13
<b>RLO</b>	965	1016	1054	1184	1069	935	897	1084
<b>Probation</b>	100	120	135	219	294	327	92	4
<b>HDC</b>	0	1312	2156	2121	1908	1836	1965	1915
<b>Licence</b>	5	5	5	18	26	25	20	30
<b>DTTO</b>	0	0	1	0	0	0	0	0
<b>ISMS</b>	0	37	25	28	30	10	18	5
<b>Bail</b>	82	113	40	0	0	0	0	0
<b>CPO</b>	0	0	0	0	0	0	2	11
<b>Total</b>	<b>1152</b>	<b>2603</b>	<b>3416</b>	<b>3570</b>	<b>3327</b>	<b>3133</b>	<b>2994</b>	<b>3049</b>

Source: Scottish Government (cited in Graham and McIvor, 2015. p. 27).

Scotland also uses EM for a small number of high risk sex offenders managed within MAPPA in which scope exists for combining EM with other surveillance and restrictions (Graham and McIvor, 2015). Evaluation of pilot projects led to the decision to withdraw EM as part of bail conditions as few applications were made from eligible cases resulting in minimal reduction of the on remand population (Barry et al., 2007).

In England and Wales EM has been extensively applied to young people since 2002 as a key part of Intensive Supervision and Surveillance Orders accompanied by strict breach conditions which some have criticised as lacking due process (Howard League for Penal Reform, 2014). In contrast Scottish stakeholders perceived significant complexity and difference in terms of the potential impacts of EM application on young people. A key issue is the recognition that age and lack of maturity can be incompatible with the strictness of the regime and negatively influence compliance (Smith, 2001). The structuring of EM application according to national policy and legislative imperative was a key concern as any breach or non-compliance can have costly and long-term consequences for young people, including legally mandated permanent exclusion from participation in EM. A further challenge was

emphasised in making young people responsible for compliance without consideration of social, relational and situational contexts (Graham and McIvor, 2016).

Key challenges also existed at a structural level which meant that EM was not widely accepted for young people. Besides the ideological concerns and reservations among professionals involved, there was also a low number of referrals and a lack of awareness of EM for young people as practitioners are not signposting its use to authorities (Orr, 2013). Thirdly EM is applied for young people as an alternative to prison however only small numbers of young people in Scotland are sent to secure accommodation (ScotGov, 2016).

Therefore EM has mainly been applied in specific ways to young people forming part of Intensive Support and Monitoring Service (ISMS) orders which aim to reduce the population of under-18s in prison or secure care by providing an intensive combination of multi-agency service provision individualised to the young person's risks and needs in addition to EM (Graham and McIvor, 2015).

#### 5.2.7.2 EM Strategy

The approach and strategies adopted for the implementation of EM has impacted on the diffusion of EM in the UK. Evidence shows that policies to promote diverse application have until recently been lacking in the justice system overall (Hucklesby and Holdsworth, 2016; Graham and McIvor, 2015; Nellis, 2014; CJI, 2012). Integrated delivery in conjunction with probation, courts and prison services is also underlined as minimal.

More recently, evidence points to a gradual orientation within the UK towards more creative EM application within the community. In England and Wales some police forces have utilised GPS tracking technologies for particular target groups such as high risk offenders and prolific offenders with long records (Hucklesby and Holdsworth, 2016; Hudson and Jones, 2016). Pilot projects have been conducted to evaluate the potential of GPS technology use within bi-lateral victims' schemes involving domestic violence. Further the use of EM for individuals associated with terrorism and radicalisation has been under active consideration in multiple jurisdictions with one adoption for this purpose

(Hucklesby and Holdsworth, 2016). The Ministry of Justice piloted in England and Wales the location monitoring of offenders using GPS in 2016, testing the ability to decrease demand on prisons, rehabilitate behaviour and the attitudes of decision-makers (National Audit Office, 2017).

Other strategic objectives emphasise flexibility to align with future changes in the justice system, higher standards of data security and the facilitation of new competitors to promote innovation in the EM market including SMEs (Audit Office, 2017; Geoghegan, 2011). Current evidence in England and Wales suggests that increasingly multiple objectives beyond punishment are being pursued in the use of EM (Hucklesby et al., 2016). In Scotland recent strategic deliberations by the Scottish EM Working Group have proposed three key aspects to inform Scottish strategic use of EM going forward (ScotGov, 2016). It is advocated that EM is implemented in a more integrated manner accompanied by supportive measures to encourage desistance among offenders. Secondly emphasis is placed on using EM as a tool to ensure victim security and protection in ways unachievable through other community interventions. Finally increased usage of EM is proposed as an alternative to short-term custody and remand (ScotGov, 2016). In stressing concern for the female prisoner population, the Scottish Ministry of Justice has prioritised a curfew monitoring system (Amstrong et al., 2011). The EM programme strategy in England and Wales is reported to have been modified both by creating a business-based approach through purchasing tailored and market available tags, and by simplifying requirements for enriching outcomes (Hucklesby and Holdsworth, 2016; Ministry of Justice, 2017).

### **5.3 Outer Setting**

Analysis of the extent to which offenders' needs are identified and addressed and resources provided may impact stakeholder evaluations of the potential and actual consequences if such an intervention excludes or fails to sufficiently address offender needs. In terms of EM in the UK from a cultural perspective, evidence shows there has been minimal consideration to issues of ethnicity or religion (Hucklesby and Holdsworth, 2016).

Knowledge and awareness among senior staff and policy-makers of diversity issues in EM application and the cultural and demographic factors which may affect the experience of EM has been found to be poor (Hucklesby and Holdsworth, 2016). Moreover research shows there is minimal training and awareness given to frontline EM managers and staff who rely on initiative and commonsense in the absence of training and guidelines to manage situations such as visiting offenders' homes during religious celebrations and sensitivity to religious customs (Hucklesby and Holdsworth, 2016).

A key area is the acknowledged inflexibility and standardisation of the way in which curfew regimes are generally applied despite the opportunities available for personalising curfew hours, and the difficulties in modifying curfew hours once imposed (Hucklesby and Holdsworth, 2016). Another critical factor is the lack of monitoring of diversity issues and recording of relevant information and data by the courts and communicated to the contractor. This creates acknowledged barriers for contractors in terms of developing strategies to deal with diversity issues such as religion or disabilities (Hucklesby and Holdsworth, 2016). This suggests that there is a failure to accommodate the different needs of offenders and some offenders may experience difficulties in adhering to scheduled religious observances and attendance at scheduled worship or prayer times.

### **5.3.1 Cosmopolitanism**

Cosmopolitanism refers to the degree to which an organisation is externally networked with other organisations (Greenhalgh et al., 2005). The transfer of EM technology and knowledge within the UK has been influenced by the extent to which agencies are networked. This factor has the further potential to impact on the flow of ideas and evidence that can affect how different stakeholders evaluate the consequences of implementing EM. Multi-agency co-operation has been an issue in the UK implementation identified in early trials of electronic monitoring (Mair, 2005; Mortimer, 2001). Such challenges have remained and the UK experience continues to face challenges in co-ordination between criminal justice agencies. Key issues arising out of the trials included lack of confidence in the efficacy of EM by the probation service (Mair, 2005).

The standalone model evidenced in UK implementations may account for the low level of collaboration between agencies (Armstrong et al., 2011). There was evidence of minimal involvement of the state and criminal justice authorities in the management and supervision of offenders subject to electronic monitoring. Research by the Criminal Justice Joint Inspectorates further shows that EM essentially operates in parallel with the criminal justice system and is only nominally integrated within other criminal justice services (CJJI, 2008).

The EM programme in the UK was not linked from the beginning to other programmes such as motivation to change schemes or treatment programmes for substance misuse (Hucklesby et al., 2016). In England and Wales probation services were rarely involved in EM except where it was combined with other requirements within a community or suspended sentence order; rather the private sector has responsibility for providing all EM monitoring services (Hucklesby and Holdsworth, 2016; Paterson, 2008). Key findings from an extensive qualitative study underline that the involvement of the private sector in EM is associated with a reduced degree of integration within criminal justice structures (Hucklesby and Holdsworth, 2016). This is exemplified in the lack of state agency involvement in pre-trial EM and Home Detention Curfews (HDC) once ordered unless conditions are violated. Even in cases where the Probation Service supervises all case aspects and EM constitutes one of several requirements, evidence indicates limited collaboration and relevant communication between agencies and EM provider (Hucklesby and Holdsworth, 2016). Scotland is indicated to have adopted a similar approach with minimal defined agency involvement unless EM conditions are violated (Graham and McIvor, 2016). Evidence shows that while EM has been combined with other measures, overall there has been minimal consideration of a formalised, integrated approach linked to other forms of support for the purpose of encouraging desistance (ScotGov, 2016; Graham and McIvor, 2015). There is recognition that EM curfew orders by themselves are unlikely to change long-term behaviour (McIvor and Graham, 2016; Sugg et al., 2001). This issue was acknowledged in Scotland and following a government consultation in 2015 the government cited the need for greater emphasis on a system-wide, holistic

strategic approach to community justice and increased collaboration among partners (Platts and Waterton, 2016; McIvor and Graham, 2016).

Evidence points to potential reasons for the absence of an integrated approach in the UK, pointing to heavy workloads, and minimal resources. Scepticism towards the benefits of EM due to non-familiarity is further highlighted leading to lack of EM ownership by criminal justice agencies (Hucklesby and Holdsworth, 2016; ScotGov, 2016). Nevertheless there is evidence of small-scale projects and changes in perspective. Hertfordshire Police in England for example use an integrated approach aimed at repeat offenders with a genuine desire for rehabilitation in which GPS tracking constitutes one element of an individualised offender management programme (Hertfordshire Constabulary, 2015).

### **5.3.2 External Policy and Incentives**

The legal mandate can provide legitimacy for the adoption and use of EM and provide framework for its application that may support its diffusion. In the UK the legislation framework supported the use of EM as a sentencing tool and the explicitly stated purpose to ensure that supervised people comply with the conditions mandated for their supervision, with devices applied in a person's home (Nellis, 2009). Therefore while legislation focuses the application of EM as a sentencing mechanism it defines no purpose for EM as a rehabilitative mechanism which may undermine EM use beyond the existing remit (Lockhart-Mirams et al., 2015).

Within the UK legal framework EM can be applied to a wide range of modalities and target groups. There is significant specification of the period of supervision and the type and length of curfew to be applied which relies less on judges' discretion to set supervision and EM conditions (Hucklesby and Holdsworth, 2016). This points to a potential success factor in terms of the acceptance of EM. Evidence showed that the duration of EM curfew was important and directly influenced successful outcomes for Home Detention Scheme and Curfew Orders (Hucklesby and Holdsworth, 2016).



In England and Wales offender consent is a key part of the monitoring process and consent is more assumed than actively sought, as the 1991 Act has been amended so that the offender's consent is not required for electronic monitoring to be applied. This differs from the practice of many other countries (Hucklesby et al., 2016). Further the extent to which offenders provide informed consent is an issue as evidence highlights that individuals are sometimes not fully aware of or informed about the implications of EM before the equipment is applied. The potential has also been acknowledged for family members to feel coerced into accepting monitored offenders. Some evidence indicates a correlation between later withdrawal of consent by householders and failure to properly gain informed consent prior to the monitoring of members (Hucklesby et al., 2016).

## **5.4 Inner Setting**

### **5.4.1 Structure, Networks and Communications**

The nature and quality of UK criminal justice organisational social networks and communications, both formal and informal, influences the transfer of knowledge on EM. The structure adopted for UK implementation focused on a standalone model with limited agency collaboration and minimal state involvement in EM offender supervision and management, restricting the extent of knowledge sharing and collaboration around the implementation of EM.

The reach and effect of communication channels appeared to be a pivotal factor in the effectiveness of the technology and knowledge transfer because it affected the diffusion of information to stakeholders. UK evaluations consistently noted limited communication and information sharing between agencies such as courts, probation services, police and social services agencies and also with the EM provider (Hucklesby and Holdsworth, 2016; Bottomley et al., 2004; Mair and Mortimer, 1996). Clear guidance and communication were found to be seldom provided and problems extended to difficulty in identifying the status and progress of EM. The consequences were found to be significant in terms of errors, delays in action and misunderstanding between actors (Hucklesby and Holdsworth, 2016). Communication was further impeded due to differences identified in decision-making structures and in enforcement practice that add

further complexity to the process (Hucklesby and Holdsworth, 2016; Armstrong et al., 2011).

Evidence shows that in the UK constraints to the timely and accurate flow of information between criminal justice actors partly resulted from adoption of outdated methods of communication and inflexible and limited systems with minimal information sharing capabilities (Hucklesby and Holdsworth, 2016; Geoghegan, 2015). A key problem was the absence of involvement of frontline criminal justice practitioners who were unable to access and use critical EM digital data and infrastructure. Significant frustration was noted by offender managers with barriers in the technology employed and the lack of a centralised digital location to which they had direct access to add, modify or remove EM sentencing conditions and monitor compliance (Hucklesby and Holdsworth, 2016).

The minimal diffusion of scientific and objective evidence in the UK implementation (Mair, 2005) limits the extent to which stakeholders can become aware and understand the benefits and impacts of EM. This may hamper the flow of ideas and lead to subjective assessments that can impede support and adoption of EM. The significance of this has motivated a shift towards a more integrated model to promote greater multi-agency collaboration and information exchange. In attempts to address these issues both UK jurisdictions have adopted digital communications channels between contractors and state agencies while England and Wales are creating a central portal accessible to contractors, probation and prison services (Hucklesby and Holdsworth, 2016).

#### **5.4.2 Implementation Climate**

The climate for learning and knowledge sharing can be identified as a key factor impacting the successful transfer of knowledge. Research in the UK underlines a fragmented approach in which there is conflict and tension between stakeholders and differing perspectives as EM implementations have been undertaken with minimal consultation and have failed to draw on the experience of key actors (Audit Office, 2017; Armstrong et al., 2011; Mair, 2005). Considerable weakness is further evidenced in terms of continual learning and knowledge-sharing processes either within or between involved agencies and

stakeholders. A significant limitation was noted in terms of the technologies for information sharing (Hucklesby and Holdsworth, 2016).

In the UK, strong tension for change was perceived by central government that reducing rising prison populations and lowering the costs of the criminal justice system was a key priority. Nevertheless, despite acknowledging the need for change not all stakeholders in the UK, particularly the Probation Service, viewed EM as an effective solution (Nellis, 2009). The implementation climate in the UK did not reflect shared receptivity to the EM as a solution resulting in an uneven adoption of EM across the UK.

Discretionary decision-making presented a major challenge for the implementation of EM in the UK related to reconciling national standards with local and social contexts (Hucklesby and Holdsworth, 2016). Evidence from Scotland mirrors this situation showing significant regional variations in EM application (Graham and McIvor, 2017). Two key factors were shown to influence discretionary decision-making and variability in application. Firstly use of EM depended significantly on the professional ideologies and views held by key criminal justice decision-makers, and was influenced by power differences between them enabling discretionary decision-making (Graham and McIvor, 2017). This led to strong differences in frequency of use, how it was applied and on whom across different jurisdictions (Graham and McIvor, 2017).

Secondly there was a lack of knowledge, awareness and engagement with EM by criminal justice agencies and key judicial actors. Multiple evaluations pointed to confusion in terms of the appropriate target groups for the application of EM, leading to unexpected but consistent underutilisation of EM as an alternative sentencing option (Hucklesby and Holdsworth, 2016). For example the Audit Office (2017) doubted government expectations for EM adoption in England and Wales based on a lack of empirical evidence confirming that courts would apply it as part of sentences, and limited understanding of the causes underpinning shortfalls. However evidence does indicate that policies to promote diverse application were lacking in the justice system overall (Hucklesby and Holdsworth, 2016).

The implementation climate also concerns extrinsic motivational aspects that can facilitate the transfer of knowledge and technology to support the adoption of EM. In the UK reward systems for monitoring officers based on offender outcomes or compliance do not appear to be in place. In the UK monitoring officers work entirely within the private sector and are in a structurally weaker position compared to police or probation officers in terms of background, training, terms and conditions of employment, promotion opportunities and organisational support for their role (Hucklesby, 2011). While UK legislation does not preclude using curfew changes as a reward for offender compliance, this practice is not being adopted with curfew hours nearly always remaining unchanged and no existing mechanism for reward (Hucklesby et al., 2016).

The compatibility construct addresses the extent to which the intervention aligns with existing organisational values and work processes. Some stakeholders held views that EM was not compatible with the goals of some agencies (Hucklesby and Holdsworth, 2016; Nellis, 2009). Young people have received special consideration with the acknowledgement of the significant complexity and difference in the application of EM to young people influencing low take-up (McIvor and Graham, 2016).

From a technical perspective compatibility of technology in the UK rates poorly. In some cases deployment of newer technologies is noted to have lacked the preparation of an adequate business case, and a key consequence is a significant lack of integration among components of the system and between software and hardware developed by different companies (Audit Office, 2017).

#### **5.4.3 Readiness for Implementation**

While the literature on electronic monitoring implementation is better developed in the healthcare field, some literature provides insights into key factors for implementation. The UK experience has been analysed in terms of the readiness for implementation and the extent to which this factor impacts on the successful transfer of knowledge and technology of EM. Technological readiness emerged as a critical factor that impeded implementation of EM.

The UK experience shows that the planning of EM technologies has been piecemeal and ad-hoc and deployment has been subject to significant change over the years. Some examples have shown minimal preparation of the business case for the new technology (Audit Office, 2017). Weaknesses have also been evidenced in the management of an enhanced EM service using GPS technologies (Nellis, 2005). A key factor was lack of direct experience by the Ministry of Justice and Probation Service in operating monitoring services. Key conclusions of The National Audit Office (2017) emphasise technical issues with monitoring equipment which created an additional work burden.

In terms of access to knowledge and information, the UK experience shows that the extensive use across multiple different modalities has had implications for resources and increased workload in terms of supervision and courts, police and probation services (Hucklesby and Holdsworth, 2016; Dodgson et al., 2001). Furthermore the UK context is characterised by inflexible and limited systems with minimal information sharing capabilities, differing widely from international practice (Lockhart-Mirams et al., 2015). Achieving implementation readiness was further undermined by a lack of training and education on EM (Hucklesby and Holdsworth, 2016; Shute, 2007). This is a key issue impacting the effectiveness of knowledge transfer. This issue is more problematic due to the continually evolving and fast pace of change of EM technology.

## **5.5 Implementation Process**

Successful implementation of EM in the UK principally requires an active process in which individual and organisational use of the intervention is achieved as designed. These factors have potentially significant impacts on learning and knowledge transfer and can provide insights into the challenges.

In terms of planning and management, evaluations of the UK experience reported a clear lack of government planning and focus (Mair, 2005). Evidence points to ad hoc planning and a highly distributed management structure that has arisen largely in a non-deliberate manner, having undergone several changes in management model thus adding to challenges in planning and structures (Audit Office, 2017). There is significant potential challenge from the parallel operation of EM within the UK criminal justice system for the transfer of

knowledge within the system overall and between relevant actors, by inhibiting the flow of knowledge and information, feedback flows, and collaboration. The lack of engagement of a broad spectrum of key criminal justice actors and stakeholders was notably lacking from the outset (Hucklesby and Holdsworth, 2016; Armstrong et al., 2011). The process in a majority of cases adopted a technological approach that focused on input from suppliers and technology providers. There has also been a significantly lower level of integration with probation or other criminal justice services at national, regional and local level (Audit Office, 2017; Hucklesby and Holdsworth, 2016).

In terms of the management of EM, evidence points to several shifts in management model by the Ministry of Justice as it attempted to find an appropriate approach that would reduce dependence on traditional primary contractors (Audit Office, 2017). A tower model was adopted which divided the traditional end-to-end delivery provided by prime contractors into a four-supplier tower structure. In addition to reduced dependence, the new model also aimed to enable greater cost transparency, innovation and flexibility and greater competition and SME participation (Audit Office, 2017). However it is observed that this was a high risk strategy with significant inherent challenge in procuring, integrating and subsequently managing multiple contracts, and risks in purchasing non-compatible equipment. Ministry capabilities were found to be unprepared and unable to address the significant transformation required. As a result of the emergence of multiple issues the UK government is observed to have changed course in relation to the tower approach (Audit Office, 2017).

Evidence highlights challenges in EM programmes in relation to procurement and services. Findings suggest that the potential of EM has been eroded by weak procurement and contract management by the Ministry of Justice (Audit Office, 2017; Lockhart-Mirams et al., 2015). One key issue is significant and long-term overbilling by key incumbent suppliers which resulted in the cessation of bidding and contract processes for a five-month period. Evidence further shows significant delays and failures in the development of a new EM service and tags (Audit Office, 2017; Audit Office, 2013).

Implementation issues in England and Wales have included the management of intellectual property (IP), and changes and a lack of clarity in specifications. Delays and problems in the process are noted to have resulted in substantial financial pressures for some providers (Lockhart-Mirams et al., 2015). Due to competitive concerns and IP risks incumbent suppliers were shown to be reluctant to share information and collaborate with other suppliers as desired (Lockhart-Mirams et al., 2015). Most recently evidence suggests that the Ministry of Justice has modified its original customised approach in favour of procuring off the shelf tag solutions. Incumbents and suppliers have been mandated to collaborate to ensure integration of different tagging systems (Audit Office, 2017).

In terms of evaluation in the UK a small evidence base and narrow scope of official evaluations have hampered a holistic evaluation of EM effectiveness. This has provided significant challenge for the transfer of knowledge and learning on EM. Official evaluations have been criticised for being narrow and shallow where the focus has been on performance management and service improvements primarily for quality assurance purposes and for decision-making (Mair, 2005). Only specific dimensions of offender experience were evaluated. In the UK compliance and early release were identified as key evaluation measures (Marie, 2011; Dodgson et al., 2001).

Nevertheless, numerous implementations of EM in the UK were subject to evaluation which has furthered knowledge and understanding of EM. The UK experience emphasised the critical role of evaluation to support the effective diffusion and adoption of EM in the UK. This process yielded a range of key recommendations that are under consideration for future policy for EM in the UK addressing information-sharing, use of EM and legal measures to improve the effectiveness of EM.

Firstly, to maximise the potential of EM technologies it is advocated that offender managers should be able to flexibly and comprehensively access and use the data collected in the new generation of monitoring devices being implemented. This was viewed to support the design of more personalised regimes aimed at long-term desistance (Lockhart-Mirams et al., 2015). A

specific recommendation was the use of technology to enable enhanced creativity and flexibility in curfew use to adapt curfew periods to the offender's particular circumstances and patterns of offending, with the purpose of clarifying to offenders the link between their offending and the punishment (Lockhart-Mirams et al., 2015). Identifying and understanding underlying behaviour patterns through the use of EM data on daily movements is acknowledged as important for determining re-offending in addition to encouraging desistance and relinquishing habits. It is suggested that an automated system to flag patterns would be cost effective (Lockhart-Mirams et al., 2015).

Extension of EM to other stages within the criminal justice process was a major recommendation under consideration. EM application to remand stages for non-violent and non-sexual defendants is recommended in view of the significant difference in costs associated with incarceration compared to GPS EM (Lockhart-Mirams et al., 2015). EM is also considered suitable for the management of serious offenders such as violent or sex offenders and thus for enabling early release programmes. It is recommended that legislation be amended to allow serious offenders to be released early on EM subject to an individualised risk assessment that takes into account the offender's circumstances (Lockhart-Mirams et al., 2015).

A number of recommendations have been made in Scottish Government evaluations in respect of specific modifications to the legal framework for EM. Firstly amendments to primary legislation were considered essential to allow for EM to be expanded with the aim of using its greater potential as a condition of police bail, as part of a Domestic Violence Prevention Order or Restraining Order, and to allow violent and sexual offenders to be released on Home Detention Curfew following an appropriate risk assessment (ScotGov, 2016). In England and Wales recommendations have also been made to amend legislation to introduce EM for violent and sex offenders based on rigorous risk assessment, and government trials for domestic violence (Lockhart-Mirams et al., 2015). Changes in legislation and data protection are also advocated to enable the introduction of GPS technology. Recommendations that do not involve legislative changes include advocacy of collaboration among agencies to promote more creative curfew use, greater discretion for professionals to



amend curfew requirements, and the replacement of remand with EM for non-violent or non-sexual offenders (ScotGov, 2016).

The key issue that can be identified in the evaluation process relates to their timeliness. In the majority of cases evaluations were undertaken years or decades after the implementation, which meant that EM projects would not have benefited from critical feedback that was essential for continuous adjustment or modification of implementations to address emergent issues.

## **5.6 Summary of Key Findings**

The analysis in this chapter applied the CFIR analytical framework that provided a comprehensive and standardised list of constructs to evaluate the implementation of EM in the UK. Analysis of these constructs revealed a diverse range of challenges impacted on the diffusion and adoption of EM technology. The reason for examining UK implementation is the widespread and long-term development of EM implementation accompanied by a body of work available providing evaluation, assessment and evidence. The analysis was based on a review of the UK evidence of implementations in two separate jurisdictions of England and Wales, and Scotland, drawing on secondary data sources such as government reports and other studies on electronic monitoring between 2007 and 2017. Analysis was framed around the key CFIR constructs of intervention characteristics, outer setting, inner setting, characteristics of individuals, and implementation process that provide a comprehensive analysis of the implementation of EM in the UK.

## **6 RESULTS II – PRACTITIONER INTERVIEWS ON UAE EM IMPLEMENTATION**

### **6.1 Introduction**

This chapter presents the qualitative results from the interviews with senior and leading actors in the criminal justice system. A thematic analysis was conducted from the transcripts of 11 practitioners drawn from across the criminal justice system that were interviewed about EM. The interview guide in Appendix 3 comprises a total of 18 questions that explore the challenges and the potential of EM implementation for the UAE. The qualitative themes from this research phase address the research questions:

#### ***RQ1 What are the drivers of implementation of EM in UAE?***

The drivers and challenges identified by experts in section 6.3 (Drivers of EM in the UAE) provide an indication of the drivers influencing the adoption of EM in the UAE. This is supported by evidence in section 6.4 which highlights perceived priorities and the potential benefits of EM for the UAE.

#### ***RQ2 What are the challenges of transferring EM technology and knowledge to the UAE?***

Section 6.6 addresses this question through expert perceptions of the implementation factors that are directly or indirectly related to the transfer of EM technology and knowledge.

#### ***RQ3 How do different stakeholders evaluate the potential and actual consequences of implementing EM in UAE?***

Expert accounts address this research question through different stakeholders' perspectives in relation to the application of EM (section 6.5), cultural and other issues (section 6.5.4 to 6.5.7) and implementation factors (section 6.6).

#### ***RQ4 What can be deduced from this investigation that adds to our knowledge and understanding of EM as a punitive as well as rehabilitative system in an environment which is new to this approach?***

The expert qualitative evidence presented in this chapter will form one set of data that will be triangulated with UK case evidence and UAE case evidence of EM implementation contributing new knowledge and understanding of EM.

The interview participants are shown in Table 8 and are cited in terms of their job roles: JU= Judge; PA= Prisoner Affairs; SW= Social Worker; PR= Prosecutor; SA = Strategic Advisor/Consultant

## **6.2 Overview of Key Themes**

An overview of the key themes is outlined in Figure 7. In terms of perceived benefits there is strong consensus that electronic monitoring can play an important role in promoting corrective behaviour, rehabilitation and safeguarding offenders from learning criminality in prison. This is consistent with the majority view that EM had applicability to minor offences and low-risk offenders. Furthermore this aligns with the strategic value placed on EM in terms of deployment primarily for rehabilitation and community service and the importance of integration into these two areas. The focus is consistent with the social and family impacts of electronic monitoring in terms of the benefits to improve social cohesion and provide family support and engagement in the rehabilitation of offenders. There is a strong consensus on the importance of education and awareness of the public and the family on the benefits of electronic monitoring and its role in preventing recidivism through family engagement and support to promote positive behaviour. This is supported by the emphasis placed on EM as a deterrent. The focus on minor crimes and low risk offenders and juveniles can be associated with the challenge that the UAE faces in terms of prison overcrowding and the need to free up prisons for serious crimes. For this category of offender EM is perceived as highly applicable as an alternative to detention at any stage of the general justice process to promote corrective behaviour and rehabilitation. This theme is consistent with the view that EM can be applied to support offenders on parole or a release for monitoring and rehabilitation and reintegration. The various themes arising from the interviews are presented in the following sections.

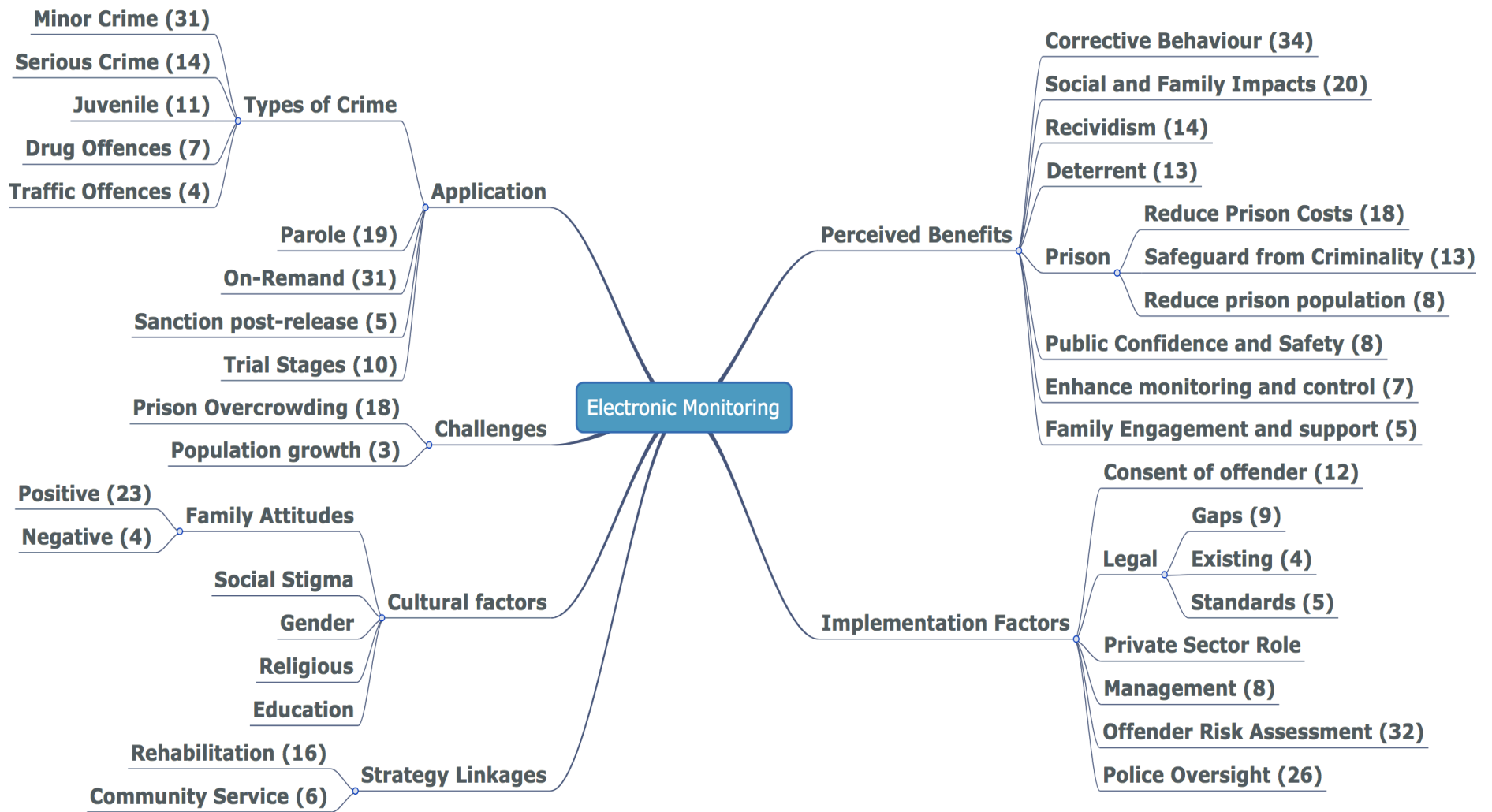


Figure 7 Mapping Key Themes of EM in UAE

### 6.3 Drivers of EM in the UAE

Interviewees highlighted a range of challenges within the UAE context believed to impact the implementation of an electronic monitoring programme. These challenges further point to specific drivers influencing the adoption of EM in the UAE.

One interviewee from the prison department highlighted that prison capacity is three times lower than currently required. According to a member of Prisoner Affairs: *we have unprecedented levels of minor offenders being imprisoned and a high proportion of prisoners on remand.* While a judge states that: *until recently our judicial system has incorporated very few other means to punish criminal offenders other than prison.* Three interviewees pointed to various impacts of overcrowding: *This is manifesting now in terms of rising management costs as well as negative effects on mental health and behaviour of offenders.*

The rapid growth of the UAE's population was cited as a major challenge. From the perspective of one police officer this led to the potential for new crimes and growth in victimisation with consequences for the judicial system: *This means that we in turn have to learn new methods and techniques for combating and controlling crime.*

The drivers for implementation of EM in the UAE were identified in terms of the potential for lowering prison numbers, rehabilitation and reducing recidivism, and the possibility of greater monitoring and control. In relation to the strategic value of EM to the UAE the most cited contribution was its relevance as a tool for the UAE's vision to reduce prison numbers. One social worker participant believed that the reason for this was that electronic monitoring assists with the rehabilitation and reintegration of offenders into the community. Another view from a police participant cited that: *EM could be effective in preventing and deterring crime as it allows us to monitor the offender's whereabouts and activities and offenders are aware of that.*

One judge recognised strategic value in terms of the ability of electronic monitoring to enhance public confidence. They cited that: *EM can reinforce and strengthen the public feeling of safety and security by helping ultimately to reduce crime numbers.* There was support among four interviewees for the idea of strategic significance in the potential for increased monitoring and control.

One senior advisor to the police noted strategic value in financial and other terms: *EM is highly cost effective as a form of monitoring and indeed allows security services to obtain new knowledge and tools for controlling crime and offenders.*

One judge noted that:

*In comparison with community sentences EM places offenders under a higher level of supervision but more importantly it provides a new alternative to give us greater flexibility how we support and monitor offenders in the community, JU1.*

Another judge noted its flexibility in application for different judicial stages such as the pre-trial (bail), community penalty and/or post-release supervision stages of the criminal justice process.

*This should or could include things like discipline, study and education, exercise, health assessment and treatment, financial planning, career development, personal betterment, perhaps some form of repairing the harm caused by their crimes, and follow up family support and integration into society where appropriate, JU2.*

#### **6.4 Potential of EM for the UAE**

The perceived benefits of electronic monitoring to the UAE were explored in the interviews, providing insights into the perspectives of leading criminal justice actors on the potential and actual consequences of implementing EM in the UAE. The key benefits of electronic monitoring to the UAE related to the effectiveness of EM as a deterrent for reducing recidivism, the promotion of corrective behaviour, positive social and family impacts and safeguarding offenders from learning criminal behaviour. To a lesser extent there was the view that electronic monitoring contributed to a wide range of other benefits.

Electronic monitoring could lead to an increase in public safety and community confidence, and could be beneficial for the UAE in terms of supporting transformational reform of the criminal justice system. Moreover its appropriateness as part of the overall legal and punishment 'tool kit' following best international practice was noted in addition to enhancing the international image of the UAE justice system.

### 6.4.1 Reducing Recidivism

One of the most widely cited themes in relation to benefits of EM was the role of EM as an effective deterrent and the reduction of crime. The majority of interviewees perceived that EM was effective as a deterrent that could lower reoffending. In the view of a judge the supervision and real-time control by the authorities were the key reason that offenders were deterred from future crime:

*Serving sentences outside of prison means that social bonds can be maintained with family, friends or business and employment. I think for minor offenders rather than being in prison EM provides opportunity for families to reflect and help the offender to refrain from reoffending. I think friends and family can exert some pressure and provide informal support that help them change their ways, JU3.*

*EM provides a punitive element that the same time can be designed around rehabilitative activities and positive social activities that can expose the offender to role models and ideas that can stimulate their desire to change, SW1.*

This view is reinforced by two interviewees who referred to the potential for influencing the offender's psychological outlook. A police officer stated that:

*Being on EM can encourage a certain amount of self-examination and reflection and the development of one's inner-self. Of course this can happen in prison but the difference is that EM provides a healthier rehabilitation culture that can stimulate self-reflection, JU2.*

At least eight interviewees held the view that EM provides a means to guide offenders towards positive routines and habits. Five participants cited the belief that EM had positive impacts on social and family life. The main benefit for several participants was the ability for defendants to continue their work or study, care for their dependents, and maintain family unity. From the perspective of one police officer this factor was perceived as important because: *it helps in avoiding many family problems such as family breakup and often financial and social hardship.*

Another police participant believed that being able to be at home and continue education or employment and maintain family ties were key elements that helped offenders to change their behaviour.

Four participants perceived that the avoidance of incarceration and contact with other prisoners can reduce recidivism from learning greater criminal behaviour and reoffending. One social worker noted the benefits for juveniles and first time offenders to remain in family situations: *this can help to avoid negative influences and the inclination to commit further crime*. On this theme another judge stated that: *If the problem is treated within the family without bringing these teenagers to the centre it could prevent them from such behaviour*.

#### **6.4.2 Cost Effectiveness**

Nine of the eleven participants held the view that EM would provide significant cost benefits for the UAE. The key reason cited was the cost savings potentially achievable through a reduction in prison populations, with one prison department participant underlining the high monthly costs of incarceration for each prisoner. The point was further made by a prosecution service participant that international experience showed that EM was less costly than detention.

A minority perspective questioned the cost effectiveness of EM if rehabilitation strategy was adopted. According to one interviewee:

*Because of the different cultures in the UAE if EM is targeted to foreign offenders then there will a major challenge in terms of communication and many cross-cultural barriers that will be faced. The cost implication will be high because we will need to train a highly diverse workforce and invest significant time in addressing such barriers,* PR2.

#### **6.4.3 Monitoring and Control**

The view that the monitoring and control capabilities provided by EM is a key benefit attracted support among five participants. EM was perceived by one police perspective to provide new knowledge, tools and robust technology for controlling offender behaviour in personalised ways. One example cited was the value of



monitored offenders as sources of intelligence. In another judicial view the monitoring and control provided at home: *brings positive benefits I think in the opportunity for families to be engaged in, participate in and support the correction process.*

## **6.5 Application of EM**

Views on the way in which EM should be applied and to whom offers significant insights into relevant factors which could either challenge or facilitate the transfer of knowledge and adoption of EM.

There are two contrasting perspectives on the future of electronic monitoring for the UAE. On the one hand certain respondents viewed EM as a significant technology in addressing the country's key challenges such as supporting crime reduction and reducing prison populations. The role of EM was viewed as wide-ranging and as a strong alternative to incarceration but contingent on effective implementation, education and risk assessment. This points to a potential challenge to ensure an effective knowledge transfer process. An alternative perspective among other participants argued that EM is not the initial option or the primary option and should be viewed as part of an integrated approach. A particular view emphasised the limited applicability of EM given the relatively low level of crime in terms of terrorism, dangerous offenders, serious sex crimes and drugs in the UAE. This would make it difficult to gain government and community acceptance for EM to be applied to these categories.

### **6.5.1 Types of Crime**

Participants considered the most appropriate types of crime for the application of electronic monitoring including for minor crimes, serious crimes, drug offenders and specific types of crime. Some insights were provided into perceived consequences for the UAE of application to different types of crime. A majority of nine participants viewed minor crimes and violations as the most suitable type of crime for application of electronic monitoring sentences. In the view of one judge:

*Suitable crimes for EM are minor offences that do not threaten community safety, whereas offenders of serious crimes like rape and murder could*

*not be put under electronic monitoring as an alternative to incarceration, JU1.*

In support of this view, participants cited a range of benefits in relation to applying electronic monitoring for minor offences. One police perspective pointed to the opportunity for rehabilitation and behaviour correction while another social worker cited the possibility of avoiding the disadvantages of incarceration such as acquiring more serious criminal behaviour in prison. One participant further underlined the potential deterrent effect of EM for offenders of minor violations.

The application of EM sentencing to serious crimes was considered among interviewees. A majority view among eight participants was that electronic monitoring should not be used as an alternative to imprisonment for serious crimes because of the danger such offenders were perceived to present to the community. However, there was significant support for the application of electronic monitoring after the serving of sentences in a post-release programme to facilitate rehabilitation and ensure behaviour correction and reintegration into society. A member of the Prosecution department stated that:

*Also it applies to serious crimes prisoners, such as rape, after release to ensure their behaviour correction and protect the community from harm, both early released ones and finally released ones should be under EM for a certain period to ensure that they pose no risk to the public, PR1.*

Participants advanced views on the application of electronic monitoring to drugs offences and offenders. Perspectives varied in relation to whether EM should be applied in these cases. Some police and judicial participants believed that those convicted of drug abuse were suitable for electronic monitoring. A police participant explained that:

*Being on EM means there is good potential for rehabilitation if provided with the right rehabilitation programmes and it also facilitates our periodical testing that can ensure compliance, PA1.*

However there was disagreement with this assessment among a smaller group of participants. One social worker believed that electronic monitoring would not be

suitable for drugs offenders as the likelihood of re-offending was too great. In these cases it was believed that reoffending occurred: *as a result of some family and social problems therefore keeping them at home would not prevent them from accessing drugs.*

Participants discussed the potential application of electronic monitoring to specific types of crimes. In traffic offence cases, mainly serious ones where a period of imprisonment or on remand detention would generally be applied, a majority of eight participants believed that electronic monitoring would be suitable and a reasonable penalty for offenders. There was also discussion on the potential application of EM to financial crimes. Four participants considered that for these types of crime being placed under electronic monitoring would be advantageous for the offender mainly as it would allow them to continue working or seeking to pay any financial penalties they may have incurred. There was a small level of disagreement with this view however, underpinned by the perceived inability to constrain repeat offending of this type of offence.

A range of other views were expressed in relation to the suitability of EM for different types of crimes and offenders. One police officer cited potential limitations in terms of repeat offenders who may not respond to correction and rehabilitation. According to another judge: *there may be a preference among minor offenders for detention rather than being on EM that could publicly undermine their reputation.* A participant from the prison department suggested that EM would be suitable for felony sentences of up to three years where EM would be implemented after the first half of the imprisonment period to ensure good conduct.

### **6.5.2 Stages of Application**

Participants provided their views on the appropriate stage of application of electronic monitoring within the judicial process. Analysis reveals some insights into the perspectives of leading criminal justice actors of the impacts of implementation at different stages in the judicial process. The most important stages discussed related to early release, on remand and EM applied as an alternative to detention. To a lesser extent participants additionally considered juvenile detention and the different trial stages in which EM could suitably be applied.

Among nearly all interviewees the belief was expressed that electronic monitoring should be applied at a post-release stage as a mechanism for early release from prison for good conduct. A police perspective cited that EM allowed police to follow up on the offender's reintegration and behaviour improvement and ensure the continuation of good conduct while no threat was posed to the community. It was highlighted that for serious offenders electronic tagging would be an effective method of testing whether they were ready to be released back into the community.

A large majority of participants considered that the remand stage where defendants are kept in prison prior to trial would be highly appropriate for EM application. A judicial participant summarised this suitability thus:

*It can be practical if applied as an alternative to on remand detention on defendants of minor cases because it helps to locate the defendant and bring him for court interrogation when required. In such a stage, it could not be considered as a direct punishment, but a guarantee for presence before the court, the same as cash bail, bail conditioned by location or personal recognizance, JU3.*

Seven participants considered that EM could be applied as an alternative to the detention stage. The main reason cited to support this view was the avoidance of the disadvantages of incarceration such as family breakdown and enabling the offender to remain engaged and committed within society, and able to look after their family. A social worker perceived that EM was highly applicable to short sentences in particular as in their view they did not achieve anything useful. It was further argued by a police participant that EM was suitable and reasonable as an alternative to detention as there were a large number of offenders whose cases were perceived to pose no threat to society or security.

Another key theme to emerge was the applicability of electronic monitoring to juvenile detention. A high proportion of participants shared the view that electronic monitoring for juvenile offenders was highly desirable on the grounds that it avoided the drawbacks of prison with young people remaining within families and education and kept away from potentially dangerous influences that could encourage

reoffending. One judge cited possible issues in the current system of police detention of juveniles that EM could solve:

*Police get rid of juvenile detention responsibilities and that causes problems although many juveniles come with cases which do not deserve on-remand detention, JU2.*

The utilisation of electronic monitoring during pre-, during and post-trial periods was considered among participants. The majority considered that EM was most suitable for the pre-trial stage with interviewees focusing on this stage for different reasons. One police officer perceived strong practicality in EM for defendants on remand for minor offences as it ensured their presence in court and facilitated investigation. A prison department participant cited the potential cost savings for prison management. Another judge further made the point that:

*Placing on remand prisoners under EM could help better protect the rights of the accused, as well as reducing some of the negative international press coverage that we have in the UAE from our current policy of detention at pre-trial, JU1.*

### **6.5.3 Length of EM Period**

In relation to the most effective length of monitoring period for the EM programme a divergence of view was observable, offering differing perspectives on the potential and actual impacts for the UAE. Seven participants believed that electronic monitoring should last at the most one year or less. While almost all of these participants indicated that the maximum length of EM should be one year, a significant minority specified a length of time between six months and one year. The reason most cited was that the EM period should be relative to the seriousness of the crime. One police participant also noted the risk of a detrimental effect of a lengthy period of electronic monitoring in which offenders may lose the motivation to complete their supervision period. This reason was also cited by interviewees who thought the EM period should last less than six months.

In contrast there were alternative views that the length of monitoring should be fixed in relation to the duration of the original sentence. However despite agreement on this

parameter there were diverging perspectives on the exact length of sentence. Three participants believed that the length of EM should be shorter than the original detention period, and the suggestion was made that it should not exceed one third of the original sentence. There was also the belief among two participants that the period of monitoring should be the same as the original punishment period and suited to the crime committed. Although the option of using EM as an alternative to detention was identified, it was argued by a minority that the suitable period for electronic monitoring was equivalent to short-term detention.

Three participants believed that the monitoring period should be linked to the severity of the crime. Consequently a short period for minor crimes was suggested and a longer period for more serious crimes in order to ensure deterrence and behaviour correction. One police interviewee made the suggestion that the length of EM should be left to police discretion or should be undisclosed to the offender in order to be held under the fear of long monitoring unless their behaviour is corrected. Another prisoner affairs participant proposed that: *a risk assessment of offenders should determine the period length of EM, and the costs of the monitoring service should be attributed to the offender.*

#### **6.5.4 Education and Awareness**

The importance accorded to education and awareness points to a critical success factor in transferring EM knowledge and technology. Many participants expressed the view that education and awareness are key cultural factors which needed to be addressed to enhance the effectiveness of electronic monitoring programmes. One judge cited that:

*These challenges could be eased by awareness and education of the community and explaining the advantages and disadvantages of EM. Awareness facilitates preparation of the community for the application as what happens with the introduction of social service punishment, JU2.*

The need to provide education and awareness for the community as a whole was emphasised by both police and social worker participants. In the view of one police officer this could help prepare the community prior to EM application and promote acceptance and avoid any cultural shock or fear: *the community needs time to*

*understand and get the idea and comprehend the benefits and advantages of this type of punishment.* The role of the media was also underlined in promoting awareness of the programme, with previous successful judicial initiatives noted that had been presented through the media and which had gained acceptance and approval from the community.

Another police participant placed emphasis on the education and awareness of the family. Its importance was noted to rest on the potential intrusiveness of electronic monitoring and its impact on the family, and the perception that explanation of the benefits would help to secure cooperation:

*I do not think the families would refuse having their offending children electronically monitored, however they need to know the benefits of it compared to detention and the consequent disadvantages, PA1.*

#### **6.5.5 Cultural Attitudes**

Discussion of possible cultural issues provided key insights into senior actors' views of the impacts of EM implementation in this regard and potential challenges for knowledge transfer and efficacy of EM.

Firstly there was a view among six interviewees that EM did not present any major cultural challenges that could not be overcome with education and awareness. A key perception was that the application of EM would not impose any behaviour contradictory to public traditions, values and customs. The view was expressed by one judge that electronic monitoring depended on punishment for behaviour that accorded with the idea of traditional punishment. They noted that EM would not encounter resistance on cultural grounds as it would be viewed by the community as an alternative punishment that provided an opportunity for correction in a more effective way than traditional punishments. The point was further made that: *the diversity of culture within the UAE has led to openness and awareness of new ideas among the public.*

Interviewees provided a range of perspectives on the consequences of implementing EM in terms of cultural attitudes, particularly in relation to social stigma and privacy. One of the most cited issues by participants related to the potential social

stigma associated with being monitored and wearing an electronic tag. A division of opinion was observable between the participants over whether electronic monitoring would incur social stigma for the offender. Slightly more participants believed that electronic monitoring would have an impact on social stigma as a result of the cultural environment of the UAE. A prison department interviewee noted that:

*There is a big thing here about shame, which does not necessarily exist in other countries and cultures. I think the government and society do not want to shame people as being recognised visibly as having committed crimes, PA2.*

Another social worker participant cited that there could be possible impacts on offender rehabilitation and reintegration as a result of negative perceptions within the community, while psychological effects on the family and person being monitored from social stigma were highlighted. Sensitivity to social stigma was thus felt to be important in EM application. In contrast a smaller number of participants held the belief that electronic monitoring would not incur any social stigma. The reasons expressed ranged from the lack of visibility of the devices, preservation of family ties, and principally its favourability over prison perceived to be associated with greater stigma.

Five participants drew attention to privacy issues as UAE culture was cited to value and afford high levels of privacy and protection. Potential breaches of confidentiality by private entities involved in any EM programme were cited as a key concern in this respect. Breaches of secrecy of case information were observed to potentially undermine the success of the initiative. It was suggested that only private companies with local employees should be used to manage the EM application and protect the privacy and secrecy of information related to the monitored offenders. The proposal was also made that police officers should be aware of the importance of maintaining the privacy of EM clients.

Consideration of diversity highlighted potential factors influencing the acceptance of EM in the UAE. The issue of gender in any implementation of electronic monitoring was consistently referred to, with conflicting views evidenced on the potential impacts. The majority of participants believed that there would be no cultural issues or conflicts related to gender and EM could be applied equally to both sexes. The point was made



by a police participant that EM was not a breach of privacy while a further judicial view stated that the considerations of women would be accounted for in the application process. It was also believed by this participant that: *EM would be a good tool for female offenders as it allows them to serve the punishment at home thus avoiding the disadvantages of being in prison for family and children.*

However there were alternative views among three participants in relation to the belief that the gender of the offender being monitored would be a cultural issue within the UAE. The customs and traditions of the UAE were highlighted by one social worker interviewee as barriers to putting a woman under electronic monitoring and families were not expected to welcome a tag on their female members preferring imprisonment as an alternative. One police officer noted that cultural sensitivity in the application of electronic monitoring could potentially overcome these barriers mainly focused on employing female officers to deal with female offenders.

Discussion of religious issues points to the potential compatibility of EM for the UAE facilitating its adoption and diffusion. Religious issues were discussed by many interviewees with all but one of these perceiving no conflict between electronic monitoring and religious considerations. In particular EM as an alternative punishment was not viewed as incompatible with Shariah law as EM was perceived to encourage good behaviour. It was noted that on a practical level EM did not pose any conflicts with religious considerations such as cleanliness and maintaining prayer routines. However a challenge in accommodating changing prayer schedules was noted.

Four interviewees perceived that there were cultural barriers to applying EM to the non-Emirati population. A police interviewee made the case that language diversity was a key issue:

*We have strong demographic diversity with foreign nationals and migrant workers from many different countries that speak many different languages. Language barriers alone could be a significant obstacle to successful implementation. Effective supervision and social support depends on being able to communicate however many foreign nationals don't speak Arabic or even English, so communication could be virtually impossible unless you hire translators, PA2.*

One social worker interviewee suggested that cultural diversity could affect the success of the implementation. It was argued that:

*There is undeniably a cultural distance between Emiratis and foreign workers that could challenge the creation of trust and communication between offenders and supervising teams. This has implications for any rehabilitative approaches that the project may adopt, SW1.*

A senior actor affirmed:

*Cultural diversity could be a threat to how successfully EM meets its goals. There is a lack of trust for migrant workers that could potentially curtail engagement from either side and ultimately have an impact on their compliance and rehabilitation, PR2.*

#### **6.5.6 Family Attitudes**

Family attitudes to electronic monitoring were explored among interviewees with mixed views emerging on the potential level of acceptance by families. There was a widespread belief among participants that family attitudes would be positive towards EM. One senior police officer stated the belief that:

*I don't expect the families to refuse EM on a member of the family if required, because they will not prefer to have their member in the prison. However, awareness and education are important in this respect. The family would welcome EM alternative as it allows observing their son's behaviour outdoors in addition to their own observation on them at home. In many cases, families complain to the court seeking its intervention to correct their children's behaviour, particularly in case of drug addiction, PA2.*

Several participants suggested that families would be happy to accept electronic monitoring as an alternative to prison, which was viewed as a worse option from their perspective. Another reason cited by a social worker related to the opportunity for correcting the offending family member's behaviour, particularly in regard to helping resolve any drug or alcohol issues. Experience was further highlighted of application

of EM in another country with the view expressed that the positive family attitudes demonstrated there would similarly be reflected in the UAE. One perspective in the police emphasised advances in monitoring technology which have rendered monitoring devices highly unobtrusive and therefore causing less embarrassment to families than prison.

There was agreement among a smaller group of participants however that families may not initially welcome having an electronically monitored member at home, citing issues of perceived breaches of privacy and intrusion in family life and possible conflicts with UAE cultural values. A police officer noted that:

*The domestic culture of the family and the UAE community that bear our custom, traditions and cultural values, would not welcome the idea of having a family member being electronically monitored within his family by an official authority, PA2.*

However it was also argued that provided families and wider society were educated on the benefits of EM as an alternative punishment family acceptance would likely improve.

#### **6.5.7 Psychological Impact**

There was some discussion on the potential psychological impacts from electronic monitoring either on the offender, family or both. The point was made by several participants that electronic monitoring could be considered potentially humiliating to the Arab mentality and with attending psychological impacts on family and offender from the loss of family reputation.

On interviewee explained that:

*There is significant potential in Arabic culture that EM can create mental and emotional distress for offenders more than prison. They may experience daily humiliation and shame in wearing the device. I am very concerned about the application of EM to offenders that can experience depression or feelings of anger or frustration, SW1.*

Another view emphasised greater impact for foreign offenders:

*I think EM can create pressures for offenders that can be more straining than prison. The constant surveillance and monitoring and supervision will be a challenge. I think this will be multiplied for foreign offenders because of the cultural distances and the additional tensions that this will create. There are major cultural barriers between language and attitudes and I think that this will make it challenging for offenders, PA1.*

## **6.6 Implementation of EM**

The critical factors to be considered and perceived to potentially impact the effective implementation of EM were explored by interviewees. This provided insights into the relevant factors which may challenge or facilitate the transfer of knowledge and adoption of EM.

Ten key themes were identified of which the target group for EM, legal requirements and offender consent emerged as the most significant implementation factors. In addition numerous minor themes were noted including the need to assess suitability for electronic monitoring based on the type of crime or offender. Many of these have implications for knowledge transfer. It was perceived that risk assessment and case study should be performed before an offender is recommended for monitoring. Further the principle of "punishment individualisation" was noted in terms of individualised assessment of each offender under the electronic monitoring programme. Moreover it was highlighted that cultural assessment was important in order to evaluate the suitability of EM for the UAE. The suggestion was made that local cultural factors should be taken into consideration and further that research should be conducted to explore how effective the programme had been in other countries whose legal system is based on Sharia law. The importance of cost assessment was emphasised as other countries were cited to have found the costs of implementation higher than conventional prisoner management.

### **6.6.1 Implementation Strategy**

The type of implementation strategy adopted could facilitate or hinder the adoption and diffusion of EM in the UAE. Many participants stated that the approach adopted towards implementation was a critical factor. In this regard there was a majority view among nine participants that a gradual approach developed in stages was most

effective mainly as a result of a significant lack of experience in the UAE with electronic monitoring. One participant cited that: *evaluations of results should be conducted and we should expand EM only once we have established experience and confidence in EM from both administrators and society.*

Nine participants commented on appropriate strategies for implementation of EM. Some level of support was observable for a phased approach considered the most suitable for the demographic and cultural context of the UAE. One police participant stated that: *given the huge diversity of nationalities we have in the UAE a phased approach in which we trial it with Emiratis first I think is more preferable.*

The appropriateness of a phased introduction for addressing different areas of policing such as predictive policing, crime prevention, juvenile crime and community-based sentencing was also asserted by police participants. Another judicial view stated that EM should be applied in accordance with judicial priorities while the application of EM on a post-prison case by case basis was also cited.

One theme to emerge from the interviews was the implementation of EM within an integrated approach. At least six participants expressed the view that applying EM in combination with rehabilitation and training programmes would strongly support the effectiveness of the programme to achieve behaviour correction. According to one police participant police and family roles in the process should be clearly defined and communicated. The proposal was also advanced that EM should be combined with community service. A judge cited that: *community service should be the key sentence and EM a complementary measure which could enhance control of offender behaviour and ensure compliance with community service orders.*

### **6.6.2 Target Group**

Discussion of the appropriate target group highlighted certain impacts for consideration in EM implementation. One of the principal dimensions attracting significant comment was the appropriate target group for initial implementation. Many interviewees were of the view that fairness and equality in any decision-making on appropriate targets for EM held key importance.

Cultural issues in relation to the inclusion of foreign nationals in electronic monitoring were cited among a small group of participants. One judge argued that if adoption of EM only applied to UAE nationals this may be seen as discriminatory by some stakeholders. An alternative view was expressed by one police interviewee who noted that the application of EM may provoke resentment among foreign groups with no experience of EM in their own countries.

Multiple interviewees believed that all people regardless of nationality, race, gender or religion were equal under the laws and constitution of the UAE and therefore they should not be discriminated against when targets for electronic monitoring are decided. One police participant specifically stated that there should be no discrimination between expatriates and locals:

*If you apply it to locals and not to others, it generates a feeling of inequality and racism which is not the spirit of the UAE constitution... Thus, for the sake of this country's reputation in human rights, the EM should be applied to all wherever its conditions are met, PA2.*

To a lesser extent however a diverging view was apparent among three interviewees that electronic monitoring should either be restricted to the local population or applied in stages with local targets the priority. One police perspective cited that: *the different languages and backgrounds, and the customs and traditions of expatriates would make it difficult to include them in the first stages of the project I think.*

Linked to this debate, a gradual, incremental EM strategy beginning with the local population and expanded to expatriates subsequently was recommended. A phased approach was suggested advocating that EM was introduced in specific phases starting with local juveniles in an experimental phase, later trialled with local adults, then low risk expatriates, followed by new crimes trialling, and the final phase of full implementation after the legal framework and procedures had been approved.

Other target groups for implementation were considered by interviewees. There was some support for the view that juveniles would be highly appropriate targets. One social worker perceived that they would benefit the most from reintegrating with society and being given a chance to correct their mistakes. Specific consideration was also

given to the situation of low-skilled and low-waged labourers. The perception was expressed by one judge that applying EM to this group would be beneficial in terms of allowing them to continue earning a living and making a contribution to society. However an alternate view from a police officer suggested that the accommodation environment for low-skilled labourers may not suit monitoring, and other punishments may be more suitable.

### **6.6.3 Legal Requirements**

Discussions on the legal conditions and needs relating to an electronic monitoring programme highlighted a number of important issues and considerations relating to legal gaps, existing legislation, application standards and consent issues that were viewed to impact the effectiveness of the programme if not addressed. These issues highlighted perceived impacts for the UAE and critical factors influencing the transfer of knowledge.

Although responses were dispersed over a range of different issues, eight participants perceived critical gaps in the legal framework governing the introduction of EM. It was consistently stated that currently the legal regime needed to be updated to accommodate developments in alternative sentencing generally and the application of electronic monitoring specifically. The UAE needed to put in place a clear written and approved legal framework, policies and procedures and standard operating procedures. The observation was made by one judge that:

*There is recent law concerning community service as an alternative sentence and the relevant prosecution has been formed, however [there is] still no clear vision about execution mechanisms, JU3.*

A number of different dimensions were identified by participants that in their view should be considered within any legal framework governing electronic monitoring. The suggestion was made by a judge that the EM legal regime and guidance should be adapted to the UAE community's needs, traditions and customs and take into consideration issues relevant to the UAE such as privacy, family dynamics, religious interpretation and parameters. Another view highlighted that social factors and needs should be integrated into legal governance and decision-making on the suitability of EM for monitoring a person.

Consideration of the rights of offenders drew out insights on the potential impacts of different approaches for the UAE. A key implementation issue in which the majority of participants agreed centred on obtaining the consent of different parties in the application of EM. Most emphasised was the consent of the family hosting the offender being monitored. Family consent was considered vital in order to guarantee its cooperation with the supervisory authority during EM implementation. It was further suggested that the culture and laws of the UAE entailed the necessity of considering the privacy of the house and family and seeking appropriate consents from the family and its head of household.

Confidentiality of cases and the enforcement of privacy were considered as critical as breach of confidentiality was perceived to potentially lead to negative effects and breach of the rules and possibly cause reoffending. The issue of low-wage foreign labour was further alluded to in the context of necessary modification of existing laws to allow new alternatives to imprisonment or deportation for this segment of the population. The importance of protective measures for the community and family from any dangers posed by electronically monitored persons was also underlined.

#### **6.6.4 Communication**

Perspectives on communication provided a strong basis for understanding some of the issues which could challenge the adoption of EM in the UAE. Seven participants believed that communication with the community and key stakeholders within the delivery of an electronic monitoring programme was imperative for the scheme to achieve success. One prosecutor noted that ensuring community awareness of the benefits of the scheme and further that key stakeholders were consulted in any implementation were critical elements of communication:

*The requirements of EM may include awareness of community so as to cooperate with the process. They should be educated on its advantages and disadvantages and that EM is a more positive type of punishment,*  
PR1.

It was further noted that electronic monitoring clients should be clearly aware of their obligations and conditions and that any breach could have more serious implications such as going back to prison.



The proposal was made that focus groups should be convened with key people and used as a platform to advance persuasive and easy to understand arguments and the benefits that EM could bring to the UAE, its people and user community. This step in addition to continuous involvement was argued to reduce any resistance to change.

#### **6.6.5 Management of EM**

Discussion of how the implementation should be managed highlighted key issues for technology and knowledge transfer of EM. Multiple interviewees noted that the management of the electronic monitoring programme was a key implementation factor. Several senior decision-makers noted challenges for the leaders implementing EM emphasising it would bring with it new languages, methods and techniques. One actor noted that this would require significant change and transformation in mindset. A strategic advisor proposed solutions for both planning and execution stages:

*In my view a 'whole systems approach' should be adopted to map out the entire business and operational process for implementing EM in the planning stage. This would allow a baseline comparison of the changes needed within the current system, SA1.*

It was further noted by an advisor that most major projects fail due to inappropriate project management, therefore when implementing EM, utilisation of a full time project team was suggested supported by a dedicated project team and formal project management methodology.

Interviewees addressed the issue of the most effective management body to administer any electronic monitoring programme, with the majority of participants expressing a clear preference for police agency management. Other key themes included consideration of a partially privatised approach, government agency management, management by joint committee and the preferences for and issues involved in private international management.

Many interviewees held the view that the police were the most appropriate agency for undertaking the management of the EM programme. This rested on the perception that the police had the executive authority, geographical and inter-organisational reach

and specialised experience and resources as the executing body for judicial sentences to effectively manage the programme. A senior advisor noted that:

*Historical experience shows that the strongest impact on EM compliance will be the fact that it is being run by a major state institution i.e. the police, SA3.*

There was strong belief expressed by judicial perspective that the community confidence and strong reputation the police were perceived to enjoy in the UAE made them the ideal candidates to manage the programme. This was asserted to have the further effect of encouraging greater cooperation, respect and compliance from the monitored offenders.

One police participant attributed this to the experience and resources of the police, viewed as a key advantage for police management of the EM programme, as they had higher budgets and resources for supervising individuals than other agencies. These resources included greater staff availability, technical skills and aids, and greater preparedness and equipment. The benefit of a single governmental organisation possessing all the information they need in relation to offenders, and the convenience of supervision by a local government agency was further highlighted.

Some allusion was made to the wide geographical coverage which may not exist in other entities and the ability to work together with all partners to support the process:

*The police are the best supervisory entity for EM management as it consists of supporting units like social support centre, community police department, etc. these units can work in coordination to provide better management and welfare for the monitored persons, PA2.*

Another participant stressed the importance of EM management remaining in the hands of a government agency, whether the police or other agency. A key point related to local culture:

*We have Abu Dhabi Police and other government agencies who understand the culture of the community better than a private company does, whether from UK or USA for example, SA2.*

There was further caution that privatised models from other countries were not directly comparable with the UAE context.

A dissenting view stated that electronic monitoring should be supervised by a joint committee to coordinate between police and judiciary. This committee would facilitate updating of the relevant procedures, systems and laws, in order to guarantee effective application of the EM programme to suit objectives.

Interviewees were questioned in relation to the role of and involvement of the private sector and international management of the electronic monitoring. A number of common themes and issues emerged among interviewees perceived to potentially negatively impact or strengthen effectiveness. These issues further point to challenges and barriers for the adoption and acceptance of EM. There was a majority view among seven participants that public acceptance of private sector involvement was a key possible issue in terms of suitability within the cultural context of the UAE. The police were perceived as the traditional official authority for such matters and possessed the level of trust and reputation required from the local population to ensure effective management. One police decision-maker noted: *Private companies do not have the same level of respect that the police do and this could mean that there is lower cooperation and compliance from offenders.* Another actor further underlined that using private companies which generally have multinational staff to manage EM as a punishment measure for local people would not gain acceptance from the community and would be viewed as a lack of respect to people in the local culture.

However a number of participants adopted a slightly different view, suggesting that private sector involvement in electronic monitoring may eventually gain acceptance. In this respect one senior actor emphasised that utilisation of multi-national private security personnel to monitor public spaces for example was not new in the UAE and their role had been accepted in local society and valued as essential for maintaining the safety and security of the Emirates. Another interviewee cited: *faced with the option to go or stay in prison I think offenders would accept monitoring by private sector companies.* It was also proposed that companies develop cultural awareness in the supervision of offenders.

### 6.6.6 Risk Assessment

Participants explored the nature and key factors of the risk assessment process for offenders undergoing electronic monitoring. This also provided insight into key challenges and critical success factors for knowledge and technology transfer. Almost all interviewees perceived that risks associated with the individual offenders should be appraised before participation in any electronic monitoring programme. Table 11 indicates the assessment criteria arising compiled on the interview responses. Attention was drawn to a number of different offender assessment factors considered important, with over half of participants highlighting the offender's previous criminal record as a key risk criterion.

**Table 11 Risk Assessment Criteria**

<b>Offender Assessment Criteria</b>	<b>Code References</b>
Previous Criminal record	12
Mental Health	3
Family Circumstances	3
Nature of Offence	3
Public Safety and Security	2
Public Opinion	1

Five participants expressed the view that an extensive criminal history indicated a high-risk level requiring significant supervision and potentially excluding offenders from participation. The view was also expressed by a police officer that an offender's state of mental health was a key risk assessment factor: *That is because a person with mental problems, for example, may not benefit from the monitoring and cause risks to the community.*

More than one participant noted that the surrounding circumstances of the offender were critical risk factors to be assessed. In particular family and stable employment in the offender's area were considered important aspects influencing risk. One actor emphasised the consideration of the risks to and emerging from the offender's family environment, with recommendations to conduct a "family impact assessment" in each case. One decision-maker from the prison department cited the relative newness of this approach in the UAE:

*This step is absolutely necessary particularly as there is no mechanism in the UAE to carry out independent family social inquiry and probation reviews and provide reports to the courts and the decisions makers, PA2.*

Multiple interviewees stated that the nature of the crimes committed should form a basis for risk assessment, with more minor crimes perceived to offer lower risk. The point was made by one actor that individual risk appraisal should include the effect of the committed crime on public opinion. Public safety and security were further criteria receiving some support, with the view expressed by a police actor that this should be the principal priority.

In discussions interviewees suggested a number of ways in which offender focused risk assessments could be constructed and effectively implemented. A key theme focused on the need to involve professional assessors either social workers, psychiatrists or other trained professionals to conduct risk assessments and review criminal profiles:

*The same as judges appoint expert witnesses for certain technical matters, ... applies to EM potential clients being assessed by specialised people before being put under monitoring, SW1.*

Another suggestion proposed assessment based on comparison with similar offending profiles and reoffending rates over a specific period.

These findings emphasise the need for a standard risk assessment criteria associated to the different EM options such as different stages of the criminal justice process and the different types of offender.

#### **6.6.7 International Best Practice**

Multiple interviewees perceived that implementing international best practice could help to ensure the effectiveness of any EM implementation. In terms of the transfer of EM technology and knowledge several participants believed that this was critically dependent in the UAE on evaluating the evidence from other countries. However one perspective placed caveats on utilisation with the qualification made that:

*The UAE must look to implement what it finds as good practice from other countries around the world, so long as any policy is adapted locally to take into consideration the law and culture of society, PR2.*

One decision-maker believed that a benchmarking exercise would be a good idea, both to gain knowledge of best practice and to understand the impact of EM in countries when it was introduced. However it was underlined that a large external organisation should not be used to lead and implement any EM model in order to ensure that a locally developed and culturally appropriate model emerges.

## **6.7 Summary of Key Findings**

This chapter presented qualitative data drawing on the perspective of senior academics, policy makers and personnel from the UAE criminal justice. The qualitative results point to a number of key drivers for implementation of EM in the UAE. Major drivers include reduction in prison numbers, the potential for rehabilitation and reducing recidivism, deterrence, public safety and confidence, and the capability for greater monitoring and control. The results further reveal a range of challenges for the transfer of EM knowledge and technology to the UAE. Cultural issues, the implementation strategy adopted, target groups and modalities, communication, legal requirements, risk assessment, and management of EM are key themes which can potentially impact on successful implementation. Various perspectives were identified in terms of the potential and actual consequences of implementing EM in the UAE. Key perceived impacts related to the positive potential of EM in terms of reducing recidivism, cost effectiveness, increased monitoring and control and potential for rehabilitation. EM implementation could also have positive or negative consequences for cultural issues, and in terms of how EM is applied, implemented and managed.

## **7 RESULTS III - INSIDER INTERVIEWS OF UAE EM IMPLEMENTATION**

### **7.1 Introduction**

This chapter presents the qualitative findings drawn from insider accounts and interviews of the planning, design and implementation of the electronic monitoring programme piloted in the UAE. The results are based on insider accounts conducted after pilot implementation had commenced in 2017 and the first cohort of offenders had been processed and released at the end of 2018 so that evidence was available of the entire implementation. Aligning with the insider interview schedule in Appendix 4, the results in this chapter are structured into five sections based on the CFIR framework that provide a comprehensive analysis of the implementation of EM in the UAE. Analysis of the implementation construct relating to the intervention characteristics, outer and inner contexts, characteristics of individuals and the implementation process revealed rich qualitative evidence. This evidence addresses the four research questions underpinning this study in revealing the drivers of the implementation in the UAE, the challenges in transferring EM to the UAE and different stakeholders' evaluations of the potential and actual consequences of implementing EM in the UAE. The qualitative data within this chapter provides key insights into the critical success and failure factors for the implementation of EM.

The interview participants are shown in Table 9 and to ensure anonymity are cited in the following sections in terms of their job roles or agencies: JU= Judge; ADP = Abu Dhabi Police Officer; PA= Prisoner Affairs; SW= Social Worker; PR= Prosecutor; PS = Psychologist.

### **7.2 Intervention Characteristics**

#### **7.2.1 Intervention Source**

Examination of the source of the intervention allows for insight into the specific factors driving implementation of EM in the UAE. The source of the EM pilot project and its aims was explained by key actors from the Ministry of Interior to have emerged from the Ministry itself driven by commitments to reducing prison population, cost reduction and a rehabilitation approach to criminal justice. A senior administrator

underlined that prison population was perceived as a key issue that has promoted a review of criminal justice and consideration of alternatives to prison. He stated that:

*Our strategic goal is to reduce the prison population by 25% by 2030, because we know we have a problem with overcrowding. There are probably more than 12,000 in prison right now which is a 100% increase since 1998 and we just don't have the capacity to cope with much more. Eventually this will undermine the prison service stability and effectiveness so it is vital that we introduce new alternatives that address this issue, MOI1.*

According to prisoner officers prison overcrowding is becoming a serious issue that has increasingly negative consequences for prisoners stating that:

*We have exceeded the official capacity of the prison system and conditions are worse. I can see it affecting prisoners especially first time or minor offenders. I can see that it has psychological impact with high stress, fear especially being close to other prisoners and mental health, ADP4.*

An official from the Ministry of Interior explained that this issue has promoted a growing internal policy focus in the Ministry towards incorporating a new strategy:

*Decision-makers have been aware of the issue of prison overcrowding and it is key factor that has led to consideration of EM. But we want to go further and there is commitment to combine punishment and the reintegration and rehabilitation of offenders, MOI2.*

A senior Ministry of Justice official stated that: *prison for minor offences just wasn't an effective strategy, and we needed to have criminal justice that gives opportunities to offenders to change their behaviour.* He explained that the government was committed to seeking new and effective alternatives to imprisonment particularly for certain types of offender, including female offenders, juvenile offenders, and offenders of low-risk or minor crimes.

Another official pointed to the government's focus on efficiency and the reduction of prison costs, which was becoming a serious issue. He explained that there was a



strong view across government that: *by expanding EM to this group of offenders we can reduce prison costs by reducing the high volume of minor offenders.*

### **7.2.2 Evidence Strength and Quality**

The actors interviewed presented different perceptions about the quality and validity of evidence that influenced their beliefs regarding EM and the desired outcomes. Multiple perspectives showed that senior decision-makers and stakeholders viewed EM as a valid intervention based on implementation in the UK and international evidence. An interviewee explained that global evidence on the satisfaction of system users in other countries further formed a key part of the selection criteria for an EM service provider.

Firstly, a senior of the Committee for Alternative to Prison (CAP) stated that the belief that EM would have the desired outcomes was based on research conducted on international evidence of EM implementation. He explained that:

*We reviewed evidence from different countries including the UK, United States and Belgium, Sweden and France. Even though the evidence is not conclusive we can see that EM has the potential to achieve rehabilitative goals, PR1.*

In one case belief in EM was based on colleagues with another member of the CAP stating:

*I have limited knowledge about the evidence of EM and I have relied on the information from other colleagues. However there are only a few people who are knowledgeable about EM. Those who are in favour strongly for EM do not always provide strong evidence and so we must trust them, JU2.*

Four interviewees believed that obtaining reliable evidence was challenging. One participant in the Police explained:

*There is a lot of uncertainty and people will not take risk and either support or criticise EM or provide any evidence from any sources because they fear being held responsible, ADP2.*

There is major reliance on the information provided by the technology provider G4S and several interviewees cited the cases and evidence provided by the company. According to a member of the monitoring team: *My main knowledge about EM is from G4S staff who have provided many examples of how their solution has been effective in reducing re-offending.*

### **7.2.3 Relative Advantage**

There was a range of views relating to stakeholders' perception of the advantage of implementing the intervention versus an alternative solution.

The UAE had strong perceptions about the advantages of EM as an alternative to prison specifically in relation to minor offenders. The strength of belief in the efficacy of EM appears to contribute to acceptance and support for the transfer of EM to the UAE.

Stakeholders viewed EM as a cost-effective alternative that could achieve behavioral change of offenders and at the same time provide restitution in supporting community service:

*We can alter their behaviour by reducing their exposure to the prison environment and provide rehabilitative support while at the same time being able to supervise and monitor their routines. Current existing curfew monitoring with EM does not provide us with real-time information about offenders, ADP2.*

Emphasis was placed on the advantage of EM to be able to regulate the monitoring conditions:

*The most powerful feature of EM that I find exciting is that we can reward or punish good behaviour to reinforce positive habits and routines. As I understand it the technology will allow us to increase or decrease curfew times and geographic boundaries. This can send important messages in real-time to offenders of the consequences of their behaviour, ADP1.*

For minor and petty offenders, EM is viewed as a passive option in comparison to the active contribution required by community service, while EM has been viewed positively in terms of the early release option compared to continued incarceration.

This provided a way of freeing prison capacity and integrating low risk early release offenders.

The UAE account emphasises that the use of EM technologies has significantly increased the scale, the accuracy and the enforceability of sentencing and regulation. The dimension of remote surveillance has been added to community supervision and by restricting unmonitored movement increased the intensity of control able to be applied to offenders. EM is thus perceived to extend the possibility of managing offender mobility applied as a crime reduction strategy. Further it was considered that EM technologies provided a key advantage in terms of the amount of intelligence and data they could provide that could both detect and deter crime and that monitoring officers otherwise would not have.

#### **7.2.4 Adaptability**

In terms of the degree to which an intervention can be adapted or tailored to local needs there was significant flexibility apparent in the UAE in terms of the availability of different conditions able to be applied within EM sentencing and the possibility for a degree of personalisation within those conditions. According to a senior Ministry of Interior policy maker one the major advantages of EM is:

*The flexibility it offers that allows for different sentencing and correctional policies. As a result we can support a wide range of goals in terms of punishment, deterrence, incapacitation, and rehabilitation, MOI2.*

It was acknowledged by several of the CAP members that EM was highly adaptable and that it could be tailored to the UAE context:

*We can adapt the conditions for each offender depending on that offender's existing programme or circumstances. For instance, the conditions for EM can be designed so that they allow offenders to maintain their family and religious commitments that are important values of UAE. It can apply specific time and geographic restrictions to allow offenders to engage in some family activities and attend local Mosques, SW2.*

The potential for integrating broader social and rehabilitative objectives, a key factor in adoption, is attributed to flexible application in different areas:

*Judges have the option to use EM as either a post-release surveillance measure or as an alternative sentence; personalised conditions can include a ban on location of residence or social company; imposing employment or training as a key condition for offenders under EM; or mandating of access to social or material support measures for the offender, PR2.*

A member of the CAP stated that in 2018 judicial sentencing combined for the first time the use of EM with other community sentencing options namely community service in the case of young minor offenders:

*We found that by incorporating flexible conditions the potential of EM to impact positively on rehabilitative goals could be realised. Two exciting features, firstly the ability to reward good behavior by reducing curfew and geographic restrictions; secondly tailor the geographic boundaries so that they fit with each offender's interests and allow them access increasingly to positive lifestyles. These are very powerful features that allow us to adapt and provide more engaging rehabilitation culture, ADP5*

Another interviewee explains:

*For young offenders where I can see the future being extremely challenging, EM represents a vital tool if used effectively and it delivers on its features. For example, we can adapt it to allow us to provide a very flexible regime for an offender. We can match them to community services while on EM and we can integrate their routines to positive activities that match their interest. They are being punished through community service and rewarded through EM conditions on time and freedom. When you integrate and adopt EM in this way I think it can make a difference, ADP1.*

#### **7.2.5 Trialability**

Senior stakeholders and decision-makers stressed that trialability was a vital component of EM to ensure successful knowledge and technology transfer in relation to EM. The UAE has prioritised the piloting of EM and implemented systems and

processes that demonstrate a clear commitment to detailed planning for the pilot project. As explained by the Head of the Committee for Alternatives to Prison:

*We knew that there was a lot of disparity in the success of EM from the international evidence. The piloting is a key measure to make sure we designed and developed the project with oversight and monitoring of the implementation, MOI2.*

Committee members described a number of specific processes that they highlighted as critical success factors for the trialability of the EM. According to a senior member emphasis was placed prior to commencement on examining international research to understand the potential for introduction in the UAE:

*This informed the planning and design phase which we felt important to focus on three main areas. These were the legislative framework, how EM is to be resourced, and analysis of stakeholders and structures to identify roles and responsibilities within the EM project, MOI2.*

A member from the Judicial Department involved in examining the legislative framework further elaborated:

*A major focus was looking at the existing legislative structure in terms of the gaps and how it can accommodate alternative sentencing and facilitate adoption of EM. Based on the Committee recommendations was the introduction of specific regulations directed towards electronic monitoring early on in 2013 and other legislative changes, JU2.*

In relation to resources, a senior administrator noted that:

*We ran a preliminary pilot project in 2013 which provided a test run for addressing the resource issues, mainly to validate the reliability of the system and equipment. We applied EM to a small number of offenders for a short period of two weeks after which we assessed the results. This supported our planning for the full-scale pilot project begun in October 2016 in Abu Dhabi. At this point we extended EM to minor offenders as an alternative sentence to prison, MOI1.*

Another police officer stressed the perceived efficacy of the project trial: *Operationally the Committee felt that the pilot programme had strongly validated the use of EM as a means of supervision for those experiencing early release.*

In the pilot project EM had been applied to a total of 30 offenders who are currently still subject to monitoring.

#### **7.2.6 Complexity**

The complexity construct of the implementation is concerned with the intervention in terms of its duration, scope and disruptiveness. Drawing on the perspectives of stakeholders this aspect provides insights on how factors can impact on the transfer and diffusion of EM technology and knowledge.

One respondent explains this complexity:

*We have to address many issues but the most critical is that implementation of EM has many processes. If we implement it as part of a rehabilitation strategy then we have to connect systems from across different agencies and then all the different participants that will be involved in EM will have good information and understanding about EM, ADP1.*

EM was perceived to be too complex and required specialist expertise. Planners explained that the UAE selected to work with a credible and highly experienced partner in G4S which facilitates the knowledge and technology transfer process allowing them to draw on their expertise and experience:

*We are aware of the issues relating to EM technology and it was a vital and deliberate strategy to select a technology provider with significant experience, knowledge and track record with EM, ADP3.*

The technical development of EM technology was the focus of many concerns. According to a senior manager of the pilot project:

*there are many skills and knowledge we need to acquire and keep up to date. The different and changing features and the rapidly changing technology means we*

*have to make a high investment in time and cost to ensure we develop and maintain awareness and knowledge of the capabilities and issues, ADP3.*

The head of the project explained that training and understanding requirements is very complex:

*It is difficult to develop training plans and understand requirements because we are evolving and developing how we use EM and in under what conditions. This in itself creates confusion and undermines commitment from staff when we are unclear about specific capabilities we need to develop, ADP1.*

Another interviewee explained:

*Many people are under-estimating the complexity in implementing EM in the UAE. If we consider only the UAE citizens then the implementation is manageable because we understand the group. However, I am concerned that with the many different groups of foreign workers the issues will become unsurmountable, ADP4.*

### **7.2.7 Design Quality and Packaging**

The design component of EM represents a further element of the analytical framework. The perceived excellence of the EM programme in terms of how it is assembled and targeted may impact both stakeholder perceptions of the potential impacts of EM and the adoption of EM knowledge and technology. Interviews on the key operational aspects of EM provide different stakeholder perspectives on the impact of EM and the potential that is attributed to EM. This is evaluated in terms of conditions and application of EM to target groups, support programmes and operational design of EM in relation to design of supervision and compliance.

#### **7.2.7.1 Target Groups**

In relation to target groups a senior decision-maker stated that:

*For minor offenders EM has significant potential to support their rehabilitation and that is the group that we are targeting principally and are the largest group in the pilot. But I see no reason why EM couldn't also be useful when used to help rehabilitation of non-violent serious offenders, JU1.*

In addition, the implementation of EM in the UAE is associated with the potential to support early release prisoners. The EM pilot project targeted serious offenders sentenced to a maximum of three to five years. They are monitored following their early release from prison for good behaviour for the final quarter of their sentence. UAE law mandates that those sentenced to life imprisonment or for serious offences are subject to police supervision following completion of their sentence for a maximum length of five years. This means that non-violent serious offenders qualify for early release automatically from prison for the final four months of their sentence.

Different perspectives focused on this issue in relation to the application of EM for minor youth offenders. A concern in relation to the broader use of EM was voiced:

*Default use of EM on minor youth offenders may not be appropriate when we have other community alternatives available. I think we should be careful not to over-use EM on lower risk minor offenders where too much supervision could be counter-productive. For minor offenders there are less severe community sanctions and conventional monitoring and supervision processes which can be applied. We do not need to subject young people to surveillance, JU1.*

A social worker actor stressed that: *to some extent we are shackling young people which may not always be the best foundation for building trust and behavioural change in young people.*

One social worker interviewee draws on the UK experience:

*We know from the UK experience that young people may be more incompatible with EM than other groups, at least they may experience it more punitively which can make it harder for them to comply. EM is an intensive and intrusive process; offenders wear devices, there are home visits, constant monitoring and checking by police and regular assessments. We have to assess this carefully for young offenders, SW2.*

This view is supported by another senior actor who argued that potentially EM could be used as the de facto alternative to prison and replace less intrusive and less costly methods such as community service.



Perspectives also emerged on the impacts of targeting and prioritising of EM.

*It is critical that we make clear to everyone which groups to target especially for judges who are the influential actors in this process. If we are too ambitious then we will create a large burden that is unmanageable, MOI2.*

A senior decision maker explained that a broader approach in terms of applicable groups would imply increased loads and pressure across the entire justice system and render technical issues less manageable:

*If you focus on a larger number of groups then you reduce your ability to personalise the support and you have to standardise and make the whole system more rigid. Understanding the needs and what will work for one is a major challenge and each group targeted adds a whole new set of considerations and issues for training and resources and procedures, MOI1.*

Another actor perceived that:

*We are trying to focus on specific groups where we can learn and achieve important lessons and working efficiently with resources, ADP2.*

#### 7.2.7.2 Support Programme

A key aspect of the solution for early release offenders under EM is the access to social support that is provided with the purpose of assisting the reintegration of the offender. Perspectives emerging among some interviewees stressed that the potential of EM would not be realised if support programmes were not provided as an integral aspect of the overall design.

Several stakeholders believed that a critical aspect to the effectiveness of EM implementation is the flexibility in the design:

*Having the flexibility to use a certain level of discretion and personalisation in the way that we apply EM is important so that to some extent we can effectively support offenders. The idea is that this will help in their rehabilitation, SW3.*

### 7.2.7.3 Supervision and Compliance

A senior representative on the CAP committee explained that the design of the implementation allowed for flexibility to apply a range of different conditions dependent on the offender. They further explained that home curfews can be enforced in locations other than the offender's home, where sensitivity was needed to family stress or domestic violence. Another view was that:

*Curfews may be combined with exclusion orders from specific places where offences commonly occurred and encourage re-offending and we can monitor with both RF and GSM technologies to enforce restrictions, ADP4.*

In terms of the impact of electronic monitoring on compliance with sentencing conditions by offenders, several actors conveyed generally positive perceptions of compliance and breach. According to one view:

*We have tried to develop a relational approach to compliance so that protocols are in place to make sure we have a level of face-to-face interaction with the offenders. This allows us to understand what problems there may be in achieving compliance, SW2.*

A senior actor explained that monitoring officers within the Abu Dhabi Police Department of Aftercare were at the front-line in responding to breaches and making compliance decisions:

*The monitoring officer is the main contact for offenders when they need information or clarification, to discuss if they have any difficulties with compliance or where there is some breach, ADP2.*

Speaking of compliance one actor explained that the design of the compliance regime needed to strike some balance between flexibility for the offender with consequences for failure to comply.

Breaches are addressed by what one monitoring officer termed "offender cautions", which constitute visits to offender homes to investigate the reasons for the breach. It was explained that in the case of a minor breach EM monitoring is resumed following written undertakings from the offender while serious non-compliance can lead to

referral to the prosecution service and possible incarceration. In discussing breach response, one police officer stressed that: *we want to offer a considerate regime and therefore there is discretion for the monitoring officer to negotiate and discuss the situation with the offender.*

### **7.3 Outer Setting**

The outer setting encompasses the political, economic, and social context in which an organisation is located (Pettigrew et al., 2001). These contexts can be domestic or international, with factors such as the size, economy and governance of a country impacting on national contexts in terms of the level of implementation undertaken (Saluja et al., 2017).

#### **7.3.1 Offender Needs and Resources**

The CFIR implementation framework gives focus to the extent EM offenders' needs, and barriers and facilitators are identified and prioritised by the organisation. During the monitoring period oversight of EM offender compliance is the sole responsibility of the Police Follow-Up and Aftercare Department. While the courts are the body responsible for deciding EM recipients and for setting initial conditions and restrictions, subsequent decision-making authority rests with the police.

A senior decision maker from the EM project team stated that a relational approach was a critical design component of the supervision process. He confirmed that multiple actors viewed this as vital for the provision of control and support and achieving the desired outcomes:

*Our aim is to ensure that as much as possible offenders do not only experience the technical and perhaps less human aspects of surveillance which could feel dehumanising, ADP1.*

There are many views that show that rehabilitation needs of offenders has been taken into account. According to one:

*The integration of human support provides us with opportunities to further understand what offenders are experiencing and their perspectives. Offenders all have mandated visits by our department soon after they start on EM and this is*

*followed by regular visits by their assigned social worker. We report back to authorities on compliance and make recommendations, SW2.*

The Chief Officer of the ADP has some discretionary authority and flexibility to assess the offender's compliance with the programme and adjust the monitoring conditions. According to one view:

*Such flexibility is useful because it allows the police to free up resources by releasing compliant offenders and more efficiently manage the programme, ADP2.*

A police officer stated that:

*We have clear and cohesive supervision procedures in place which positively affect the information and knowledge that we provide to offenders. We provide offenders training on their monitoring and full details on their monitoring conditions, ADP3.*

For serious offenders a two-month preparation period was delivered by the police intended to prepare them for reintegration and rehabilitation within the community.

According to a senior police decision-maker:

*The monitoring service is always willing to accommodate justified changes in schedules and these are a relatively straightforward process that does not cause stress for offenders. We have streamlined procedures avoiding the need for repeated requests and allowing changes to be requested in advance, ADP1.*

EM was also perceived to provide more standardised and rationalised follow-up procedures viewed as helpful in terms of supervision management and fairness.

In terms of the impact of supervision processes on offenders one interviewee stated that:

*We have a sentencing framework where we can impose a range of monitoring conditions and different curfew times...this supports offenders to continue or make a start on positive lifestyle choices such as employment that is good for their rehabilitation, JU1.*

In terms of addressing lifestyle routines of different offenders one interviewee stated that:

*We've recently improved the flexibility of some of our processes to accommodate offenders with unconventional work patterns. While initially the system was a bit inflexible in managing different routines we have made significant efforts to adapt and we can easily adjust the sentencing and monitoring conditions, SW2.*

There was some evidence from different interviewees that the economic circumstances for offenders under EM was being considered. In particular the ADP Follow Up and Aftercare Department have communicated and coordinated with employers both public and private to resolve difficulties and put in place agreements to ensure that offenders could both comply with conditions and continue in regular employment roles. One senior decision-maker perceived this had lessened the financial impact on offenders and on government support and welfare systems.

The EM programme is viewed as a key component supporting offenders in gaining and maintaining employment. A senior police actor noted that:

*Opportunities are made available to make use of EM schemes. If the offender is unemployed or not able alone to arrange a job the authorities will offer assistance in finding employment.*

#### 7.3.1.1 Accommodation of Religious Practices

Several perspectives indicated that there was strong commitment to adapt the implementation of EM to address cultural and religious needs. One senior actor stressed that:

*We see it is a significant issue for offenders' rehabilitation that we can accommodate their religious practices and observances. We have made a number of provisions in the pilot project particularly in the sentencing framework so that personalised curfew times can be applied, ADP2.*

Another senior police officer stressed that frontline monitoring officers had some level of discretion to adjust curfew periods in order that offenders could fulfil religious obligations.

Nevertheless certain alternative perspectives cited significant practical difficulties and complexities in addressing the different religious needs of all offenders.

*We have many different religions being practiced in the UAE, such as Hinduism, Sikhism, Christianity, or Buddhism. This implies that we have to accommodate all the different religious holidays and the different prayer-times. Hinduism alone has five major religious festivals. Logistically this will be a significant burden in scheduling all the different processes of EM such as visits or assessments or rehabilitation and we really haven't taken account of or considered that. Quite frankly I don't think this is manageable and will create a barrier to addressing the needs of offenders, ADP1.*

This view was supported by another participant who stressed that:

*We may have greater difficulties in providing offenders on EM individual access to religious and spiritual advisors in the community than if they were in prison, where access to spiritual guidance is to an extent more manageable and controllable. We haven't considered under what conditions offenders can visit their religious advisors, PA1.*

#### 7.3.1.2 Rehabilitation and Support

The perspective of monitoring and social support officers emphasised a relational approach that is consistent with the strategic decision to provide a dedicated social support unit in the UAE.

One senior police actor noted that the Police Follow-Up Department and Aftercare (PFDA) and the Social Support Centre focus specifically on the behaviour of those sentenced to EM and are also the units responsible for offender risk assessments. According to one view:

*Their main role is to design the most effective rehabilitation programmes for each individual offender based on their history and background. They conduct offender reviews and then follow up on the reasons why non-compliance may have occurred or the factors that may have led to their offending, ADP5.*

There is evidence that social workers engage with offenders and their families. According to a social worker interviewee: *we work to help them accept monitoring, and we sometimes intercede in family conflicts and try to provide support that helps the offender to comply with EM.*

An interviewee questioned the resourcing issues and the potential of EM to positively impact offender behavior explaining that: *I have major concerns that if the programme is extended the same level of support currently offered may not be sustainable.* Another actor perceived that:

*Expanding the programme may result in less face-to-face contact with supervision officers and then EM may become all about compliance rather than behaviour change, SW2.*

Meanwhile, while some offenders would not require a high level of support, another social worker indicated the potential for technology to isolate offenders from supervising officers and rehabilitation workers. It was acknowledged that when the period of monitoring is free of incidents the social support provided could be minimal and contact with social workers could be highly limited.

There were several minority perspectives that provided different insights into cultural and social issues of supporting offenders.

Language was noted as a major barrier to communicating and supporting offenders. One interviewee stated that:

*Language is one of the major barriers for EM. The UAE has over 17 different languages including Hindi, Farsi, Bengali, Urdu and Malayalam, but almost all of the monitoring and support teams speak only Arabic and English, SW3.*

In addition in terms of the literacy skills of foreign workers:

*A high number of migrant workers from South Asia come from poor backgrounds, frequently speak minimal Arabic or English and are often illiterate. Language has been a major issue communicating with some offenders on EM, ADP4.*

He further explained that:

*We are finding it difficult to communicate the information about EM, the terms of the EM, compliance, the EM tag and how they can access support. It is hard to discuss with some offenders about breach occurrence and their conditions. I am not always sure they fully understand, ADP4.*

This issue is supported by the view of another interviewee:

*The language differences create serious issues to provide support because it severely limits basic information, advice and support on aspects such as employment opportunities, education and training and programmes available, SW3.*

Some interviewees believed that language differences could significantly impact the ability to understand offenders and get to know their needs to provide appropriate rehabilitative support: *language can be a major barrier to help the offender integrate into the community, to give advice and support to follow positive habits and routines.*

Participants stressed concerns over the ability to build the rapport with offenders that can support their rehabilitation:

*It will impede on providing any kind of emotional support, it will inhibit in building a connection and trust so we can understand and learn about offenders' anxieties and fears and goals, SW2.*

Another participant cited:

*We are severely limited because of cultural differences and language differences to develop a meaningful connection with offenders. This can create a major challenge to enable offenders to talk about their experiences and to learn about what they have been through. In turn we can't support them to make choices about living in a more healthy way, ADP2.*

There was some concern expressed that rehabilitative support to all offenders could be hampered by cultural differences. On a general level one senior actor noted that a close relation with offenders was vital to address their rehabilitation however they acknowledged that:



*The system has yet to be tested among a more diverse range of offenders where there could be challenges in communicating and developing relations and understanding with non-UAE citizens, ADP1.*

A psychologist on the EM team provided a more detailed account of the cultural barriers EM may present for rehabilitation:

*While monitoring officers and support teams are UAE citizens and have Islamic and Arabic values, as a country we have a mix of vastly diverse cultures. On one hand Emiratis frequently have biases and negative attitudes towards foreign workers. On the other foreign workers often feel it necessary to display caution and deference around Emiratis. On top of that monitoring officers and support teams are mainly from the police and therefore authority figures requiring respect. Under these circumstances it may be very difficult to build trust and rapport and the meaningful connection with offenders that can help to properly identify and address their needs and support their rehabilitation, PS1.*

A major concern revealed by one senior decision-maker in relation to the pilot project was a lack of more intensive, community supervision programmes. This was emphasised as necessary especially in the case of more serious and repeat offenders to address the motivators driving their criminal behaviour. They acknowledged that: *EM curfew orders by themselves are unlikely to change long-term behaviour.*

Another senior police perspective noted a challenge in the capabilities of social workers to conduct formal case studies or plans for each offender during EM monitoring. Assessment also needed to draw out the subjective experience and the concerns and the person and her/his family's perceptions and experiences of electronic monitoring:

*This is a major knowledge gap but if we can identify the factors that can positively influence offender's behaviour we can design and personalise EM conditions to encourage rehabilitation, ADP1.*

Intensive training programmes in social or other skills to assist offenders in addressing the problems that encouraged their offending were perceived to be a possible future step in the EM programme.

### 7.3.2 Cosmopolitanism

Cosmopolitanism, identifying the degree to which an organisation is networked with other external entities, can significantly impact the effective transfer of knowledge and technology. Emphasis on the existence of a formal collaboration structure that brings together all key agencies to manage and oversee the implementation of EM underlines the presence of a key success factor for knowledge transfer.

There was a strong view that the UAE had adopted a highly centralised approach to the implementation of EM. One senior administrator stressed that under the direction of the Committee the Abu Dhabi Police are the sole body responsible for implementation of the EM project. It was explained that:

*The ADP are the principal agency for EM as not only does this fit naturally with their law enforcement role but also they have a growing role in governing Abu Dhabi's prisons through the Department of Punitive and Correctional Institutions of ADP, MOI2.*

The participant further clarified that the principal unit involved in the implementation of EM and the supervision of offenders is the Police Monitoring Section, responsible for all current and future types of police monitoring and related programmes in Abu Dhabi. The section is fully supported by the Police Follow-up and Aftercare Department which follows up the performance of the monitored persons, reports to the judiciary on the cases of breach, assesses the behaviour of monitored offenders and coordinates with the Social Support Department in applying a social reintegration programme.

There was perception by one senior actor that although implementation was highly centralised within one law enforcement agency there was a high degree of inter-organisational networking and co-operation with external organisations in the UAE:

*The Probation Service are not involved in the monitoring and supervision of offenders although the monitoring section works in collaboration with other relevant police units, departments and stations within the ADP which work together to ensure the seamless operation of the EM programme, ADP1.*

This view was supported by another participant who commented:

*We have placed emphasis on engaging with external stakeholders beyond the agencies represented on the committee. There is collaboration with the Prosecution Service in relation to how EM sentences can be modified and adjusted in the event of non-compliance. The Committee has further consulted with judges on EM sentencing and breach condition, MOI1.*

The view was expressed among more than one participant that the existing framework and structure possessed gaps in terms of engagement and collaboration with other agencies to enhance overall implementation towards EM goals. One senior social worker stressed that:

*There is a need for increased inter-agency working and the involvement of other agencies in rehabilitation work and offender training. Right now it's highly focused within ADP, even the support teams. We need to broaden involvement with other services such as Probation so that we can provide a more holistic implementation that integrates multiple agencies and their perspectives on the offender, SW2.*

Another police interviewee supported this view: *we do acknowledge the need for the greater involvement of social workers in conducting offender risk assessments.*

One senior official noted that the Committee and the ADP had made significant efforts towards building trust, relationships and awareness of EM with other criminal justice actors:

*For example we conducted awareness sessions on the work of the EM pilot project and the social support and rehabilitation programmes being introduced with the Prosecution Service. Since this we have noticed changes in perception in Prosecutors who seem to be more open to recommend EM sentencing to judges, ADP2.*

### **7.3.3 External Policy and Incentives**

One judge stressed that significant efforts had been made to facilitate the adoption and successful implementation of EM by shaping the legal context. He argued that:

*In the UAE there is strong commitment to implementing legal measures that support EM. This has signalled commitment across the entire criminal justice sector to this alternative, JU1.*

There was concern expressed by another judge that if regulations are developed too rapidly the implementation could be locked in toward a particular approach in how EM was applied. He stressed:

*We need to make sure that new legislation is introduced incrementally so that we have a balanced approach that takes account of lessons learnt and what we know of the impacts for the criminal justice system, the offenders and for society, JU1.*

At the same time he argued that if there was greater scope for discretion there could be significant inconsistency in its application.

Another judge noted that there was as yet no mechanism in place for gathering data and allowing the legislative regime to be developed gradually. To address this issue he recommended the creation of a dedicated working panel:

*This should be highly inclusive and include a cross-section of views, as currently the legislative regime is being driven by the top-end and we need more varied views from prosecutors, police and so on to really make effective legislation for EM, JU2.*

One judge perceived that the legal regime for EM held gaps in terms of clear definition of the way EM could be applied to offenders:

*The circumstances under which EM can be applied are clearly specified in UAE law. However the period of supervision and the type of curfew to be applied within UAE law lack any kind of clarity meaning that there is limited guidance for sentencing, JU1.*

There was also concern expressed by one judge that if regulations are developed too rapidly the implementation could be locked in toward a particular approach in how EM was applied. At the same time they argued that if there was greater scope for discretion there could be significant inconsistency in its application. Another judge noted that there was as yet no mechanism in place for gathering data and allowing the

legislative regime to be developed gradually. To address this issue they recommended the creation of a dedicated working panel:

*This should be highly inclusive and include a cross-section of views, as currently the legislative regime is being driven by the top-end and we need more varied views from prosecutors, police and so on to really make effective legislation for EM, JU1.*

## **7.4 Inner Setting**

Analysis was conducted on organisational factors in UK organisations involved in the implementation of EM. Structural characteristics, network and communications and implementation climate involving compatibility, organisational incentives and learning climate which can potentially present diverse challenges for the acceptance of EM in the UAE.

### **7.4.1 Structural Characteristics**

The structural characteristics of the UAE EM implementation points to a potential critical success factor for the acceptance and transfer of EM. In the UAE the structure points to a highly centralised implementation involving a single agency in the operation of the EM scheme.

A senior decision-maker drew attention to the perceived importance of the involvement of state agencies in the management and supervision of offenders to the success of the programme. He noted a key factor which could undermine EM acceptance and knowledge transfer:

*When it comes to supervision we presently lack a clear definition of the operational roles between agencies. There is a lack of cooperative protocols such as between the Police Follow-Up and Aftercare Department and the prosecution service, MO11.*

There was emphasis placed on establishing a cross-agency planning structure:

*The Committee for Alternatives to Prison is the main overarching body responsible for the planning and design of the EM project. The Committee has senior diverse cross-agency representation from the Ministry of Interior; Abu Dhabi Police including Police Monitoring Section, Community Service, Police Follow-up*

*Department, Technology Section and Strategic Advisory for Policing Operations and Community Policing. Represented agencies outside of the police include the Judicial Department, and the Social Support Centre attached to Abu Dhabi Police, MOI2.*

Another interviewee stated: *While there has been commitment to integrate all stakeholders from the outset, we need more frontline planning and responsibility.*

#### **7.4.2 Networks and Communications**

The nature of formal and informal communications potentially has significant impacts on the diffusion of knowledge on EM within the UAE and its wider adoption.

According to certain perspectives there was a high degree of communication and networking among the actors and agencies involved in the implementation of EM. An interviewee stressed that:

*We have established protocols and a dedicated system to ensure that there is continuous communication. Scheduled quarterly meetings between the Committee and all the relevant partner agencies is the key channel of communication and dialogue between us. In the meetings we review EM pilot outcomes, try to develop of solutions for issues or problems, and they are also a forum for brainstorming ideas and innovations, ADP1.*

Another actor pointed to additional communication channels:

*We have a central email system which acts as a critical channel for communication and sharing and information on EM project updates and processes and where we exchange ideas, ADP3.*

However alternative perspectives perceived a number of gaps and weaknesses in in this area. One senior police officer noted that there were few measures for sharing EM data or statistical evidence between ADP and other agencies:

*Our systems are still traditionally paper-based and there is no unified and integrated administrative system and database that enables us to create shared offender*

*records, case examination, the application of aftercare programmes and coordinate with the court, ADP2.*

Another social worker noted:

*Currently, information is stored on a closed police organisational network and is not accessible to third parties. As an example police-employed social workers within the department do not have access to EM information, SW2.*

The management team for the EM confirmed the absence of a knowledge management strategy. Furthermore, interviewees indicated that frontline criminal justice practitioners have limited direct access to critical EM digital data and infrastructure.

### **7.4.3 Implementation Climate**

This construct addresses the absorptive capacity for change, the shared receptivity of stakeholders to a change intervention and the degree to which the change is expected, supported, and rewarded.

There was the strong view that EM was compatible with the broader criminal justice philosophies and principles embedded in UAE culture and society. A judge noted that:

*The community and rehabilitative aspects of EM fit in well with the values of rehabilitation that are broadly held at many levels of society and are increasingly observable in our criminal justice system, JU2.*

Another participant supported this view and suggested that the ability for offenders to remain within the community and maintain family and community ties aligned with the family and community values of UAE society, promoting its acceptance.

On the other hand the concern was expressed by a social worker that EM may be incompatible with rehabilitation goals unless accompanied by social support.

EM to support rehabilitation and community service was viewed by one senior actor as entirely compatible with government and organisational policies. He noted that:

*Introducing EM is not incompatible with our organisational culture. Managing change and introducing new technologies and innovations is a key cornerstone of the UAE public sector, ADP2.*

Nevertheless an alternative view was provided by another actor who suggested greater challenge at an organisational level due to the intensity of the change management context in the UAE public sector. He cited that:

*We have persistent and radical change initiatives across all departments, agencies and sectors that involves significant restructuring and transformation. We already have a number of existing programmes of transformation already underway, and the EM programme creates another new radical change. I think this will make it difficult to implement another new programme, particularly as resources and staff focus may be elsewhere, ADP5.*

There was some support from one senior administrator for the view that organisational culture was important to support motivation of personnel and their commitment and support for EM. It was stressed that reward systems for monitoring officers based on offender outcomes were not in place as this kind of incentive was not part of the UAE public sector culture. He argued that other more appropriate reward systems existed:

*Monitoring officers are members of the professionalised police force and as such have high professional status. Therefore they benefit from organisational systems already in place to develop them, reward, and incentivise, MO11.*

Some viewed that a dearth of knowledge and capability existed within the UAE criminal justice system in relation to EM. One senior actor explained that:

*Before the implementation of the pilot project frontline staff, managers, and even senior leaders had hardly any or no experience with EM. We are aware that a lack of experience and technical skills have been significant issues that have impeded EM integration and management in other countries, ADP4.*

Another interviewee linked the lack of capability to a wider issue in terms of the relative youth of the UAE criminal justice system:



*The country was only formed in 1971 and has only recently in the last 15 years embraced alternative forms of sentencing within the criminal justice system, compared to more mature countries whose systems have been evolving for centuries, JU1.*

In terms of the judiciary judges were viewed by one police actor as lacking knowledge and clarity in relation to EM, the reliability of the new technology and its most appropriate uses.

A senior administrator stressed that there was a need for a much deeper understanding of the impacts of EM on existing staff. He argued that:

*Integrating EM is potentially highly disruptive for our existing systems and processes and our capacities and admittedly there is a lack of full understanding of what views and concerns employees may have and how our staff are coping and adjusting, MO1.*

This view was supported by one senior police officer who recognised negative impacts:

*The project can be undermined without employees' full commitment and support however I feel that this is a priority that easily gets overlooked. For example there may be major challenges that we haven't yet considered in acceptance of police personnel to act as supervisors, ADP1.*

Another participant referred to more complex employee issues such as attitudes towards changes in responsibilities, fear of the technology and resistance to change:

*There is strong top-down commitment and focus but we need to bring on board all the frontline staff in order that we can shape and adjust the implementation and identify important adjustments that can be critical to some aspect of the implementation, ADP2.*

A senior official noted that a lack of established standards across the electronic monitoring industry was a key challenge despite extensive global research to identify appropriate standards. The concern was expressed that:

*The lack of guidance from standards was a great hindrance to the design of specifications and procedures for EM so that we can ensure a high quality system. We have to rely mainly on exploring and experimenting in the UAE to identify what works effectively. The literature shows that despite decades of use of EM technologies and the range of options available there are no international or country-level standards that can be used for guidance, ADP3.*

Different actors drew attention to perceived issues in the uncertain context that EM presented which increased the difficulty of decision making for transferring EM. One actor noted:

*We are strongly aware of a significant lack of knowledge and evidence on the effects of EM intervention and this challenges our ability to adopt an evidence-based approach to policy and practice. The relative newness of electronic monitoring contributes to this problem, PR1.*

Another actor revealed that the UAE was thorough in its research and their findings were consistent with the literature in terms of small sample sizes, limited robust quantifiable evidence and mixed research findings. The impacts were noted:

*This implies that decisions about adopting EM were made with limited knowledge of the effects of EM intervention. There is significant diversity of legal and justice systems in different countries and the many differences with the UAE context meant that there was a challenge in incorporating the international lessons and benefits, MO2.*

One senior police officer member in the Technology Section noted challenges associated with procurement of EM technologies and working with third party suppliers. He stated that:

*Identifying an appropriate and effective procurement delivery model was initially difficult in terms of whether to contract with one supplier or multiple suppliers and which would be more advantageous. Reliance on a single supplier could entail risk while working with diverse suppliers could have problems in terms of system compatibility. Building in more bespoke requirements that more precisely align with the UAE context has been difficult, ADP3.*

One senior participant believed that there was a need for continuous learning and more effective knowledge sharing and management between and across agencies. However a key cultural challenge was perceived that could hamper the extent of knowledge sharing in the UAE:

*The diversity of the workforce in the UAE public sector contains many different non-UAE nationalities and cultures. UAE nationals in particular can be reluctant to share information with non-UAE nationals although this can vary, but they are more likely to share information with those colleagues and subordinates with whom they have more trust, SW1.*

#### **7.4.4 Readiness for Implementation**

Resourcing and expertise represent the major challenges cited with implications for transferring EM technology and knowledge to the UAE. The relatively recent inception of the department and EM programme was highlighted as a core underlying reason. In particular human resources were deemed problematic, with insufficient numbers of qualified staff available and those currently working in the field viewed to possess limited EM experience and skills. This factor was thus acting as a constraint on the expansion of risk assessment practices at different stages of EM. To address this challenge the police were noted to be undertaking significant training and development of personnel:

*The process is still new, and the people who work in this field still have limited experience. We are addressing this by development and training. How they should interact with the offenders, with their families, and what skills should be considered in their behaviour, ADP1.*

The interviewee also pointed to the support of senior leadership in overcoming these challenges:

*We are getting support from leaders and they are very interested in this alternative, they recognise the potential for good outcomes. There is now more support to expand our human resource capability in monitoring and for rehabilitation, ADP1.*

While there is considerable political willingness in the UAE to dedicate sufficient resources to EM implementation an incremental approach has been adopted to target a small range of groups to enhance manageability and better prioritise resources. One participant suggested that:

*In particular the UAE approach has allowed for sufficient time and forward planning to ensure that resources are in place to support programme objectives and are deployed where they can be used most beneficially. However resourcing and expertise represents a key challenge as we have insufficient numbers of qualified staff available and our current fieldworkers possess limited EM experience and skills, ADP2.*

## **7.5 Characteristic of Individuals**

Insider accounts provided an indication of different stakeholders' evaluation of the potential and actual consequences of implementing EM in the UAE as well as the challenges experienced. Several key accounts were drawn from a number of stakeholders including the perspective of the planning and management authority and perspectives of offenders, family, and key criminal justice actors. These perspectives provide critical insights into the impacts and issues associated with the EM pilot project.

A complex range of supervision conditions to manage for each offender in addition to the resulting data were suggested to have a possible negative effect on supervisors' working conditions and to stretch resources, impacts that were already being noted within the Abu Dhabi Police. EM was essentially being integrated within existing systems however was perceived to be causing additional workload within those systems. The EM technologies in the UAE are operated on a 24/7 basis and monitor and report on violations whenever they ensue. A key challenge noted was limited understanding as yet of the volume of alerts they were likely to receive day and night once the pilot programme was extended, their distribution over time or the potential proportion of false alerts. The view was also expressed that frontline staff needed support and guidance in their workloads given the relative newness of EM supervision within the UAE and also the potential for officers to become frustrated and demotivated if their caseload escalated significantly without support.

### 7.5.1 Knowledge and Attitudes Towards EM

This section presents multiple perspectives on the knowledge and attitudes towards and its perceived efficacy in the UAE. This is grouped under six key themes that follow.

#### 7.5.1.1 Net Widening

There was some concern among judges that the availability of the EM option could have a negative impact in potentially leading to the application of a more severe sanction to minor offenders than otherwise would have been applied. One judge explained that:

*Other more lenient sentences which could just as effectively manage minor offenders such as conventional community service, or probation and suspended sentences are being overlooked. I think that perhaps there is greater priority being placed on using EM by government policies and this could result in disproportionate use, JU1.*

A Ministry of Interior official argued that the existing system had the potential to place too many individuals on EM and application needed to be highly discriminatory so that implementation could focus the strengths of EM, rather than be used as a broad tool.

In this regard the ability to make accurate assessments of offender suitability for EM was a key concern. A judge noted that: *we don't have enough good pre-sentence information that shows the background and case histories of offenders that could be beneficial for making EM sentencing decisions.*

Supporting this view a senior prosecutor explained that currently no specific criteria or processes existed for assessing the individual appropriateness of an offender for EM:

*This could result in a major waste of resources when in fact an offender may be better suited to other community alternatives or even suspended sentence. There is a major cost differential between a suspended sentence or community service measures and EM, especially when EM is too excessive, PR1.*

#### 7.5.1.2 Stigma

Multiple perspectives expressed the view that stigma could have a major negative impact for offenders on EM.

One police officer stressed that based on their feedback from offenders the potential for embarrassment and stigmatisation is a key offender concern:

*Simply wearing a visible electronic monitoring device can be a source of stigma and shame. Some report feeling “labelled” and wearing a mark of criminality for all to see. This potentially influences their support and acceptance of EM, ADP5.*

One actor noted that the feeling of stigma for some young offenders could be more accentuated:

*For minor youth offences it is too harsh and they will feel significant more shame and embarrassment and even humiliation wearing the device in public or in front of family and friends. A young person irreparably damaged his EM device trying to get it off with a hammer for this reason, SW3.*

Another police officer noted that when the perspectives of UAE citizens were elicited many expressed similar sentiments of stigma and shame associated with being on EM.

Female offenders appeared to experience the effects of stigma differently than male offenders. In one social worker's experience women offenders reported that the clothing conventionally worn by female nationals in the UAE tended to cover the EM device which diminished any stigma felt by them when outside of the home.

Nevertheless the case experience of one social worker had informed a different perspective. They explained that:

*It is the case that more traditional families may not be initially receptive and we have had some initial resistance. There was considerable shame in the idea of a wife or daughter being tagged and monitored and anxiety that it may compromise her in some way. However after discussions with the head of the household they were*

*persuaded that their female member would not be compromised in any way from being on EM, SW2.*

One senior judge explained that because of the associated stigma he was aware some judges preferred not to use EM and rather applied community sentences:

*The view is that just placing an offender on a strict timetable and curfews is in itself a good enough punishment and there is no need to show the community that these people are being punished, JU1.*

On the other hand not all offenders were perceived to experience or perceive stigma to the same degree. One police actor in the Police Aftercare Department noted: *Many offenders feel that the programme minimises the social stigma of imprisonment and therefore helps their reintegration into society.*

Another participant stressed that offender concerns were actively addressed through awareness sessions that highlighted the benefits of EM in comparison to prison and which were perceived to have contributed to changes in the attitudes of most offenders towards EM.

#### 7.5.1.3 Family Impact

Offender families in the UAE experienced both positive and negative impacts from participation in the EM programme. The degree to which these were experienced point to factors which could influence or even challenge the diffusion of EM technology.

Some views stressed the positive impacts that EM could have for family life and relationships:

*Feedback from families collected within the pilot project has generally shown acceptance of EM among families. In particular it seems that the greater control that monitoring has enforced over the lives of younger monitored offenders has resulted for some in noticeable and sustained behavioural changes and improved relationships, SW3.*

Another actor noted that families perceived significant benefit in the ability to maintain parental or other roles within the home:

*The results from offenders and their families are highly positive towards EM in that these devices allow the offenders to have more time with their families, and take care of their children because they are staying at home. For example the offender could be the main breadwinner, so EM can significantly reduce the economic hardship for families compared to when a key member goes to prison, ADP5.*

Another actor noted that being confined at home under EM could have positive impacts for families as it could help to provide positive motivation towards an offender's rehabilitation.

The ability of EM for female offenders to maintain family roles was generally viewed as a positive impact. One interviewee senior actor viewed that this was a significantly more preferable option to prison, especially in the case of wives and mothers under EM who could continue raising children and looking after their husbands.

This was supported by one social worker who reported that a female offender preferred EM to alternatives:

*They were happy not to have to spend time outside of the home doing community service or in prison. This was because culturally as a Muslim woman bringing up children and looking after the home was very important, so they were grateful to serve their sentence in this way, SW2.*

Some female partners of offenders had reported positive effects from having their partner at home particularly in terms of their relationship but experienced stress in other areas, such as a reduction in social contact and more responsibilities outside of the home.

Nevertheless some views indicated that EM could be experienced in a highly negative way among some families. Major impacts could be felt on family privacy: *for some offender's families supervision and home visits are highly intrusive and an embarrassment when explaining to neighbours and relatives.*

A social worker explained the traditional position of some families:

*Islamic families will view EM a highly intrusive and offensive practice because it violates the privacy of their home. Visitations for these families is shameful and has*



*serious consequences for the whole family. Even I find it difficult because to enter an Islamic home and break a family private sanctuary is a transgression and breach of one of our important values, SW3.*

Another interviewee expressed the view that for some offenders' families the application of EM sanctions had made them feel that they were being punished as much as, if not more so, than the offender. This was stressed to have psychological impacts: *the experience of constant surveillance for some families has led to some psychological distress.*

Other impacts were noted in terms of the additional burdens placed on families from having a monitored offender living under their roof. An interviewee explained that: *there are extra responsibilities and workloads on families to help the offender comply with their restrictions.* Another police officer noted that: *In EM in the UAE families are very much a key part of helping to ensure that the offender complies. That means a lot of extra burden on them.*

Another view showed that families of children tended to hold the most strongly negative views on the application of EM. Most believed that this form of punishment was a heavy-handed option for their child.

*Often families acknowledge that yes he needs to have some punishment for what he has done but express that he or she is only young and having a bracelet and being monitored all the time like a criminal is too much, SW3.*

Several parents believed that community service would have been a better option for their child:

*Families repeatedly ask why community sentence wasn't imposed, believing that it is a positive thing to do to make up for what he has done and he wouldn't have all this feeling of being a criminal, ADP5.*

An interviewee acknowledged that family relations could be negatively affected by the imposition of EM:

*Some offenders have experienced worsened family relationships as a result of being confined at home for long periods. This seems to have made family problems they already had even worse, PS1.*

A further example was the case of families of serious post-release offenders. A social worker believed that their reintroduction after an extended absence could create pressures on the family: *Long hours of home confinement can exacerbate this situation and make it challenging to re-establish relationships.*

An interviewee believed that the impact on the family was dependent on the specific family. However this was also influenced by factors within the implementation:

*The pilot assessment at the current moment does not fully take account of the offender's characteristics and the family's perspective and needs. Therefore the impact could vary from positive to negative. On the one hand it may bring families together to maintain cohesion and continuity. But on the other hand it may create additional burden and stress for the family members, SW2.*

#### 7.5.1.4 Impact on Offender

Perspectives on the impact and experience of offenders under EM in the UAE revealed both positive and negative impacts from participation in the EM programme.

A senior Ministry view was that EM was positive for offenders when compared to a prison alternative:

*An imprisonment strategy was resulting in a range of negative impacts for offenders causing disruption to education and employment opportunities and exposure to negative behaviour in prison. Consequently, this has placed a focus on minor offences as this category of offenders accounts for a greater proportion of the prison population and is at greater risk of learning criminality, MOI2.*

In terms of the punitive experience of offenders and their attitudes towards EM there was some perception that these were positive. A senior actor involved in implementation believed that overall offenders positively perceived EM as a punishment. He explained:

*On balance offenders view it as a fair programme that legitimately imposes restraints on their life. When weighed against the alternative of prison this contributes to the positive perception of EM as a fair sanction, ADP1.*

Another police actor supported this view: *offenders perceive EM as a less harsh sanction and if in the same position again many offenders would choose to serve their sentence under EM.*

Positive impacts were noted for younger offenders in particular. A police officer perceived that: *EM is effective for youthful offenders, it provides structure and rules that they must follow to remain in the community.* A representative from the Aftercare department believed that EM could have positive social impacts by expanding opportunities for younger offenders to build more positive relationships with parents and other family.

The view was expressed that EM had some impact on offender compliance. This was attributed by a social worker to several motives:

*There is the fear of the repercussions, such as going to jail. They also fear the loss of their family life and important elements of their daily life such as education or employment, SW3.*

In the case of post-release offenders having a supportive family was viewed as a key factor influencing compliance: *Given that the offenders' family are already under some strain in this situation, social support is vital for offender compliance.*

Nevertheless there was concern that for some offenders EM could provide a more punitive experience associated with negative impacts on the offender. A number of psychological impacts were noted by several interviewees. One monitoring officer explained:

*Some offenders have significant apprehensions in relation to being monitored by electronic devices. A major concern is related to their privacy and the idea that the devices are a means for spying on or recording their personal lives, or that the devices could be harmful to their health, ADP3.*

Police were undertaking a number of measures in response perceived by this actor to be successful in allaying offenders' fears and promoting acceptance:

*These include information and training sessions on EM, support contacts, and health certification standards made available to offenders. The early stages often involve multiple contacts and enquiries from the offender and their family in relation to the devices and monitoring conditions however over time this tends to reduce, ADP2.*

A psychologist in the Juvenile Welfare Department further supported the view that EM could have psychological impacts:

*Certain offenders have experienced minor depression while being monitored particularly after the realisation that they could not live their normal lives. For a very small number of offenders we have witnessed a strong desire to continue former lifestyles nearly leading to near breaches and repeated warnings, PS1.*

Some interviewees believed that foreign offenders may well experience significant isolation and marginalisation under EM:

*At least in prison they would be with people of their community, their culture and faith. On EM however they will be on their own most of the time as most of their colleagues will be out working, ADP4.*

A social worker further suggested that they could face resentment or could even be shunned by co-workers if they could not contribute or because they had committed a crime. In their view this logically created an emotional and psychological burden:

*Foreign workers face major isolation when they work in the UAE. They work long hours and have few days off. They are isolated even from within their own communities. EM will place them at risk of far greater isolation. This can only have financial and mental impact and offenders will need to adjust to that, SW2.*

A range of practical considerations influenced the experience and views of offenders on the impacts of EM implementation. Technical constraints had a potential negative impact on offenders, mainly in relation to battery life which meant that offenders often had to charge devices every day. A police officer indicated the view

*that: these are simply practical factors that are inevitable and mostly a source of inconvenience rather than something that can have lasting damage.*

A senior actor perceived as more significant that the overall experience and goals were not undermined by technical issues. Another actor drew attention to practical considerations such as the size of home, amenities and number of rooms which were all perceived to impact on offender's experience in terms of enforced proximity with family.

There was some ethical concern expressed in terms of how EM was applied to offenders. A social worker believed that EM should apply control over offender presence in a particular place and not necessarily control what they did while on EM. Some concerns had been raised among stakeholders in their department in relation to the ethics of exclusion from public spaces, on the basis that access is a key element of citizenship enabling utilisation of goods and services and the maintenance of daily life.

#### 7.5.1.5 Rehabilitation

There was a strong belief that overall EM was a useful tool for rehabilitation. A key perspective was the ability of EM to restructure offender's lives and behavioural patterns towards rehabilitation. Based on their experience working with offenders an interviewee stressed that:

*Talking to offenders they are reporting that they feel increasingly stable in their personal lives as they have to follow a schedule and curfews and are restricted from specific locations. This enforced break from their earlier habits is providing them the space they need to change their outlook and their behaviour, ADP5.*

A social worker explained their perception that EM has strong potential for resocialisation of offenders:

*For the period of monitoring at least offenders have a different social life that excludes contact with their former friends and peers who may be a criminal influence and increases contact with families and the community, SW3.*

It was further believed that those who had already made the psychological decision to change perceived that EM provided them a guided and structured opportunity to do so.

Certain committee members also drew attention to the potential for attributes of EM to positively impact behaviour change and desistance aims. One senior actor expressed the view that EM provided a better alternative to incarceration as it enabled positive and social activities to be undertaken. They explained that prison: *while preventing offenders from committing crime and wrongdoing also prevents many activities which are harmless and could be helpful towards their rehabilitation*. EM for some offenders had underpinned abstinence or reduction from substance use.

Another social worker cited a benefit of EM in being able to be applied concurrently. She stressed that:

*So even if it does not benefit in terms of rehabilitation we can integrate other types of treatment such as substance abuse that is better delivered outside of the prison in a different environment, SW2.*

Evidence from the pilot project was cited that many offenders and their families requested the intervention of the PFDA to ensure successful compliance and reintegration. It was argued that this showed a level of demand and expectation within UAE society in relation to rehabilitative support within the EM programme.

However there was deep concern that delivery of EM for foreign offenders was not viable. One interviewee who stressed anonymity explained:

*Even with the language barriers which are challenging. There are large cultural differences between emirates and offenders who can come from many different countries: Pakistan, Philippines, India, Bangladesh. Everyone under-estimate this and there is no plan or training or understanding of this issue. The policy written talk about respect for all and equality and fairness but we start from bias situation and the culture is not friendly to foreign workers. There are many prejudices and negative attitudes of foreign workers.*

Talking about differences he states that:

*First many Emirates think they are superior to foreigners; there is little trust and regard for them. To be good therapists or to provide even basic support to any offender, you need to have some connection. But the problem is many monitoring and supervisors and even social support are from the police. They present themselves as superior because they are police and then because they are Emiratis. Right now in public any foreign worker who meets an Emirate in any situation they are deferent to them. To support offenders to must develop rapport, you must have some trust. This depend on many things form both the officer and the offender.*

This view is supported by another social support officer who explains that:

*The majority of officers that work in law enforcement adopt much more strict and serious law enforcement approach when they engage with offenders. It completely undermines the ability to build trust and a relationship. There are few that have development or therapy skills, SW2.*

The officer needed to be sincere, friendly, patient and show some empathy and understanding for an offender however certain barriers were perceived:

*Firstly, this takes time and secondly this requires the officer to have the right attitude and skills. This is complex because if an officer has negative and stereotype attitudes about the offender then how can he be sincere and empathic? This will not be a rare situation because this is our culture and there will be many different conditions which are made worse if there are language issues.*

Further from the offender side there is another major socio-cultural issue. This interviewee stressed:

*Foreign workers will have many feelings about Emirates and the UAE because of working conditions in UAE for migrant workers. Our rulers try to improve this but right now an offender can feel some humiliation or resentment or anger towards Emirates about their treatment. Foreign workers face much hardship, low wages and harsh treatment and work long hours. This creates another challenge to build trust and understanding so that we can help them.*

This perspective shows the challenge in overcoming an important barrier to rehabilitation and behavior change:

*It will be difficult to provide good advice and support and encourage positive behaviour because if we can't have trust and connection with each individual offender then it limits how much we are able to talk about their feelings or anxieties or circumstances, SW2.*

Another police officer referred to cultural barriers and explained that:

*Yes I can talk even from my experience. I am passionate about this work but when I think about work experience I see I am first an officer and I am officious and serious and I create distance between me and the offender. And at the same time I try hard to get the offender to open to me and talk and in many cases I get little information about what they are really feeling or thinking, ADP5.*

A psychologist further stressed that the relational and intensive nature of rehabilitation could prove a major challenge:

*The circumstances of every offender are unique, they have different experiences, fears, anxiety, personality and as therapists we need to approach in a very sensitive and slow way. The cultural difference is a barrier, the time we have is limited and creates further pressure and providing support in an outreach way is really not viable. In reality the process is intensive and we need to meet the offender many times to develop even basic understanding and trust before we can offer any support, PS1.*

A further issue was the conditions in which outreach support could be provided to foreign offenders:

*But it is complicated as we do not know what conditions or space we will have at each place to be able to support them. The environment can be noisy or lacking privacy. I meet someone in the corridor because of shared accommodation because there was no private space. Support needs to be delivered in a safe and quiet environment. Much of the time we can't guarantee this, SW2.*



Based on their experience another interviewee noted that rehabilitation could be hampered by the financial impact of EM on offenders:

*Under the current system and from these offenders that participated on this pilot I can see some major issue because of financial hardship they will face. We've not considered or even acknowledged the economic hardship that EM will cause to foreign offenders. It's just not practical for them to exist outside of a prison context where they have lost their employment or not be able to work, which will be the case for the majority of them, ADP4.*

This view is supported another participant who believed this can even worsen the situation:

*All foreign workers will face this situation and instead of reducing crime I think it can actually push offenders to reoffend. If an offender is sentenced to prison then they have basic food and accommodation. EM however will create immediate economic hardship and we have not actually accounted for this so far. The reality is they carry debts and have to survive without income being on EM, SW2.*

A good example of the challenge of cultural distance between foreign workers and emirate comes from one offender cited by a social worker:

*I have never been treated with respect, I have worked for Emirates for many years and to the same people I am like stranger. They are not friendly and they are strict and hard. I know in their eyes I am lower person because I am foreign and poor, Male Offender.*

Some participants perceived that there could be major cultural issues that could impede the rehabilitation of female offenders. One interviewee explained that:

*In our culture women are highly reserved with men and rarely would be willing to discuss personal issues with males outside of their family. This has major repercussions for supervision officers in communicating with them and identifying what their needs are. Added to this you have a male supervision officer who is not necessarily accustomed to personal discussions with women and is used to being*

*deferred to. I'm not sure that developing a relational approach could be possible in those circumstances, SW3.*

#### 7.5.1.6 Recidivism

There was some belief that EM could have positive effects on the reoffending of offenders. A senior administrator cited positive impacts on offender behaviour based on early evidence from the pilot project and shared with other key stakeholders. However they also noted that: *the evidence is as yet incomplete and cannot provide a more in-depth picture of the impacts.* They explained that EM had only recently been introduced in the UAE and the pilot project was ongoing:

*None of the 30 monitored offenders have yet completed their sentences which means that there is limited or only partial data available on whether they desist or not under EM and whether this extends to long-term change, MOI2.*

A prison service participant viewed EM as effective in terms of compliance, underlining that very few offenders had been removed from the programme for repeated non-compliance or re-offending.

Another participant believed that:

*If we implement positive measures and rehabilitative support we have a good chance of changing the behaviour of many offenders but as yet we don't know if there is a long-term impact on re-offending, ADP2.*

## 7.6 Implementation Process

This construct identifies the active process through which the desired changes are accomplished. The way in which the EM is planned and implemented can provide significant insights into the relevant factors which may challenge or facilitate the transfer of knowledge and adoption of EM. Successful implementation principally requires an active process in which individual and organisational use of the intervention is achieved as designed. In terms of the analytical framework the process of implementation was assessed in terms of planning, engagement and execution of the implementation to understand the extent of forward planning conducted, the actors involved in the engagement process and the execution of the implementation.

A key perceived barrier to wider implementation of EM within the UAE judicial system is the attitude of judges, the sole decision-makers in terms of to whom EM is applied. Multiple perspectives within the police underlined the view that judges were slow to adopt EM as an alternative sentencing sanction and had a lack of awareness of the correctional options available. One police officer noted that: *“Some judges were initially unaware that our current laws allowed them to use EM as an alternative sanction”*.

A Ministry of Interior official further drew attention to the impact of judicial attitudes on EM implementation. They noted that judges appeared to hold different perspectives at different judicial levels with older judges at executive level potentially more reluctant to incorporate EM than younger, less senior judges who were perceived to be more supportive.

Another police perspective underlined that in stakeholder meetings the view had emerged from some senior judges that prison was preferred to EM: *it seems that EM was perceived as a lenient option that may not achieve effective deterrence, while there was also scepticism that the police service were capable of executing the sentences*.

However changes in judicial attitude over the course of the UAE EM pilot project was noted by one police insider, helped by meetings and mutual fact-finding visits that resulted in greater understanding of EM benefits and acceptance by judges. Evidence of the outcomes of the EM programme was viewed as important in this sense for helping to support changes in attitudes that can facilitate increased acceptance.

Emphasising a critical success factor in terms of broader diffusion of EM technology and knowledge in the UAE, more than one judge underlined the importance and potential efficacy of engaging with the judiciary.

A judge noted that:

*It's important that we continue with efforts towards including judges in decision-making and raising our awareness and knowledge of EM. The judiciary should be actively involved in the process and can add a lot of value to the implementation of EM here, JU2.*

More widely a key factor viewed to influence the successful adoption of EM in the UAE was the potential to transform public attitudes or at least support the Arab philosophy of rehabilitation. One actor noted:

*We need to demonstrate to the wider public that offenders can be made to provide restitution over punishment. EM can be used to promote community service of criminals thus they can make amends for their behaviour. We could apply more demanding community penalties to offenders, JU1.*

It is vital to address the political and social context of EM implementation. At senior level in the government and ministry of interior: *there is significant interest in EM as part of our modernisation agenda and it is not controversial among the wider public.*

There was a strong perception by multiple CAP representatives that the effective transfer of EM in the UAE was critically dependent on establishing clear purpose and objectives. According to one official the many possible applications of EM meant that defining the specific goals was a critical dimension:

*It's very important that we know what we want to do with EM and where we want to go with it. We cannot implement it in the right way and expand it to different stages such as bail or for domestic violence offenders for example if we don't have a precise grasp of what exactly we expect from it and how can we use it, MOI2.*

Multiple judges drew attention to a perceived gap in the implementation process relating to the lack of offender risk assessments at key stages. One judge viewed the absence of risk assessment supplied to courts prior to sentencing as an imperative issue that undermined effective decision-making:

*This means that currently I am forced to rely on my own discretion and judgement in relation to who I sentence to EM and under what conditions. However this is a fairly new option and I would like more help in this area. We could be putting people on it that are not suitable and will not benefit and it will just be a waste of time and resources, JU1.*

One police perspective noted that there was greater emphasis on risk assessment reflected within police departmental structures: *We have a new risk assessment*

*section to improve our capability in this area but this needs developing and it is not integrated with other departments.*

There was also tension noted that due to the fact that EM is implemented and managed by Abu Dhabi Police and the implementation is predominated by police personnel. One social worker explained: *officers primarily prioritise their role as ensuring offender compliance with monitoring conditions.*

Senior officers overseeing the project suggest there is a culture challenge:

*From an Arabic perspective police hold a high position of authority and social status. Inevitably it will be challenging to encourage all officers who are involved in monitoring or supervisory roles to engage in an empathetic and relational manner that is sensitive to families and offenders' needs, ADP1.*

Further the development of rehabilitative and integrative behaviours among offenders could go unrecognised and unrewarded by supervisors. But more significantly, offenders may find it difficult to communicate their needs or feel they have the opportunity. This issue becomes more complex in the cross-cultural context when UAE officers must engage with foreign offenders, who will be in the majority when the programme is expanded. Attention was drawn to cultural issues in the UAE which could impact the quality of the relationship and the information and support provided by supervision officers to foreign offenders.

*Foreign offenders may be reluctant, or unable because of language barriers to engage with monitoring staff and vice versa, ADP4.*

A key administrator noted that expansion of electronic monitoring to remand and bail stages is a key future goal based on their evidence showing that remand prisoners represent a significant proportion of the total UAE prison population. They also noted the importance of clear definition of aims and within implementation:

*It's vital we continue with our gradual and incremental implementation process that started just with sentenced offenders, this helps us to achieve a clear plan for future expansion. It helps us to learn lessons before we extend the programme, MOI2.*

One monitoring officer indicated that EM applied in a relational approach could:

*Help in monitoring and encouraging offenders to desist from their usual routines and contacts to reduce exposure to the contexts that influenced their offending. This can help identify those offenders that require more support and enable resources to be directed towards more vulnerable individuals, ADP4.*

Another police actor underlined operational issues with a relational approach:

*The scope and discretion allowed may lead to numerous types and number of supervision conditions that can be personalised to support rehabilitation but which can have negative impact on frontline workloads. This may be much more of a challenge to deliver than we originally envisaged and there may be a limit to how much personalisation we can provide in terms of employment, training, curfews, substance abuse and exclusion, ADP1.*

Another police actor noted that when expanded beyond the pilot project: *applying personalised conditions will generate a high degree of complexity that could be challenging to manage and impact.*

Evaluation of EM implementation is a key factor and the UAE exhibits weaknesses in this area, challenging the transfer of knowledge and learning in relation to EM. A senior CAP official noted:

*We have gaps in evaluation processes and we need to establish a robust evaluation framework and key metrics. Limited quantifiable evidence has been collected so far. We need especially to evaluate the costs and benefits and fund our own internal studies and assessment, MOI1.*

To date however implementation of the pilot project has not been accompanied by quantitative targets or formalised systems to monitor and assess the cost-effectiveness of EM. The senior official perceived this as a critical issue:

*The future expansion to other regions is dependent on effective data collection and analysis and objective data. We need to track increased supervision and monitoring of rehabilitation against the prison costs to support the case for EM. This includes the level of support and supervision at every stage as well as the rehabilitation costs, MOI1.*

Key elements to evaluate have been considered in terms of: who EM is applied to; the use of EM at different stages of the judicial process; the length of application; the potential alternatives; what other elements are integrated within the EM programme, and different outcomes of EM including compliance, re-offending and impact on rehabilitation.

Offender perspectives and experiences were also considered a key area for examination. One actor explained: *it's important we discover any positive or negative impacts other than on offender behaviour*. However to date few modifications have been made to the original plan, and any changes were acknowledged to take time and to be dependent on review meetings of the central committee overseeing the project.

## **7.7 Summary of Key Findings**

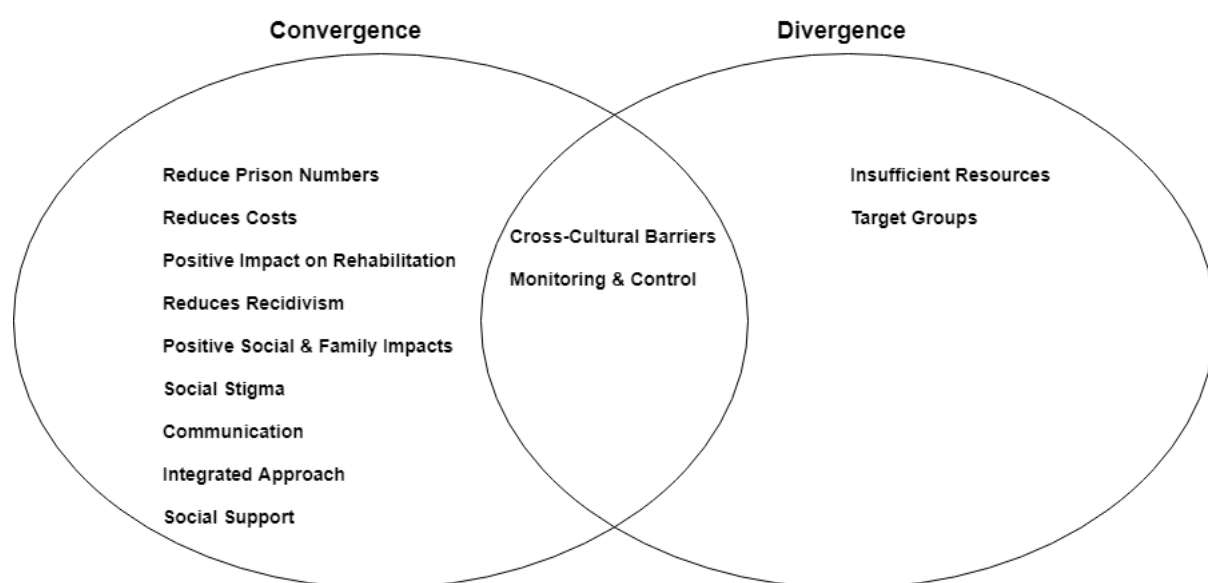
This chapter has presented findings drawn from insider accounts of the planning, design and implementation of the electronic monitoring programme piloted in the UAE. The results are based on insider accounts conducted after pilot implementation had commenced in 2017 with evidence available over the entire implementation so far. The results were structured into five sections based on the CFIR framework that supported a structured analysis of the implementation of EM in the UAE. Analysis of the implementation construct relating to the intervention characteristics, outer and inner contexts, characteristics of individuals and the implementation process revealed rich qualitative evidence on the effectiveness of implementation and the critical success and failure factors for the implementation of EM.

## 8 Discussion of Findings

### 8.1 Introduction

Previous chapters have presented the results and analysis on the implementation of EM in the UK and the UAE using the CFIR framework. This chapter presents a discussion of these findings in relation to the research questions examining the drivers of implementation in the UAE, the challenges in transferring EM to the UAE, different stakeholders' evaluations of the potential and actual consequences of implementing EM in the UAE and understanding of EM as a punitive as well as rehabilitative system in an environment new to this approach. The chapter is structured into four sections which address and analyse the research questions in relation to the literature.

In discussing the findings, attention is drawn to the convergences and divergences of perspective between the two sets of interviewees of practitioners and insiders as shown in Figure 8. Overall there is significantly more convergence in opinions than divergence with consensus evident on key themes in relation to the benefits and impacts of EM and the factors important to effective implementation. Some divergence in views was evident on resource issues and modalities and target groups. In particular, while practitioners generally viewed application to young offenders as unproblematic, this view was not shared by all insiders.



**Figure 8 Comparison of Views between Practitioner Interviewees and Insider Interviewees**



## **8.2 Drivers of Implementation of EM in the UAE**

The key lesson from examining the UK and UAE context is that the drivers and the prevailing context can have far reaching implications for the implementation climate. Firstly, there can be significant risk that drivers can lead to bias and imbalance by concentrating the nature and direction of EM towards a narrow agenda. In both the UK and UAE the cases examined in this study showed that prison overcrowding was a primary driver for implementation of EM. There was a political drive toward systemic goals to adopt an intervention that would counter this issue and the perceived relative advantage of EM for its adoption in terms of cost was influential. What is consistent in both the UK and the UAE evidence is that specifically technology drivers influenced a technocratic approach. The impact is most notable in the UK where the design and implementation were highly centralised and led by technological perspectives and a focus towards systemic efficiency-driven goals.

The innovation climate was a key factor in the UAE where a wider innovation programme and the government's vision to become a world leader and achieve excellence in all areas of its public service delivery emphasised the role of EM as a modernising technology. The UAE has consistently been an early adopter of new technologies such as biometrics, CCTV, and robotics and therefore upgrading innovation capabilities is a key driver across all its public sector. Buhumaid et al. (2016) has identified the adoption of new technologies in the UAE as a key dimension of the change strategy driving the fast pace and broad scope of enhancements at all levels of the public sector for the purpose of radical improvements in service accessibility and delivery. The extent of the UAE's focus on innovation drivers and early technological adoption is consistent with and influenced by the broader context of commercial drivers of EM discussed in chapter 2. Commercial drivers have emphasised ongoing technology development and commercially-driven diffusion within the criminal justice field enabled by the emergence of neoliberalism and consequent market opening for private sector involvement in criminal justice (Paterson, 2008; Lilly and Deflem, 1996).

While a positive innovation climate is not problematic the key lesson from these findings is the potential risk that adoption can be driven by the strong appeal of EM as

a new innovation by virtue of its technological capabilities and new features rather than by social or correctional goals. In high innovation-oriented contexts such as the UAE this driver may mean that the implementation of EM influences a technology-based focus where the emphasis is placed on developing the organisational, managerial and technical systems and processes rather than on identifying and improving the enabling factors or addressing barriers. To a degree this aligns with the UK experience in which third party providers have largely been predominant and resulted in the exclusion of critical criminal justice actors, driven mainly by the political view adopted that technology is an independent mechanism (Lockhart-Mirams et al., 2015). The implication from such drivers means that the implementation process, priorities, relations and decision-making could be biased towards technology partners and fail to account for social and criminal justice perspectives.

Thus the planning approach represents a critical mechanism to moderate the influence of drivers and align the EM implementation. In both the UK and UAE the drivers were borne from institutional sources that influenced a highly programmed approach and planned from top-down. This is significant because the source of these drivers can embody a particular vision or concern. This in itself is not problematic if there exists a high level of inclusiveness. In the UK the implication of this was an exclusive planning approach focused on specific goals as evidenced in the UK with the lack of engagement and highly technocratic agenda. In comparison in the UAE where innovation was a key driver there was evidence that, while reduction of the prison population and the technology adoption were the primary drivers, this was balanced explicitly towards criminal justice reform focused on a rehabilitation strategy. Thus it can be seen in the UAE context that the government can frame the implementation of EM in line with broader socially orientated goals that combines punishment and the reintegration and rehabilitation of offenders. Therefore the planning approach can determine the level of inclusivity and influence the extent to which drivers can be moderated towards a balanced consensual agenda. The key lesson is that in order to maximise understanding and acceptance for EM in any given context the influence of primary drivers must be evaluated to account for interests and views of a broader range of actors. The level of inclusivity in the debate and the planning of EM to which drivers are moderated and evaluated in turn influences multiple feedback into the policy development and design of EM.

A critical lesson is that drivers must be identified, evaluated and managed. To avoid bias in this process however requires a diversity of representation of EM stakeholders. The extent to which this is undertaken may influence a broader narrative inclusive of a diverse range of stakeholders and reduce potential resistance throughout the process. The diffusion and acceptance of EM in the UAE is likely to emerge through the incorporation of a diverse engagement of criminal justice actors. A key issue is the potential for the drivers of implementation to dominate the process and entirely shape the design of EM, influencing the risk of a disconnect with the prevailing criminal justice ideology embedded in the broader societal context. Criminal justice theories identify different societal perspectives on the aims of criminal justice broadly divided between a focus on punishment and deterrence, or rehabilitation and reintegration (Lattimore, 2017; Dilulio, 2010; Hart, 1958). This suggests the critical implication that the design of EM implementation needs to align with the dominant criminal justice ideology in order to ensure success and public perceptions of effectiveness. In societies that emphasise rehabilitation and reintegration of offenders this points to the need to ensure that rehabilitative features are significantly incorporated within EM design. In the context of the UAE and wider Arabic cultural and religious perspectives, offender rehabilitation is a key underlying theme within criminal justice (Waqas and Qaiser, 2014) in which emphasis is placed on supporting opportunities for rehabilitation by removing barriers to reformation (Hascall, 2011). Rehabilitation principles emphasise that to rehabilitate and reintegrate offenders support is essential in the form of access to necessary treatment, social and educational programmes, in addition to removal of offenders from criminogenic environments and the maintenance of community and family ties (Hart, 1958). Electronic monitoring can be designed and applied in many different ways to fulfil the aims of societies holding different criminal justice ideologies. It has been argued that the likelihood of any EM implementation being effective will not depend on technological change alone, but on what politicians make of the particular social affordances it provides (Nellis, 2015). In terms of rehabilitation, Nellis et al., (2013) holds that rehabilitation is significantly more effective when EM application is accompanied by social support elements such as cognitive behavioural therapy while Shoham et al., (2014) stress the need for offender support towards the creation of pro-social community ties that aid in the effort to avoid slipping back into previous behaviours. This suggests that if the top-down drivers in the UAE are oriented predominantly towards cost and innovation there is a danger that

rehabilitation and reintegration will be overlooked, leading to an EM implementation that diverges from key perspectives embedded in UAE criminal justice.

### **8.3 Challenges of Transferring EM Technology and Knowledge to UAE**

This research revealed several key challenges that impacted on the transfer of EM technology. The diffusion and acceptance of EM is contingent on a number of interrelated factors including the level of knowledge and understanding among stakeholders, knowledge sharing and learning culture and the level of complexity in the implementation context. The findings from the UK and the UAE point to the importance of a reflexivity and learning culture to develop both awareness, understanding and knowledge of EM. The central challenge is in fostering the structures and processes that enable a continuous flow of information and knowledge. Facilitating knowledge sharing is a highly complex and challenging process because it depends on the willingness of actors in the different organisations to collaborate and combine their knowledge. The unique culture of each context presents a significant barrier that needs to be overcome to ensure a high level of knowledge sharing and learning.

The management of stakeholder perceptions represents one of the most diverse and complex challenges in the transfer of EM knowledge and technology. The findings suggested a key challenge in establishing awareness, understanding and acceptance of the role of EM from all key stakeholders in the criminal justice system. Several of the constructs of the CFIR that was applied to analyse the UAE implementation demonstrate that multiple factors can influence the knowledge and acceptance of EM technology. Firstly, identification of key drivers for the implementation discussed previously showed that the focus of EM was driven by systemic and innovation goals by political stakeholders. While these are legitimate goals there is a risk that the narrative for EM is not framed in a way that engages a broader spectrum of criminal justice stakeholders if they perceive an alternative vision. It is evident that the UK and UAE are characterised by a traditional sequential planning culture. There is a significant top down pre-planned approach by initiators based on the perceived need for EM as an intervention. Centralised decision-making and standalone visions or initiatives are factors that reduce the level of inclusion and representation of interests and concerns. This approach and lack of integration severely limits access to a wider

audience. Although the planning committee in the UAE for EM implementation was structured to represent different actors including prison and social work, concern was expressed that the degree and scope of engagement of all key stakeholders was limited.

Knowledge sharing and dissemination can be a constraining factor for the diffusion of EM knowledge and technology where the flow of information is top-down and focused exclusively on the key decision-makers of the project. EM requires conditions that provide some scope for self-organising processes and a culture of reflexivity. EM needs to be viewed as a social system or complex ecosystem, rather than a technological mechanism or tool. In both the UK and UAE real-time change or implementation of EM has yet to be realised, rather relying on a highly programmed approach and lengthy and often infrequent feedback loops.

In implementation contexts while senior-level actors can develop strong perceptions about the advantages of EM as an alternative to prison specifically in relation to minor offenders, the level of awareness and understanding is not developed bottom-up. Consequently, there is weaker awareness, knowledge and understanding of the benefits and applications of EM across all levels of the organisation. EM requires conditions that provide some scope for self-organising processes and a culture of reflexivity. EM needs to be viewed as a social system or complex ecosystem, rather than a technological mechanism or tool. In both the UK and UAE real-time change or implementation of EM has yet to be realised, rather relying on a highly programmed approach and lengthy and often infrequent feedback loops. This issue is consistent with Sveningsson and Alvesson (2008) who found that it can undermine support and acceptance for EM and result in uncertainty leading to partial acceptance. Even where there is no direct opposition the failure to communicate broadly and gain wide support can impede the transfer of EM technology and knowledge. While the strength of belief in the efficacy of EM supported the acceptance of this technology, widespread acceptance and support could have been inhibited by the ambiguity of the credibility of the evidence.

Further challenges to EM technology transference were identified in the need for continuous learning in relation to EM and more effective and improved knowledge management and knowledge sharing mechanisms between and across agencies.

Prior technical knowledge combined with organisational policy can be potential impediments of knowledge transfer by affecting speed of knowledge transfer and also development of dynamic capabilities necessary to maintain pace with changes in the technology. There is further challenge to UAE and Arab cultures which face significant barriers in knowledge sharing. It is noted that sharing of tacit knowledge is problematic as knowledge sharing in Arabic culture is highly socialised and driven by trust and more so in highly multicultural contexts where there can be significant bias towards certain nationalities (Weir and Hutchings, 2005; Al-Alawi et al., 2007). This can be reflected in the existing organisational structure and strategic approach that was adopted which can be problematic for the transfer of EM. The UAE adopts a highly centralised system of planning and implementation that has the result of concentrating planning and decision-making to select senior officials. This is largely consistent with Arab management culture and national culture. Continuous learning and innovation in terms of adapting and shaping the implementation of EM can be constrained by the cultural orientation such as power distance and uncertainty avoidance. The literature shows that in high power distance countries centralisation and rigidity can characterise organisational structures while decision-making information is retained by those in authority (Hofstede, 2001). Such national cultures orient towards a top-down focus and strict control over strategy and tend to have formal hierarchies and vertical information flows (Jones and Davis, 2000). Arab cultures can also be uncertainty avoidant implying a low tolerance for uncertainty and risk.

Therefore the transfer of EM to a new environment should account for the culture and where necessary foster change where subordinates may require to be expressly empowered, as they may experience greater reluctance to engage with those in authority thus potentially constraining more spontaneous, bottom-up initiatives. Personnel may not feel confident to share their genuine beliefs out of fear or adherence to cultural values. There is less scope in these cultures to openly question or critique senior staff decisions or plans. The transfer of EM depends on understanding diverse perspectives and encouraging bottom-up engagement. This can counter the impacts of a planned approach to EM implementation and foster an emergent strategic approach that is vital to adapt and contextualise EM locally.

This is more emphasised given that EM technology is a rapidly evolving technology that makes it challenging to develop understanding and knowledge. The ability to mobilise knowledge in a timely manner and develop the technical capabilities of personnel was identified as a major challenge within the implementation context. Analysis of the implementation climate and the complexity constructs revealed also organisational and cultural factors may influence knowledge transfer. In developing countries there can be significant challenge in terms of a lack of maturity of knowledge management systems, team-working and collaboration between agencies. The unique cultural context of the UAE therefore can involve factors that constrain the speed and diversity of knowledge sharing. It is acknowledged that knowledge sharing in the UAE due to a collectivistic culture reduces the level of openness and places emphasis on personal networks (Al-Adaileh and Al-Atawi, 2011). This challenge should not be understated given the broad range of dimensions to knowledge sharing and development which is critically dependent on inter-organisational factors, mechanisms and cultural factors and which have major ramifications for implementation climate.

In addition to the challenge of identifying and addressing barriers that constrain information and knowledge flows and collaboration at all levels, the implementation of EM is subject to a change environment. In the UAE, major challenge was emphasised in the intensity of the change management context in the UAE public sector. This was characterised by centrally-driven, persistent, and radical change initiatives across all departments, agencies and sectors involving significant restructuring and transformation. In addition, policing and criminal justice in the UAE similar to all public sector agencies have been undergoing an intensive and rapid pace of change and innovation (ADP, 2019; Insead, 2019; Mansour, 2012). This has meant continuous change in personnel and processes, in addition to the integration of new technologies, in response to a broad range of dynamic and complex security threats and significant social demographic change (Alqaydi, 2015; Al-Mansoori, 2015). This makes it difficult to maintain stability and continuity in the implementation of EM as it can disrupt relations and result in a loss of knowledge and experience. Thus failure to ensure the stability of personnel, structures and mechanisms can negatively impact on the diffusion of EM.

### **8.3.1 Integration of Information and Technology System**

Integration of the information system into broader police and law enforcement was a key challenge and shown to be lacking particularly in relation to access of EM data to key parties. The extent to which EM was perceived as compatible with the existing systems can impact on the transfer of the EM to the UAE. This area requires significant resources to develop staff capabilities and to design external applications to interface and access knowledge. The degree to which it is planned and effectively implemented can significantly impact on the level of information exchange. The implementation of EM requires an intensive process of migration of existing systems from disparate standalone systems to highly integrated systems and that facilitates information storage and exchange between all key agencies. In both the UK (Armstrong et al., 2011; CJI, 2008) and UAE knowledge transfer was significantly impacted by the degree of integration where systems were implemented in a standalone manner which fails to integrate with the specific criminal justice information systems that exist. The literature evidences this issue as a factor which has constrained the sharing of information and transfer of knowledge on EM, in particular among key frontline criminal justice practitioners (Hucklesby and Holdsworth, 2016; Bottomley et al., 2004; Mair and Mortimer, 1996). Current criminal justice perspectives cite significant frustration with the continued inflexibility and lack of capability within the system for the sharing of information (Geoghegan, 2015). These lacked access to important EM digital data and infrastructure and a centralised digital location in which they could modify or remove offender data and draw data on monitoring and compliance (Hucklesby and Holdsworth, 2016). This issue is prevalent in the UAE experience and it may reflect a challenge in terms of establishing necessary information infrastructure. In the planning and design there is no evidence of any change processes that concentrated on identifying information requirements between agencies or modifying existing systems for sharing EM related data. This limitation may underscore broader knowledge and inter-agency co-operation and provide potential challenges for inter-organisational information management and knowledge sharing.

### **8.3.2 Tension between Standardisation and Discretion**

The transfer of EM to a new environment can be significantly impacted by the tension between standardisation and flexibility in the implementation. The UAE EM



project revealed a high degree of flexibility and discretion in terms of sentencing and in terms of conditions of supervision, support and breach. It should be noted here that as a result of differences in governance, resources and local contexts this may only be specific to the emirate of Abu Dhabi. While benefits and constraints are associated with both standardisation and discretion it was acknowledged that achieving an optimal configuration that balances adaptability, standardisation and discretion was highly problematic. A high level of discretion and flexibility in the system can generate inconsistency or confusion and impair the decision-making process at different stages of the EM implementation. This in turn can undermine achievement of outcomes and acceptance and support for EM. The key challenge is in identifying which processes can be subject to discretion and which can be standardised.

This issue is consistent with the dilemma between standardisation and providing a level of discretion in implementations of EM. Literature shows that standardisation and flexibility can both have positive or negative effects. A strong degree of standardisation and rigid application is characteristic of both the EM conditions imposed and responses to breaches in implementations in England and Wales (Hucklesby and Holdsworth, 2016; Airs et al., 2000), hampering the ability to apply more personalised curfew conditions and undermining the flexibility in breach decision-making which could enhance the rehabilitative aspects of EM by taking into account individual offender circumstances and risks (Hucklesby and Holdsworth, 2016). Meanwhile discretionary decision-making among frontline criminal justice actors was found to be an issue in Scotland leading to uneven regional application of EM in terms of frequency of use, how it was applied and on whom, dependent on the perspectives and views of key EM decision-makers (Graham and McIvor, 2017). On the other hand, literature also shows that some benefits have been identified in terms of clearly defining regulations on duration of daily monitoring periods which helped to lower rates of absconding and directly influenced successful outcomes for Home Detention Scheme and Curfew Orders (Hucklesby and Holdsworth, 2016). Project standardisation has proved beneficial in terms of allowing for greater efficiency and cost-effectiveness in the management of EM contracts in the UK (Hucklesby and Holdsworth, 2016), while avoiding the increased operational challenges and costs that would result from incorporation of diverse practices.

### 8.3.3 Resourcing

The technological features and capabilities in themselves are not sufficient to realise the perceived benefits but critically dependent on how resources are allocated and structured to support social processes throughout the tagging and monitoring of offenders. Ensuring a sufficient level of resources is a key factor that can either facilitate or constrain the diffusion of EM in a new context. The allocation of sufficient resources is a common barrier and failure factor for many projects (Audit Office, 2017; Hucklesby and Holdsworth, 2016; Dodgson et al., 2001). Thus the extent to which resources are optimally allocated are vital in ensuring that essential mechanisms and knowledge are developed. The key challenge is in effectively forecasting the resource requirements and understanding the potential impacts of the implementation on existing systems and resources. The complexity surrounding the application of EM and the potential of under-estimating and failing to forecast resourcing can become a major impediment to effective implementation.

EM implementation has significant implications for staffing and technological resources (Graham and McIvor, 2017; Heaton, 2016). It is evident that the transfer and uptake of EM technology in a new context is a highly intensive organisational learning process which as has been discussed is vital for developing capabilities and promoting awareness and understanding of EM and its role. Multiple factors can undermine the process from a resourcing perspective. For example the historical technological phases of EM identified in chapter 2 (Coyle and Fair, 2015) reveals the dynamic context and evolving processes of EM. EM technology trends continue to point to continued development and innovation in the field (Di Tella and Schargrotsky, 2013). This has implications for knowledge transfer and resources in the need for continuous learning and evaluation of the impacts of new technology. Concerns were expressed regarding the additional administrative burden that the EM pilot project was causing and the potential for this to significantly increase as the programme expands, which in turn calls into question the sustainability of existing resources.

The relatively recent inception of the department and EM programme was highlighted as a core underlying reason. In particular human resources were deemed problematic, with insufficient numbers of qualified staff available and those currently working in the field viewed to possess limited EM experience and skills. While this may

only be specific to Abu Dhabi due to differences in governance, resources and local contexts, as the largest and wealthiest emirate it is likely that resourcing issues may have greater impact in some of the smaller emirates. The involvement of multiple agencies and departments across criminal justice creates further challenges to share and control budgets and demarcate costs and responsibilities.

There is indication that resourcing for supervision and monitoring can be underestimated or absorbed with existing resources. A key issue is the generation of significant amounts of data by EM technologies, hampering the maximisation of information use (Heaton, 2016). This issue is significantly magnified in full implementation and a key example is under-estimating the level of human resource required to implement EM as a rehabilitative mechanism. In the pilot project maintaining a high level of support and supervision was viewed as challenging and potentially very expensive, as the small pilot provides indications that the programme is costly.

The concerns that have emerged related to the application of EM and the potential for net widening is arguably one of the most critical factors that can undermine the effectiveness of EM (Boone et al., 2017; Bonta et al., 2000). This is because the decision to apply EM to an offender has significant resource implications. Even applying EM to a small percentage of offenders that may be better suited to alternative measures can place significant burden on resources such that face to face elements and relational support is undermined (Kantorowicz-Reznichenko, 2013). The implication of reduced face to face interaction can deprive the project of valuable insights and knowledge that can shape the implementation of EM. This can result in less personalised conditions that can reduce any positive effects of EM. The resource implications of net widening extend further to potential denial of a place on the programme because of a lack of resources to other eligible offenders whose only other option is prison. Bulman (2016) equates this to cruel and unusual punishment that should be considered prior to implementation.

Furthermore, in the context of the UAE it can be highly challenging to conduct an accurate cost-benefit analysis of EM when existing resources and staffing are being utilised to implement EM. However the failure to identify and monitor cost-drivers can have repercussions for sustainable resourcing. Cost and human resource impacts are

key features reflected in the literature on EM, with cost shown to be directly impacted by the need for personnel to oversee and conduct day-to-day operations within the EM process (Daems, 2015). Variations in supervision and monitoring processes such as more personalised supervision or daily as opposed to monthly checks have significant implications for both cost and resources (Wodahl et al., 2015). Evidence in the UK indicates that implementation of EM across multiple different modalities has had substantial impacts on resources and increased workload for courts, police and probation services (Hucklesby, 2016). Different technologies and EM types are further shown to entail different cost implications, particularly in regard to the implementation of GPS (Daems, 2015). Therefore the extent to which personnel are effectively trained and networked with knowledge sources and support can affect the level of knowledge and understanding among personnel. This in turn can impact on the speed of technical development of personnel for frontline staff on installation, maintenance and monitoring of EM equipment and the management of alerts. The effectiveness of this can impact on the smooth adoption and implementation of EM and impact on the integration of EM with traditional supervision processes.

#### **8.3.4 Technical Issues**

Challenges were noted associated with procurement of EM technologies and working with third party suppliers that made the transfer of EM technology and knowledge to the UAE more problematic. Procurement has been evidenced as a key issue in the UK influenced by over-ambitious requirements and unachievable timescales which have impacted the success of the entire EM programme and lead to repeated changes in suppliers and long delays in programme implementation (Audit Office, 2017). Nevertheless EM technology is maturing while the UAE is an intensive early adopter of technology and its experience with technology partners internationally potentially provided a smoother adoption. Countries new to EM without such experience may need to ensure strong partnerships and address knowledge gaps so that the implementation is not undermined. The literature has demonstrated multiple issues related to the evolving nature of EM hardware and equipment failure that became major impediments to effective implementation (Audit Office, 2017; Nellis, 2006). The extent to which the technical dimension is managed can have serious repercussions on the adoption and acceptance of the technology. A key area of

technology management with implications for knowledge transfer is the use of classic EM versus GPS satellite tracking of offenders. The literature shows that the two technologies have relevance for different types of user and one does not supersede the other (Jones, 2014; Bulman, 2016). This has implications for knowledge transfer in understanding how the technology can best be applied and to whom. Moreover Paterson (2015) consistently warns against over-reliance on technology developments and adoption of new innovations before fully testing and learning the benefits of existing implemented systems.

#### **8.4 Stakeholder Evaluation of Consequences of EM Implementation in UAE**

Stakeholder evaluation of the consequences of EM implementation in the UAE point to both positive and negative impacts for society, criminal justice and the offenders themselves.

##### **8.4.1 Net Widening**

There was some judicial concern in relation to the potential for net-widening in the application of EM. Net-widening can be an unintended effect of programmes providing alternatives to incarceration that results in a larger number of individuals under the control of the criminal justice system than otherwise would have been experienced (Prichard, 2010). There was concern that the availability of the EM option could lead to its use as a de facto alternative replacing other community sanctions, and potentially resulting in the application of sanctions to people who otherwise would not have received a sanction or raising the severity of the sanction. This concern is consistent with the literature which shows that the potential for net-widening is a key contentious area associated with EM within judicial systems (Ardley, 2005). Di Tella and Schargrotsky (2013) suggest potential exacerbation of net widening issues from the perspective that EM is a cruel and unusual punishment when used in probation, parole and different forms of community-based supervision. Conversely electronic monitoring is viewed as less restrictive and inhumane when used as an alternative to incarceration (Di Tella and Schargrotsky, 2013). Nevertheless findings in the literature are mixed in relation to whether the application of EM does in reality result in net-widening. Broad research from North America has highlighted examples of net-widening, in which low-risk offenders who would not have otherwise been imprisoned were generally placed on EM (Bales et al., 2010; DeMichele and Payne, 2009).

Nevertheless other findings point to diversion from prison as a result of EM application, particularly through early release mechanisms, in countries such as Sweden, New Zealand, Australia and England and Wales (Bartels and Martinovic, 2017).

The concerns expressed could be driven by perceptions that net-widening may be occurring at the 'front-end' of the EM process at the time of sentencing when offenders would not otherwise have been imprisoned or where existing community sentences could have been applied without resorting to the stricter conditions linked to EM. The UAE has an evolving legal framework and EM is an entirely new technology and criminal sanction associated with a considerable level of discretion in how it is applied at the sentencing stage. Specifically a lack of established legal criteria for EM decision-making and on whom it should be applied is noted in addition to insufficient judicial awareness. This could be having an effect on net-widening and perceptions in relation to EM, with the discretion provided perceived to be leading to or potentially resulting in inconsistent application.

#### **8.4.2 Reducing Recidivism**

A key consequence from the perspective of criminal justice stakeholders is that the implementation of the EM pilot project reduced the re-offending of monitored individuals. Stakeholders pointed to early data collected from the project which showed actual positive effects on re-offending rates for monitored persons in the UAE. There was moreover a clear expectation that EM would reduce re-offending. This is consistent with the literature within multiple studies indicating the impact of EM on recidivism across a range of different contexts and implementation conditions (Bulman, 2016; G4s, 2016; Palermo, 2015; Wodahl et al., 2015; Jones, 2014; Nellis et al., 2013). Stakeholders acknowledged however that the UAE project was still in its formative stages and they were as yet unclear on the factors that influenced recidivism to continue success in this area. Nevertheless even over the medium to long term the evidence shows that EM can continue to deliver. Bulman (2016) demonstrates that after a year of EM application reoffending rates for offenders dropped to the lowest recorded level compared to non-EM offenders. Palermo (2015) shows that when compared over a ten-year period even high-risk offenders indicated lower rates of reoffending. Nevertheless the level to which the benefits of EM can be continued within

a wider implementation can be questioned in relation to concerns regarding the resourcing of the implementation.

#### **8.4.3 Behavioural Change**

Multiple stakeholders believed that there were aspects inherent to electronic monitoring that have the potential to effect positive behavioural changes in offenders. Firstly it was strongly perceived that EM increased the perception of surveillance and fear in offenders that they could be caught as it heightened the ability to detect re-offending or non-compliance with monitoring conditions through monitoring their location. This perspective conforms with the literature which emphasises EM as a situational crime prevention mechanism (Clarke, 1997) that lowers anonymity through being able to determine offender locations at all times thus increasing the risk of detection of wrongdoing (Turner et al., 2015; Frost, 2002). The view was also expressed that EM improved rather than replaced supervision, and by providing information to decision-makers when breaches are believed to have occurred enabled an extended network of guardianship over offenders. This perspective is consistent with Bales et al., (2010) who find that over half of offenders surveyed wanted to comply with EM conditions as they felt they were being watched, while over 80% of parole officers pointed to being monitored and the potential for being easily caught as a key reason for non-offending and compliance.

The view was further expressed by stakeholders that EM extended the effort required to commit crime and evade detection. These findings support the value of routine activity theory in the EM context for understanding the factors that can facilitate short-term behavioural change and desistance behaviour, by underlining the importance of the presence of a capable guardian for stopping the enactment of crime (Felson and Clarke, 1998).

Nevertheless while the theory underlines significant potential for the deterrence of crime while undergoing monitoring, no ongoing impact on behaviour is implied once a capable guardian in the form of monitoring is removed (Renzema, 2009). This suggests that other factors beyond the scope of the theory need to be integrated to ensure long-term behavioural change under EM. In the context of the UAE social learning theory can be applied to provide key insight into the causes of criminal

behaviour and the means for effective intervention to change behaviour through positive social reinforcement (Sansone et al., 2011; Renzema, 2003). Andrews and Bonta (2006) emphasise social learning principles as the predominant theoretical model in effective correctional treatment.

Stakeholders also viewed EM as an opportunity to change offender behaviour through the ability to neutralise anti-social ties and settings. EM was believed to reduce negative peer pressure by being able to prohibit offenders from certain criminogenic locations and/or peers through the enforcement of exclusion zones and curfews. According to rehabilitation theory this view has some value as key principles for reintegration in society suggest the necessity that an offender is not present in environments encouraging criminal behavior (Hart, 1958). The perspectives found in this study further align with findings by Nellis et al., (2013) which similarly show that offenders perceived EM as an opportunity to break from previous habits and associations linked with offending. A key reason cited in the literature is the structuring and stabilising effect EM has on offenders' lives, provided by the enforcement of EM conditions including the frequent requirement to maintain or gain employment that can support behaviour change (Hudson and Jones, 2016; Berends et al., 2008; Lapham et al. 2007; Finn and Muirhead-Stevens, 2002; Mortimer, 2001).

The potential of EM to be combined with other more therapeutic components was apprehended as a key area that could assist behaviour change. A broader EM programme integrating social elements and treatment programmes to help with addictions was believed to assist and encourage offenders in developing pro-social behaviours and reduce re-offending through removing certain causes for committing crime. This view is consistent with evidence showing that when adopted within tailored interventions EM is experienced as rehabilitative by offenders (Gainey and Payne, 2000). Findings also align with theoretical perspectives on rehabilitation which suggest that the use of EM in the absence of other measures does not possess inherent rehabilitative qualities (Gainey et al., 2000) but that it can be effectively used as a facilitating mechanism or tool as part of a rehabilitation intervention that may also involve educational programmes, vocational training or cognitive-behavioural treatment (Gainey et al., 2000).



Evidence from this research suggested that EM had the potential to influence behavioural change as it eliminated the reasons offenders could employ to justify behaviour. This view is echoed in studies which highlight that EM programmes are usually characterised by a set of rules which are explained to offenders at commencement of their sentence aimed at supporting compliance (Erez et al. 2012; Harig, 2001; Mortimer, 2001). The application of EM in the UAE involves meetings and regular updates with monitoring officers to make sure that rules were being adhered to and if necessary to reinforce them. Evidence from Berends et al., (2008) suggests that this practice allows opportunities for monitoring officers to steer offenders towards good behaviour by helping officers to reinforce boundaries, strengthen offender sense of being monitored, and to discuss offender behaviour together. Emphasis was placed on the benefit of EM in protecting offenders from the negative effects of being in prison and mixing with other criminogenic people, potentially reducing adverse influences on behaviour. This belief is consistent with literature which suggests that avoiding incarceration could be beneficial for lowering the reoffending of these individuals (Hudson and Jones, 2016; Finn and Muirhead-Stevens, 2002). This view is further supported by rehabilitative principles according to which the usage of EM as an alternative to incarceration may enable the offender to maintain personal and community relationships while avoiding the criminogenic context of prison (Gainey et al., 2000).

#### **8.4.4 Maintaining Pro-Social Relations**

There was a predominant view among key stakeholders that use of EM positively impacted offenders and behaviour through the ability to maintain pro-social relations and ties related both to the family and the wider community in terms of education and employment. Offenders were strongly perceived to benefit from the increased contact with family and its pro-social setting that influenced behaviour. This perception concords with many studies which show that the development of improved family relationships during a term under EM can have a positive impact on the life of offenders and their behaviour including a reduction in reoffending (Erez et al. 2012; Finn and Muirhead-Stevens, 2002; Killias et al., 2010). The findings further support key assumptions within control theory, which hold that the degree to which core social bonds are experienced influences the likelihood of an individual committing crime

(O'Toole, 1999). EM can impose the type of structured lifestyle lacking among many offenders thus supporting the building of attachments to family and positive peer groups.

Criminal justice stakeholders strongly perceived that the capacity for offenders to maintain relationships with families in contrast to the incarceration alternative was a key component which contributed to favourable outcomes on the EM programme. Offenders and family stakeholders perceived similar benefits in terms of being able to maintain family contact and relationships and continue parental or other roles within the home. Moreover offenders pointed to fear of loss of these relationships as a key motive for compliance. This view is congruous with some literature which highlights that the experience of being confined at home under EM strengthened family relationships (Nellis et al., 2013) and offenders were prompted to consider desistance through the positive impact of family or friends (Hucklesby 2008; 2009). Compiling a range of evidence from different sources Nellis et al., (2013) further shows that the predominant reason for offender compliance with EM was fear of the consequences on their lives and close relationships.

The ability to maintain employment and education or take up job opportunities was viewed by stakeholders as a key advantage of the application of EM in terms of positive impacts on compliance and desistance. As a result significant emphasis was perceived to be placed on this aspect in the design of the EM programme which provides flexibility in the sentencing framework, monitoring conditions and aftercare components to support offenders to maintain or select lifestyle choices such as employment that would contribute to rehabilitation. This view supports multiple study findings which shows that employment is a critical element encouraging reductions in re-offending (Farrall and Calverley, 2005; Bottoms et al., 2004). Alarid et al., (2008) find that when EM sanctions are combined with employment provisions there is strong potential to advance long-term behavioural change.

#### **8.4.5 Family Privacy**

Some family stakeholders pointed to loss of family privacy and the intrusiveness of EM on private family space as a key negative consequence of the application of EM to a member of their family. It was underlined that the emphasis on family privacy

embedded within UAE culture played a role in family perceptions and increased the stress on some families. Personnel on the pilot project expressed the view that from the perspective of offenders' families the application of EM sanctions could make them feel that they are being punished as much as, if not more so, than the offender. This perspective supports literature which reveals intrusion and loss of privacy as a key issue and concern for families (Lilly and Ball, 1987; von Hirsch, 1990). Heggie (1999) shows that the single most disruptive aspect of EM for families are the monitoring calls, checks and home visits that are a main feature of monitoring protocols. Muncie (1990) evidences that the increased stress placed on families as a result of participation in the programme, in particular linked to loss of privacy and damage to reputation, is a key factor in a slightly higher chance of violence in the home under EM. In this study the routine experience of monitoring visits was for some families linked to perceptions of being under constant surveillance and leading to increased psychological distress. Deuchar (2011) highlights that the loss of family privacy associated with EM is a clear disadvantage that is acknowledged to place stress on both the offender and their family. The UK experience shows that if EM is not fully explained and informed family consent is not secured, there is potential for family members to feel coerced into accepting monitored offenders or even withdraw consent (Hucklesby and Holdsworth, 2016). While both the UAE and UK do not require the consent of the offender this differs from many other countries in showing consistency with the assumption that monitored offenders should not enjoy the same constitutional protection as the rest of the population (Nellis et al., 2013). Nevertheless there is a danger with this policy that families are caught up in the same loss of rights within the EM process as the family home is essentially used as a prison for the offenders (Paterson, 2015).

#### **8.4.6 Stigma**

Offender and public perspectives identified a negative consequence of EM in the perceived stigma and shame that wearing a visible device of criminality could cause. This was felt to be particularly acute for younger offenders whose reactions to EM included initial shame and resentment at the application of the EM device. The perception of stigma is consistent with a range of research across different contexts which has also reported potential for stigmatisation as a result of EM application (Palermo, 2015; Jones, 2014; Deuchar, 2011; Bales et al., 2010), with some offenders

citing the shame, embarrassment and humiliation they felt as discriminatory (Di Tella and Schargrodsky, 2013). The findings align with labelling theory, the tenets of which would suggest that the use of a visible device stigmatises the offender and facilitates societal avoidance. Negative consequences from such stigma are identified as encouragement of the internalisation of a deviant self-image (Renzema, 2003). The findings also support the theory of Network Society in which the intersection of social movements, internet and technology, political and cultural elements (Wiseman, 2013) suggest that EM components could cause social stigma and loss of position in society.

#### **8.4.7 Cost-Effectiveness**

Key stakeholders held a strong perception that electronic monitoring represented a cost-effective option in comparison with the costs of incarceration and could reduce the costs of the criminal justice system overall by lowering prison numbers. In this respect there is some concordance with the literature which shows that many countries globally have introduced EM programmes in an effort to reduce criminal justice costs (Di Tella and Schargrodsky, 2013; Deuchar, 2011). Multiple studies have shown that when directly compared with the costs of incarceration there are substantial cost savings (Wiseman, 2013; Bulman, 2006) with findings indicating reductions of between 33-50% (Bulman, 2016). In spite of this, insider perspectives in this project confirmed the lack of evaluation regime and information system to enable cost-benefit analyses. The issue identified can significantly limit transparency on the financial implications of key processes and the impact of net widening discussed earlier. On this point the failure to establish a cost analysis framework severely limits feedback on how EM compares with alternatives either as standalone or when integrated with other measures.

#### **8.5 EM as a Punitive as well as Rehabilitative System in New Environment**

The findings emerging from this research expand understanding of the implementation of EM in a new context and addresses key lessons that can be drawn from the implementation of EM in the UAE. The research identifies several critical areas of practice which if managed can enable the diffusion and adoption of EM in a new environment. The analysis of the implementation factors reveals a complex

interaction between various facets of the process and the specific context that spans the entire lifecycle of the implementation.

Firstly, the environment in which EM is adopted for the first time is influenced by numerous drivers that shape the attitudes and understanding of EM as a punitive as well as rehabilitative system. There is a complex interaction between different facets of the implementation process which can have either a facilitating or constraining impact on the implementation of EM. This research demonstrates that the aim of the UAE implementation is to employ EM as an alternative to sentencing combined with rehabilitation support. Maximising the rehabilitative element in the implementation of EM is a primary objective. An integrative approach is pursued that incorporates social support components. However, as discussed earlier there is a risk that drivers can shape the focus and scope of EM implementation, for instance toward a technology-driven or cost-driven agenda which can lose appeal with a broader spectrum of stakeholders. In other words drivers can set the agenda and focus of the implementation of EM. This can in turn undermine the rehabilitative agenda by excluding a broader range of perspectives that have knowledge and expertise in this area. The discussion of the drivers of EM in the UAE show how the nature and scope of implementation and political and innovation drivers can potentially produce a standalone and fragmented implementation that could isolate key actors in the criminal justice system. Therefore, in new contexts the purpose and vision of such an approach needs to be clearly communicated to reflect the broader criminal justice interests that simultaneously prioritises EM as a rehabilitation mechanism alongside a focus on cost and prison reduction.

It can be seen therefore that one of the most overriding deductions from this research relates to awareness, understanding and knowledge of EM. There remains significant scope in the UAE implementation to increase the transfer of EM by fostering mechanisms and a culture that achieves a higher level of awareness and understanding of EM and its goals. An implementation context that focuses on stabilising and controlling early EM imposes a high opportunity cost in terms of learning from critical insights that depend on a diverse range of social connections between the organisations and individuals involved in the process. EM requires a highly interconnected system of actors or the criminal justice system may overall

become unresponsive to EM and fail to realise its potential. This emphasises the design of mechanisms that subject primary drivers to broader scrutiny and promotes wider inclusion of criminal justice actors early in the design and planning. Developing highly inclusive organisational processes with the CJS is paramount. This has the advantage of positioning the debate of EM beyond the objectives associated with the primary drivers and maximising awareness and understanding of EM. A comprehensive information and knowledge management strategy is implied and a pre-implementation phase designed to promote understanding and awareness of EM to the public and across a diverse spectrum of criminal justice actors in developing countries where the technology is new. Furthermore, given the complexity and uncertainty surrounding EM knowledge transfer in a new context critical dependence is placed on speed and efficiency of knowledge sharing. This emphasises employee investment of effort and resources to increase opportunity and speed of interaction.

The importance of knowledge sharing to innovation and change is well documented in the literature. In relation to EM implementation in new environments its importance is pivotal because EM cannot be viewed as a standalone bolt-on solution but instead as a socialisation process that requires an intensive and comprehensive cycle of information feedback. Specifically, this enables several critical processes that are vital to all aspects of the implementation of EM and can have major influence on design and implementation for the effective diffusion of EM in a new environment. Firstly, it generates awareness with the public to promote debate and feedback and foster greater public acceptance of EM based on objective knowledge and constructive dialogue. Secondly, the criminal justice system for EM requires a collaborative approach which needs to be based on dissemination of the credible evidence. This strategy must be capable of identifying and sharing objective knowledge about the validity of EM as a solution drawing on relevant international evidence and disseminated across a broad spectrum of criminal justice stakeholders. This is vital to address a lack of awareness and knowledge gaps in understanding and ensure that stakeholders possess information to evaluate the relative advantage of EM. The quality of evidence is a critical factor to enable different actors to assess the evidence on EM and the extent to which it has been effective in respect of different goals. This measure reflects a starting point to maximise awareness and understanding broadly within the criminal justice system that can stimulate thinking about existing practices

and assessment of EM either as an alternative or supporting mechanism. Furthermore, such measures should account for the knowledge sharing culture and overcome barriers that ensure a culture of continuous learning and knowledge sharing between all actors. Failure to implement effective mechanisms for information sharing and knowledge development across all stakeholders can undermine a process of continuous feedback and adjustment that is vital to learn and draw on collective and individual experiences.

In order to fully maximise the rehabilitative benefits of electronic monitoring there is an implication that it is implemented in an integrated, rather than standalone, manner that combines with other community measures. A more integrated implementation could release the potential of EM for achieving long-term behaviour change when combined with other measures. Rehabilitation principles and social learning theory can be drawn upon to inform the design of EM to integrate it within a holistic intervention that focuses also on providing social and treatment programmes, the promotion of positive social ties and shaping social behaviour using positive reinforcement. This will ensure that EM implementation is based in social-rehabilitative reasoning aligning with an active welfare state approach which places significant emphasis on social reintegration and activation goals.

The effectiveness of this strategy can impact significantly on strategic and operational decision-making that shapes the design and application of EM. New contexts require a balance between clearly specified guidelines and flexibility to tailor conditions to maximise rehabilitation. If EM is to be implemented as a rehabilitative mechanism as well as punitive system then it must satisfy a number of conditions. In terms of the specific design and application of EM a number of deductions can be advanced that further understanding of implementation of EM in a new environment. It was acknowledged that the design of implementation needs to achieve an optimal configuration that balances adaptability, standardisation and discretion. The level of standardisation and flexibility can have major repercussions in terms of the impacts on families and offenders and on the capacity of the system to provide adequate levels of supervision and support rehabilitation and re-integration goals. The findings attach significance to effective supervision and monitoring arrangements for reducing the negative impacts of EM on the individual and the family. Perspectives from criminal

justice personnel and offenders attached value to relational approaches. The UAE has embedded a degree of flexibility and latitude in how this modality is applied customised to the offender. Yet the implications of how this interplays with other sentencing conditions to provide a holistic alternative sentencing regime cannot be fully understood without feedback and incremental understanding of the impacts and benefits and the specific practices and skills required.

Additionally, the specific design and application to target groups is highly challenging. The optimal strategy is subject to the specific context and also subject to the necessary process of continuous improvement and adjustment. In terms of the application to target groups, the incremental approach focused on a narrow subset adopted by the UAE provides maximum opportunity to learn lessons and benefit from feedback. This is vital in new environments to maximise opportunity to understand the impacts on those groups and make adjustments. In the UK the broad application on a variety of offenders targeted made it difficult to monitor if behavioural goals were being achieved. In contrast, the implementation of EM in the UAE focusing on a specific modality and targeting of specific groups increases the likelihood of achieving correctional goals. Resources in the UAE are focused on a smaller category of offenders in comparison to the UK experience. However, the weaknesses identified in the knowledge sharing culture and the formation of the information system can constrain the capacity to effectively target resources. There remains pressing need for agencies to more effectively combine and analyse the data in order to enhance their management of information across the criminal justice system. New environments require objective and comprehensive data on the implementation. This is supported by evidence from the literature where the ability to offer recorded evidence of violations and enforce consequences was perceived positively by practitioners in England and Wales and gave credibility to EM and community measures as a whole (Hucklesby and Holdsworth, 2016; Lockhart-Mirams et al., 2015).

The institutional context is a further dimension that is capable of facilitating a culture that promotes collaboration and communication between agencies that is vital to ensure rehabilitative elements are effective. Such a structure has not been evidenced in the UK which reveals a limited collaboration and relevant communication between agencies and EM provider. In contrast to the UAE the UK evidence points to a



significantly distributed planning and management structure that has arisen largely in a non-deliberate manner. EM implementation has undergone several changes in management model which have added to the challenges in planning and in management structures. Under the UK EM has been essentially operated in parallel to the criminal justice system. A critical distinction between the UAE and UK is that while the UAE has integrated all stakeholders from the outset, in the UK there has been significantly lower level of integration with probation or other criminal justice services. This was evidenced at national, regional and local level. Collaboration creates a more comprehensive planning process and goes beyond the traditional and existing processes and culture. New contexts require close interaction between all agencies in the management of offenders. The most vital aspect is to ensure continuous evaluation of progress and effectiveness of EM across different metrics.

While there is integration of senior decision-makers across agencies, the centralised and highly planned approach in the UAE needs some consideration to allow for greater responsiveness and discretion. EM implementation is less responsive to a closed and centralised system of planning but instead depends on open, continuous and multiple feedback systems to capture inputs from across the CJS. Multiple feedback is vital, as it needs to provide opportunities for actors at all levels to contribute in multiple ways that have implications for formal and informal practices. It is imperative that this approach enables professionals from the lower levels and the frontline to share the expertise that can improve organisational practices to create enabling conditions for EM. This can be challenging because at lower levels subordinates assume that they will be the recipients of detailed change plans from managers without necessarily contributing to the process of decision-making. At a higher level, decision-making can be slow-paced due centrally controlled and top-down command and management control exhibited in the UAE context. More flexible and decentralised structure can ensure that EM can be modified, adapted and explored according to local contexts and needs.

There are tensions however in the decision choices associated with these issues. The overriding challenge in adopting a more inclusive and open strategic approach is the associated risks and costs and the tension between different decision options. Greater inclusivity and interconnectedness can result in significant implications for

decision-making processes. The criminal justice system has numerous institutions, agencies and actors and the process of increasing participation can reduce the speed of decision-making and management of the entire process. While expanding the scope of input might generate new insights, it may influence new expectations, and fears and considerations which may be difficult to ignore. For instance increasing the participation and input from judges, probationers or prosecution would significantly increase the level and intensity of dialogue around numerous issues. Furthermore, this can impose a major burden on resources and impede the overall responsiveness of the project. At the same time it may be difficult to acknowledge and account for everyone's contribution and perspective. Additionally, certain cultural contexts may require significant time and development to transform existing attitudes and beliefs bound to existing managerial authority and decision-making.

A further conclusion that can be drawn from this research is the risk of vastly underestimating the resources required to ensure successful implementation of EM. Inadequate resourcing has the potential to magnify the challenges and achievement of outcomes by starving the readiness of personnel to manage the process. Resources are required to ensure a satisfactory level of supervision and monitoring that incorporates rehabilitation and relational elements. EM in the UAE was perceived as a tool that provides an alternative to sentencing that is viewed as rehabilitative and re-integrative rather than punitive. However, there was concern that a lack of resources in terms of staffing and training can significantly diminish the rehabilitative capacity of EM. This can result from a number of factors including the lack of awareness, knowledge and understanding of the relative advantage of EM, highly rigid or discretionary design elements and the structuring and allocation of staff resources. Failure to secure resourcing to support rehabilitation processes could result in the perception of EM as a flawed tool that neither satisfies rehabilitative or punitive goals. This factor can be exacerbated by broader cultural dimensions related to rewards and performance monitoring that promote necessary employee behaviours in critical areas.

Moreover rather than applied as a broad tool, EM should be implemented based on a strong, discriminating rationale that focuses on the strengths of EM. Specific criteria and processes should be established to assess the appropriateness of individuals for

EM to avoid an application to all minor offenders in a blanket approach. This would further serve to ensure that resources are maximised while avoiding a waste of resources on offenders who would be more suitable for other community sentences or suspended sentences. Assessment of offender suitability would need to take account of rehabilitation, the level of face to face support needed, the level of tracking needed, geographic constraints, and a reward and sanction regime.

The challenges identified in the earlier discussion can be mitigated by clarification of the legal boundaries and scope. The legislative framework is critical to clarifying the targeting and policy and operational boundaries and standards. The fact that the legal framework in both the UAE and the UK is in the design phases indicates the need for guidelines to clarify the scope and boundaries of operation of EM. Concerns regarding the legal framework emphasise that it is one of the most fundamental dimensions to the transfer of EM in a new environment due to the impact of the legislative regime on perceived legitimacy. However, an insider perspective indicated early definition of specific conditions and measures. Thus the approach adopted in developing the legislation framework needs to be optimised to achieve a balance between providing guidance and direction while at the same time allowing measures to be developed incrementally to maximise the impact of EM.

Development of EM regulation should be circumspect and gradual to ensure that implementation is not locked into a particular approach. At the same time allowing greater scope for discretion could encourage the creation of significant inconsistency in how EM is applied. Mechanisms need to be established for gathering data and incrementally developing the legislative regime. A critical factor is ensuring a dedicated working panel that is highly inclusive as currently mainly senior decision-makers are driving the legislative regime.

## **8.6 Summary of Key Findings**

This chapter presented a discussion of the study findings in relation to the research questions examining the drivers of implementation in the UAE, the challenges in transferring EM to the UAE, different stakeholders' evaluations of the potential and actual consequences of implementing EM in the UAE and understanding of EM as a punitive as well as rehabilitative system in an environment new to this approach. The

chapter was structured into four key sections which addressed and analysed the research questions in relation to the literature, providing rich insights that supported understanding of the effectiveness of the pilot project in addressing the needs of stakeholders within the national, social and criminal justice context of the UAE.

## **9 CONCLUSION**

### **9.1 Introduction**

The focus of this research has been on the introduction of electronic monitoring (EM) for the first time in the UAE to further knowledge and understanding of EM as a rehabilitative as well as punitive system in an environment which is new to this approach. The role and implementation of EM remains a widely debated topic that has major implications for the development of the criminal justice system. Electronic monitoring (EM) has increasingly become a feature in the judicial systems of different regions and countries around the world. Its application has been characterised by unique national contexts and priorities, divergent modalities and phases within the criminal justice system and mixed success. While in some countries it has become a firmly established mechanism and embedded within criminal justice systems, in other countries it remains in its infancy and subject to piloting and experimentation. Decades after its inception a multitude of implementations has yet to provide consistent verification of the validity of the effectiveness of EM in relation to various social and criminal justice goals. Differences in its application and issues with availability and collection of credible data have been major factors that have made it difficult to further understanding in this area. That EM has not achieved its potential has contributed to ambiguity on its relative merits and its transformative role within the penal system. It has been recognised however that the application of EM is a highly challenging undertaking that is subject to a complex interplay between multiple factors. This has necessitated that research addresses the need for in-depth, rich knowledge and insight into practices in EM implementations.

In addition to furthering knowledge in this field this research was identified as a matter of strategic significance for the judiciary and the wider criminal justice system in the UAE. The motivation for this research was driven by strategic decision-makers and stakeholders' awareness of the complexity in implementing electronic monitoring and the need to evaluate the pilot project in Abu Dhabi. The role of the researcher who is responsible for all current and future types of police monitoring and related programmes in Abu Dhabi influences a case study and insider research methodology. The researcher's senior role and experience provided unique access and opportunity to explore and conduct an in-depth analysis of the design and implementation of EM.

This study adopted a single case study strategy with the purpose of revealing the detail of the experiences and interactions of participants involved in the implementation of the EM project in the UAE. The primary qualitative research data focused on a specific case analysis where insider accounts of EM implementation form a significant part of the qualitative data gathered. Fieldwork to gather insider accounts was conducted after the pilot implementation had commenced in 2017 and the first cohort of offenders had been processed and released at the end of 2018. This research was preceded by qualitative data generated from interviews with senior and leading actors in the criminal justice system. The third strand of research involved secondary data analysis to gather evidence on the UK model of EM implementation for comparative analysis.

This research represents a focus on the implementation process of EM in an environment that applied implementation science theory to provide a comprehensive analysis of the implementation factors. The analytical framework for this research was based on multiple constructs from the Consolidated Framework Implementation Research (CFIR) that provided a structured approach for examining the implementation of EM. The results in Chapters 6 and 7 are structured into five sections based on the CFIR framework that provide a comprehensive analysis of the implementation of EM in the UAE. Analysis of the implementation construct relating to the intervention characteristics, outer and inner contexts, characteristics of individuals and the implementation process revealed rich qualitative evidence. A discussion of the findings was presented in Chapter 8 specifically in relation to the four research questions. The major findings are summarised in the next section. The rest of this chapter discusses the contribution and implications of the research, acknowledges the limitations and suggests opportunities for future research.

## **9.2 Summary of Major Findings**

This section presents a summary of the major findings of this research addressing the central research question: *How effective has the early phase of implementation of the pilot electronic monitoring project been in addressing the needs of stakeholders within the national, social and criminal justice context of the UAE?*

To address this research question the findings are summarised in relation to four specific research questions:

### ***What are the drivers of implementation of EM in UAE?***

The findings showed that the primary driver for EM in the UAE originated from political policy to stem potential for prison overcrowding. At the political level the perceived relative advantage of the adoption of EM in terms of cost was highly influential in driving a top-down strategy by political leaders in the UAE to modernise the criminal justice system. This was supported as an innovation driver with government policy committing the UAE to leadership and excellence in all areas of its public service delivery. EM was viewed as a technological mechanism that had the potential to transform the criminal justice system. The UAE position as an early technology adopter of new technologies supported this drive. The specific context of the UAE's implementation points to a technocratic perspective with the risk that the implementation process, priorities, relations and decision-making are biased towards technology partners and fail to account for social and criminal justice perspectives. A further driver can be found in the political framing of EM as alternative to sentencing and commitment to employ this intervention alongside existing community service measures and in line with broader socially orientated goals that combines punishment and the reintegration and rehabilitation of offenders.

### ***What are the challenges of transferring EM technology and knowledge to the UAE?***

Multiple challenges were identified that impacted on the transfer of EM to the UAE. The management of stakeholder perceptions represents one of the most diverse and complex challenges in the transfer of EM knowledge and technology. The findings suggested a key challenge in establishing awareness, understanding and acceptance of the role of EM from all key stakeholders in the criminal justice system. While these are legitimate goals there is risk that the narrative for EM is not framed in a way that engages a broader spectrum of criminal justice stakeholders if they perceive an alternative vision. Although the planning committee for EM implementation was structured to represent different actors including prison and probation, concern was expressed that the degree and scope of engagement of all key stakeholders was limited. Additionally, while the strength of belief in the efficacy of EM supported the

acceptance of this technology, widespread acceptance and support could have been inhibited by the ambiguity of the credibility of the evidence.

A key issue revealed that knowledge sharing and dissemination was a constraining factor organisation wide. Senior-level actors had strong perceptions about the advantages of EM as an alternative to prison specifically in relation to minor offenders. However, there was weaker awareness, knowledge and understanding of the benefits and applications of EM across all levels of the organisation. Even where there is no direct opposition the failure to communicate broadly and gain broad support can impede the transfer of EM technology and knowledge.

Further challenges to EM technology transference related to the need for continuous learning in relation to EM and more effective and improved knowledge management and knowledge sharing mechanisms between and across agencies. There is further challenge to the UAE and Arab cultures which face significant barriers in knowledge sharing. The ability to mobilise knowledge in a timely manner and develop the technical capabilities of personnel was identified as a major challenge within the implementation context. The unique cultural context of the UAE therefore can involve factors that constrain the speed and diversity of knowledge sharing.

Major challenge was emphasised in the intensity of the change management context in the UAE public sector. This is currently characterised by centrally-driven, persistent, and radical change initiatives across all departments, agencies and sectors involving significant restructuring and transformation. The continuous change in personnel and processes, in addition to the integration of new technologies, are a response to a broad range of dynamic and complex security threats and significant social demographic change.

Integration of the information system into broader police and law enforcement was a key challenge and shown to be lacking particularly in relation to access of EM data to key parties. The extent to which EM was perceived as compatible with the existing systems can impact on the transfer of EM to the UAE. This area requires significant resources to develop staff capabilities and to design external applications to interface and access knowledge.



A major challenge was associated with degree of flexibility and discretion in terms of sentencing and in terms of conditions of supervision, support and breach. The level of flexibility and discretion emerged as a key challenge and concern from stakeholders during the implementation. While benefits and constraints were associated with both standardisation and discretion it was acknowledged that achieving an optimal configuration that balances adaptability, standardisation and discretion was highly problematic. The key challenge is in identifying which processes can be subject to discretion and which can be standardised.

Ensuring a sufficient level of resources is a key factor that can either facilitate or constrain the diffusion of EM in a new context. The allocation of sufficient resources is a common barrier and failure factor for many projects. Thus the extent to which resources are optimally allocated are vital in ensuring that essential mechanisms and knowledge are developed. The key challenge is in effectively forecasting the resource requirements and understanding the potential impacts of the implementation on existing systems and resources. The complexity surrounding the implementation of EM and the potential of under-estimating and failing to forecast resourcing could become a major impediment to the effective implementation of EM.

### ***How do different stakeholders evaluate the potential and actual consequences of implementing EM in UAE?***

The findings of this research show that stakeholders had positive and negative evaluations of the potential and actual consequences of EM in the UAE. Positive evaluations pointed to the potential for rehabilitation and cost reduction as key consequences. The findings further show considerable convergence of views on these impacts between the two sets of interviewees of practitioners and insiders.

On the one hand positive evaluations underlined the clear view that implementation of the EM pilot project reduced the re-offending of monitored individuals. This assessment was based on early data collected from the project which showed actual positive effects on re-offending rates for monitored persons in the UAE.

There was strong belief that aspects inherent to electronic monitoring had the potential to effect positive behavioural changes in offenders. These included the perception of surveillance, the reduction of negative peer pressure and anti-social ties

and settings, and the potential of EM to be combined with other more therapeutic components.

Stakeholders emphasised that the capacity for offenders to maintain relationships with families was a key component contributing to favourable outcomes. Offenders benefitted from the increased contact with family and its pro-social setting that positively influenced behaviour.

Key stakeholders held a strong perception that electronic monitoring represented a cost-effective option in comparison with the costs of incarceration and could reduce the costs of the criminal justice system by lowering prison numbers.

On the other hand, negative evaluations involved the real perceived risk that the implementation of EM could result in unintended consequences in terms of net-widening particularly for minor offenders and youth offenders, with EM applied to those who otherwise would not have received a sanction or received a less severe one.

Loss of family privacy and the intrusiveness of EM on private family space was perceived as a key negative consequence. The emphasis on family privacy embedded within UAE culture was viewed to play a role in family perceptions and increased the stress on some families.

Stakeholder perspectives identified a negative consequence of EM in the perceived stigma and shame within society that wearing the visible device could cause. Younger offenders were also viewed to attract a greater stigmatising impact that could impact on compliance.

***What can be deduced from this investigation that adds to our knowledge and understanding of EM as a punitive as well as rehabilitative system in an environment which is new to this approach?***

The findings emerging from this research expand understanding of the implementation of EM as a punitive as well as rehabilitative system in a new context. The research identifies several critical areas of practice which if managed can enable the diffusion and adoption of EM. In particular there is a complex interaction between

different facets of the implementation process which can have either facilitating or constraining impact on the implementation of EM.

Findings identified the risk that drivers can shape the focus and scope of EM implementation toward a technology-driven or cost-driven agenda which can lose appeal with a broader spectrum of stakeholders. Results on the drivers of EM in the UAE show how the nature and scope of implementation and political and innovation drivers can potentially produce a standalone and fragmented implementation that could possibly isolate key actors in the criminal justice system. Therefore, in new contexts the purpose and vision of such an approach needs to be clearly communicated to reflect the broader criminal justice interests that simultaneously prioritises EM as a rehabilitation mechanism alongside a focus on cost and prison reduction.

This emphasises the design of mechanisms that subject primary drivers to broader scrutiny and promotes wider inclusion of criminal justice actors early in the design and planning. This has the advantage of positioning the debate of EM beyond the objectives associated with the primary drivers and maximising awareness and understanding of EM.

Such an emphasis further enables several critical processes that are vital to all aspects of the implementation of EM and can have major influence on design and implementation for the effective diffusion of EM in a new environment. Firstly, it generates awareness with the public to promote debate and feedback and foster greater public acceptance of EM based on objective knowledge and constructive dialogue. Secondly, the criminal justice system for EM requires a collaborative approach which needs to be based on dissemination of the credible evidence. This strategy must be capable of identifying and sharing objective knowledge about the validity of EM as a solution drawing on relevant international evidence and disseminated across a broad spectrum of criminal justice stakeholders. Failure to implement effective mechanisms for information sharing and knowledge development across all stakeholders can undermine a process of continuous feedback and adjustment that is vital to learn and draw on collective and individual experiences.

Findings pointed to the conclusion that new contexts require a balance between clearly specified guidelines and flexibility to tailor conditions to maximise rehabilitation. If EM is to be implemented as a rehabilitative mechanism as well as punitive system then it must satisfy a number of conditions. Fully maximising the rehabilitative benefits of electronic monitoring implies that it is implemented in an integrated, rather than standalone, manner that combines with other community measures. In terms of the specific design and application of EM a number of deductions can be advanced that further understanding of implementation of EM in a new environment. It was acknowledged that the design of implementation needs to achieve an optimal configuration that balances adaptability, standardisation and discretion.

Inadequate resourcing was revealed to have the potential to magnify the challenges and achievement of outcomes by starving the readiness of personnel to manage the process. There was concern that a lack of resources in terms of staffing and training could significantly diminish the rehabilitative capacity of EM.

### **9.3 Research Contributions**

This research makes several theoretical, policy and methodological contributions discussed in the following sections that advance knowledge and understanding of the implementation of EM in new environments as both a rehabilitative and punitive system.

#### **9.3.1 Theoretical Contribution**

The research addressed the strong necessity to develop deeper theoretical insights into electronic monitoring and to extend knowledge on EM effectiveness and its impact within different contexts. This has furthered understanding of the implementation issues and the identification of key barriers and challenges for EM. The findings of the research contribute qualitative evidence on the implementation of the pilot project based on comprehensive assessment of implementation factors. Specifically, this research contributes further evidence of how drivers of EM can impact on the stakeholder engagement and acceptance of EM. This emphasises the significance of establishing and communicating a clear vision for EM to all stakeholders. The focus on the EM implementation process and the socialisation dimension of EM has enabled the development of greater understanding on the factors influencing EM success

under specific contexts. The complexity of the intervention in terms of its duration, scope and disruptiveness and other factors can have significant impacts on the transfer and diffusion of EM technology and knowledge. A major contribution is the identification of factors that inhibit and facilitate EM within an Arab criminal justice context. In addition, the findings point to numerous factors that impact on the diffusion of EM knowledge and technology in new environments. In doing so this study has contributed significant value for knowledge and practice by contributing insights into the factors that influence the success of EM between differing contexts that may vary on the basis of national context, types, duration, target population, modalities of application and socio-cultural elements. Investigation of the effectiveness of the implementation process has contributed insights into the social context and dynamics in terms of understanding the perspectives and involvement of stakeholders. The findings lend support to the body of knowledge of the consequences of EM on recidivism, family and offenders and in understanding of the conditions necessary for the implementation of EM in a new environment. This research has demonstrated EM is a black box that consists of an interplay of multiple factors that impact on the success of implementation of EM including the impact of drivers, communication and knowledge management, data management, design and application of EM, organisational and inter-organisational structures and relations and stakeholder engagement. The characteristics and interaction of these factors have the potential to significantly enhance or diminish the capacity of EM as a rehabilitative and punishment system.

### **9.3.2 Policy Contributions**

This study further makes a key contribution in terms of supporting policy making and practices in the field. The research can help to guide the design of EM interventions and the development of effective implementation strategies for larger scale initiatives. Several implications for practice have emerged from this research. Critical insights have been provided into the degree to which implementation strategies address the critical factors at different stages of the implementation process. A major implication for policy is achieving an optimal balance between flexibility and standardisation of EM implementation and to ensure effective feedback and evaluation to ensure continual adjustments and changes to maximise the impact of EM. The

challenges can be mitigated significantly by ensuring support of knowledge management practices and by promoting the assessment, communal discovery, sharing and implementation of knowledge. Given the potential for net-widening identified in this research this should provide greater impetus for policy makers to implement measures to ensure that EM is understood alongside alternatives for supporting measures. There is significance in ensuring that the targeting of offenders is applied in a highly personalised manner. The extent to which EM is integrated alongside other community sanctions and re-integration and rehabilitation measures would go some way to address the negative impacts of net widening. Secondly, critical emphasis is placed on identifying the appropriate mechanisms and practices to collaboration, communication and knowledge management including the collection and dissemination of EM data. Additionally, these findings emphasise to practitioners the importance of ensuring a supportive culture that rewards and incentivises the relational dimensions of monitoring and supervision and support continuous learning, feedback, development and knowledge sharing to address the unique organisational learning challenges that exist within Arab cultures.

### **9.3.3 Methodological Contribution**

The application of the Consolidated Framework for Implementation Research (CFIR) constructs can support the development of EM implementation outcomes. The use of a validated implementation science model can enhance the study of EM by progressing research towards a consistent and systematic standard of analysis which can be used by researchers and practitioners in this field. Thus this study represented an initial step in the application of a comprehensive implementation science research approach based on CFIR. This can enhance consistency and comparative analysis of implementation of EM. This key methodological contribution provides a structured examination that can be useful for expanding the programme, and also to inform the implementation of EM in other contexts of the UAE and the Middle East for countries with similar cultural contexts. Constructs can support the advancement of EM implementation outcomes. The use of a validated implementation science model has enhanced the study of EM by progressing research towards a consistent and systematic standard of analysis which can be used by researchers and practitioners in this field.

## 9.4 Limitations of this Study

The findings of this study provide valuable insights and address gaps in knowledge on the use of electronic monitoring as a means of alternative sanction in a criminal justice context in which this is an entirely new innovation. However a number of limitations are acknowledged in relation to the research methods used and study context. In line with the insider research methodology which focuses on exploring issues inherent within a single setting (Dwyer and Buckle, 2009) this study focuses on one unique national context of the UAE and a single Emirate, although the largest. Thus the research does not reflect a UAE-wide policy perspective or perspectives across the whole of the criminal justice system in the UAE. To some extent this constrains the ability to generalise the findings more broadly to EM implementations in other Emirates, federal-wide implementation, or further to other national settings. Nevertheless it is advanced that generalisability was not a core aim of this research which was rather to engage with issues and problems in a specific context.

A further limitation is linked to insider research and the prevailing use of qualitative data to generate the findings. Qualitative data from insider accounts necessitates substantial interpretation by the researcher and therefore risks the emergence of researcher bias which could affect the results. This is a significant risk particularly for insider research in which there are specific implications in terms of the duality of the researcher who also assumes a position within the case organisation (Dwyer and Buckler, 2009). Brannick and Coghlan (2007, p.70) suggest that insider researchers may face problems with role conflict in which they may be caught between “loyalty tugs” and “behavioural claims”. According to Drake (2010) the privileged access and closeness of the insider can potentially compromise the ability to critically engage with the data.

It is acknowledged that the researcher positionality may have implications for the different elements of the research process in the way participants are sampled and the data collected and analysed (Cassel et al., 2017) that could affect the validity and reliability of protocols and the overall findings. A range of measures were implemented to counter subjectivity and bias in data collection, data analysis and sampling. Furthermore it is acknowledged that the lead role of the researcher in the EM project design and implementation has implications in terms of power dynamics and

influences. This aspect was challenging and necessitated measures to address this issue. There was conscious effort given to the dual role of the researcher who as head of the electronic monitoring project also presented himself as an advocate or co-investigator to peers and colleagues with the aim of reducing any power differentials between him and research participants (Breen, 2007).

A further limitation relates to the cross-sectional design of the study. Although individual accounts were used over the course of the EM implementation process they remain reflective of individual perspectives at a particular point in time. This limits the ability of the study to analyse implementation outcomes over time, while the snapshot of perspectives provided are not guaranteed to be representative.

## **9.5 Recommendations for Future Research**

This study points to a range of opportunities for future research to enlarge understanding of electronic monitoring both in the UAE and wider contexts. Given the general paucity of research on the effectiveness of electronic monitoring technologies to change offender behaviour there is a need to investigate this aspect further and the everyday impacts of monitoring as part of offender supervision. A key dimension particularly in the UAE context is the ethical concerns related to stigma associated with wearing EM devices. Linked to this is the opportunity to explore the implications of EM in the community in the UAE and beyond. A key focus for further research could involve examination of the benefits on offender behaviour of an incentive-based EM programme drawing on principles of social learning theory to emphasise positive reinforcers over sanctions contingent on incremental improvements in offender behaviour. Moreover there is future opportunity to investigate the underlying factors and characteristics which contribute to offender behaviour to understand the most effective way to target interventions.

Further research could also usefully examine ethical issues in relation to the use of EM as punishment or surveillance and the ethical justification on grounds of punishment or crime prevention for exclusion from public spaces. A related avenue is the relationship between ethical perspectives and the technological development of EM.



The limitations of this study and gaps in the literature suggest further opportunities for future research. The qualitative nature of this study and a lack of consensus in the literature on the effectiveness of electronic monitoring on different dimensions points to a need for meaningful quantitative measures of impact that additionally are relevant to the UAE context. In particular measures assessing recidivism impacts and the costs and benefits of EM implementation could be a key focus of research. Future research could also explore how risk assessment processes can be enhanced, an area of weakness highlighted in the findings, both in terms of individual suitability for the application of EM and in respect of the quality of risk assessment processes overall.

Finally, the findings indicated that international evidence was a key factor in the adoption of EM. Given the ambiguity of the international evidence base on electronic monitoring future research could focus on building the body of evidence in regard to the impacts and benefits. A comprehensive meta-analysis of EM implementation addressing targeted applications would be of significant benefit to both academics and practitioners in the field.

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## Appendices

## Appendix 1 Prisoners and Detainees 2011-2017 Abu Dhabi Emirate

Year	Prisoned Offenders			Detainees			Total	Prisoner Percentage
	Emirates	Foreign Nationals	Total	Emirates	Foreign Nationals	Total		
<b>2011</b>	432	5,261	5,693	261	4,002	4,263	9,956	57.18%
<b>2012</b>	464	5,994	6,458	277	3,088	3,365	9,823	65.74%
<b>2013</b>	485	6,151	6,636	263	3,059	3,322	9,958	66.64%
<b>2014</b>	452	4816	5,268	257	3615	3,872	9,140	57.64%
<b>2015</b>	442	6,349	6,791	274	4,290	4,564	11,355	59.81%
<b>2016</b>	460	7,304	7,764	299	2,996	3,295	11,059	70.21%
<b>2017</b>	571	4,314	4,885	310	3,057	3,367	8,252	59.20%

## Appendix 2 Patterns of Minor Offences 2014-2017 Abu Dhabi Emirate

		Theft	Drugs	Traffic	Financial	Total
2014	Emirate Nationals	49	44	123	93	309
	Foreign Nationals	598	119	368	410	1495
	Total	647	163	491	503	1804
2015	Emirate Nationals	66	56	116	78	316
	Foreign Nationals	620	114	361	339	1434
	Total	686	170	477	417	1750
2016	Emirate Nationals	48	87	118	71	324
	Foreign Nationals	435	133	274	270	1112
	Total	483	220	392	341	1436
2017	Emirate Nationals	52	186	114	88	440
	Foreign Nationals	498	138	282	401	1319
	Total	550	324	396	489	1759

### **Appendix 3 – UAE Practitioner Interview Schedule**

1. If we already know that many countries implement EM on offenders as an alternative to short-term detention, what do you know about EM as alternative to short-term detention? How could the implementation of that provide us with benefits in the UAE?
2. Would the implementation of EM in UAE cause cultural conflicts with the local society? Please explain
3. If electronic monitoring is implemented in many countries as an alternative to remand, or to original sentence and or to early release; what do you think the best type of application for UAE? Please explain
4. Based on the answer to the previous question, what type of crimes that fit for EM and how long should be the monitoring periods if EM is adopted in UAE?
5. Regarding UAE demography and the low percentage of locals against expatriates, in case the EM adopted in the country, should it be implemented on locals only or also on residents? And why?
6. For if one important objective of EM is deterrence and reduction of recidivism, to what extent do you support this assumption or you contrarily see the prison as more effective in achieving that? And why?
7. Do you expect the families who would have to host monitored persons would accept or refuse this application, with regard to the UAE community's culture? Why?
8. Risk assessment of the offender before being put under monitoring is one major factor in this sentence for the protection of the community from any potential harm occurs as a result of having an electronically monitored person, to what extent do you support or disagree with this step if EM is applied in UAE?
9. What do you think the legal and social needs to be considered by the decision maker who wishes to implement EM in UAE?

10. In numerous countries around the world, Probation Service from the ministry of justice manages the electronically monitored offenders, whereas as it is likely to be done by police in the case of UAE with regard to the police's role in prison management. Which supervisory entity do you think is suitable to manage them in case the EM applied in UAE? Why?
11. What are challenges of UAE criminal justice system in terms of increased prison population from minor crime offenders, increased costs of imprisonment and increased recidivism? How could EM provide solutions to confront these?
12. Some countries depend on private companies to provide better services in EM application, for if such companies, if used in UAE, would hire multinational staffs to deal with the monitored persons, to what extent do you expect those monitored offenders would cooperate with this method with regard to the local culture? And Why?
13. How important, do you think, the existence of rehabilitation programs accompanying the electronic tag, in achieving an offender deterrence and behaviour improvement? Why?
14. To what extent, do you think, EM would assist your organization in achieving its strategic objectives?
15. **Ministry of Justice's** objective is to develop legislations and legal services to the level of the international best practices?
16. **Abu Dhabi Judicial Department's** priority of reinforcing alternative solutions for litigations and achieving excellence in delivery of judicial services?
17. **Ministry of Interior's** objective of reinforcing safety and security?
18. If you were given the chance to be the decision maker would you apply EM as it is your first option to tackle prison issues? What would you do also?



## Appendix 4 – Insider Interview Schedule

Intervention Characteristics		
<b>Intervention Source</b> - Perception of key stakeholders		
Who developed the intervention?		
Why is the intervention being implemented in your setting?		
<b>Evidence Strength and Quality</b> - Stakeholders' perceptions of the quality and validity of evidence supporting the belief that the intervention will have desired outcomes		
What kind of information or evidence are you aware of that shows whether or not the intervention will work in your setting?		
What do influential stakeholders think of the intervention?		
<b>Relative Advantage</b> - Stakeholders' perception of the advantage of implementing the intervention versus an alternative solution		
How does the intervention compare to other similar existing or alternative programs in your setting?		
<b>Design Quality</b> - Perceived excellence in how the intervention is bundled, presented, and assembled		
What is your perception of the quality elements of the EM system?		
Outer Setting		
<b>Offender Needs and Resources</b> - The extent to which offenders needs, barriers and facilitators are accurately known and prioritized by the organization		
To what extent is staff aware of the needs and preferences of the individuals being served by your organization?		
How well do you think the intervention will meet the needs of the individuals served by your organization?		
To what extent were the needs and preferences of the individuals served by your organization considered when deciding to implement the intervention?		
What barriers will the individuals served by your organization face to participating in the intervention?		
<b>Legislative Framework</b>		
<b>Inter-organisational</b> - The degree to which an organization is networked with other external organizations.		

To what extent do you network with colleagues or people in similar professions/positions outside your setting?		
What kind of information exchange do you have with others outside your setting related to the intervention?		
<b>External Policies &amp; Incentives</b> - A broad construct that includes external strategies to spread interventions including policy and regulations		
What kind of local, state, or national performance measures, policies, regulations, or guidelines influenced the decision to implement the intervention?		
<b>Inner Setting</b>		
<b>Culture</b> - Norms, values, and basic assumptions of a given organization		
How do you think your organization's culture (general beliefs, values, assumptions that people embrace) will affect the implementation of the intervention?		
<b>Structural Characteristics</b>		
What kinds of infrastructure changes will be needed to accommodate the intervention?		
<b>Implementation Climate</b> - The absorptive capacity for change, shared receptivity of involved individuals to an intervention		
<b>Tension for Change</b>		
Is there a strong need for this intervention?		
How essential is this intervention to meet the needs of the individuals served by your organization or other organizational goals and objectives?		
<b>Compatibility</b>		
The degree of tangible fit between meaning and values attached to the intervention by involved individuals, how those align with individuals' own norms, values, and perceived risks and needs, and how the intervention fits with existing workflows and systems.		
<b>Relative Priority</b>		
Individuals' shared perception of the importance of the implementation within the organization.		
<b>Goals and Feedback</b>		
How does implementation of the intervention align with other organizational goals		

<b>Characteristics of Individuals</b>		
Individuals' attitudes toward and value placed on the intervention		
Do you think the intervention will be effective in your setting?		
Self-efficacy		
How confident are you that you will be able to successfully implement the intervention?		
<b>Process</b>		
Planning		
Can you describe the plan for implementing the intervention?		
Engaging		
What are influential individuals saying about the intervention?		
Who will lead implementation of the intervention?		
Who else is involved with leading the implementation?		
Will someone (or a team) outside your organization be helping you with implementing the intervention?		
Who are the key individuals to get on board with the intervention?		
Executing		
Has the intervention been implemented according to the implementation plan?		
Evaluation		
What kind of information do you plan to collect as you implement the intervention?		
To what extent has your organization/unit set goals for implementing the intervention?		

## Appendix 5 - UK Legislation Relevant to EM

Area	Legislation	Provision	Country
Police Bail	The Bail Act 1976	The Bail Act 1976 used to make provision in relation to bail in or in connection with criminal proceedings in England and Wales.  S7 of the Bail Act 1976 stipulates that if conditions of bail are breached defendants can be arrested.	England and Wales  Scotland
Sentencing	Criminal Justice Act 1991	Through the Criminal Justice Act 1991 electronic monitoring curfews were introduced with curfews restricted to a six-month maximum and to between two and twelve hours per day. However these were not immediately brought into force.	England and Wales
Police Bail	Criminal Justice and Public Order Act, 1994	Criminal Justice and Public Order Act 1994 amended to allow EM to be used as a condition of police bail.	England and Wales
Offenders	The Crime (Sentences) Act 1997	The Crime (Sentences) Act 1997 extended EM to a wider group of offenders including petty offenders and offenders aged 10 to 15 years old and amended the 1991 Act so that the offender's consent was not required for electronic monitoring to be applied.	England and Wales

Home Detention Curfew (HDC)	Crime and Disorder Act (CDA) 1998	<p>Home Detention Curfews (HDCs) were introduced in England and Wales in January 1999 by the Crime and Disorder Act (CDA) 1998 and remain in force under the Criminal Justice Acts (CJA) of 1991 (as inserted by 2.34A) and under section 246 of the Criminal Justice Acts (CJA) of 2003.</p> <p>Home Detention Curfews (HDC) are extended to up to 12 hours per day, and the maximum period of EM for autonomous sentences in England and Wales and Scotland is 12 months.</p> <p>In England and Wales, HDC require no state agencies to be involved once imposed until or unless orders are breached (breach decisions are now taken by a central enforcement team at National Offender Management Service (NOMS).</p>	England and Wales
Police Bail	Section 131 of the Criminal Justice and Police Act 2001	Introduced new powers available to the courts for the electronic monitoring of juvenile offenders on bail or remand to local authority accommodation (LAA).	England and Wales
Probation	Criminal Justice Act, 2003	Criminal Justice (England and Wales) Act 2003 introduced provisions for electronically monitored curfews as a condition of a probation order.	England and Wales
Monitoring Compliance	Legal Aid, Sentencing and Punishment of Offenders (LASPO) Act 2012	<p>In England and Wales a 2012 pilot funded and operated by the Mayor of London's Office for Policing and Crime (MOPAC) allowed for the introduction of the Alcohol Abstinence Monitoring Requirement (AAMR).</p> <p>New sentencing power was subsequently introduced as part of the Legal Aid, Sentencing and Punishment of Offenders (LASPO) Act 2012 which allowed courts to impose a requirement that an offender abstain from alcohol for a fixed time period of up to 120 days and be regularly tested, via a transdermal alcohol monitoring device in the form of a 'tag'</p>	England and Wales

		fitted around the ankle, using SCRAM technology as part of a Community or Suspended Sentence Order.	
Restriction of Liberty Orders (RLOs)	Criminal Procedure (Scotland) Act 1995	<p>The Criminal Procedure (Scotland) Act 1995 introduced Restriction of Liberty Orders which were implemented nationally in April 2002.</p> <p>Scotland's Restriction of Liberty Orders (RLOs) can be imposed as a standalone measure (i.e. EM curfew and/or exclusion zones) or in conjunction with other forms of community orders, which may involve Criminal Justice social workers (probation officers) as 'supervising officers'.</p>	Scotland
Offenders	Criminal Justice and Police Act 2001	Through Criminal Justice and Police Act 2001 EM is made available for young people.	Scotland
Monitoring Compliance	Criminal Justice (Scotland) Act 2003	<p>Criminal Justice (Scotland) Act 2003 establishes provisions for electronically monitored curfews as a condition of a probation order (S. 46), or drug treatment and testing order (DTTO) (S.47), and as a condition of parole (S.40).</p> <p>It was further specified that the RLO should be viewed as an alternative to custody (S. 50) by stipulating that orders can be imposed for offences punishable by imprisonment.</p>	Scotland
Sentencing			
Home Detention Curfew	Management of Offenders etc. (Scotland) Act 2005	<p>Home Detention Curfews (HDCs) were introduced in Scotland in 2006 for prisoners serving sentences of less than four years.</p> <p>Prisoners deemed suitable could be released up to four and a half months before release date to serve the remainder of sentence at home under an electronically monitored curfew (for between 9 and 12 hours per day).</p> <p>In 2008, the duration of HDC was extended to 6 months and the scheme expanded to prisoners serving sentences of four years or more and</p>	Scotland

		<p>recommended for release by the Parole Board at the half-way stage of their sentence.</p> <p>Breaches of HDC by young prisoners imply recall to prison, and permanent exclusion from HDC.</p>	
Sentencing	Criminal Justice and Licensing Act 2010	The 2010 Act provides significant flexibility for shaping EM general or specific guidelines and which can address the principles and purposes of sentencing, sentencing levels, sentences for particular types of offence, and types of offender.	Scotland
Community Payback Order (CPO)	Criminal Justice and Licensing Act 2010	<p>This Act replaced existing community sentences (probation, community service and supervised attendance orders) with the new Community Payback Order. Restriction of Liberty Orders (RLOs) and Drug Treatment and Testing Orders (DTTOs) were not included within the new order.</p> <p>Section 227ZE is a provision for a restricted movement requirement that courts can impose in the event of a CPO breach.</p>	Scotland
Children's Hearings System Under 16 years old	<p>Children's Hearing Act 2011</p> <p>Antisocial Behaviour etc. (Scotland) Act 2004</p> <p>Intensive Support and Monitoring (Scotland) Regulations 2005</p> <p>Intensive Support and Monitoring Service (ISMS) orders</p>	<p>With young people under 18, EM is currently used differently as part of Intensive Support and Monitoring through the Children's Hearing System and Movement Restriction Conditions (MRCs).</p> <p>Antisocial Behaviour etc. (Scotland) Act 2004 includes Drug Treatment and Testing Order (DTTO) and Movement Restriction Conditions (MRCs) imposed on children and young people.</p> <p>Movement Restriction Conditions (MRCs) were introduced through Section 135 of the Antisocial Behaviour etc. (Scotland) Act 2004 and Section 70 of the Intensive Support and Monitoring (Scotland) Regulations 2005, piloted in 2005 and rolled out nationally in 2008.</p>	Scotland

## Appendix 6 - UAE Legislation Relevant to EM

Area	Legislation	Provision
Post-release	<b>Federal decree –law No 7/ 2016</b>	Article 79 Anyone convicted of serious crimes or life imprisonment is subject to supervision for an equal term not exceeding five years following release
Post-release	<b>Federal decree –law No 7/ 2016</b>	Article 110 Provides for restrictions on post-release persons including a ban on visiting specified public places, a ban on residence in particular locations, police supervision, mandatory community service and deportation
Supervision Conditions	<b>Federal decree –law No 7/ 2016</b>	Article 115 Restrictions can be placed by courts on supervised persons including ability to visit specified places and a nighttime curfew
Supervision Conditions	<b>Federal decree –law No 7/ 2016</b>	Article 130 Violation of supervision conditions will be punished with imprisonment or a fine
Supervision Conditions	<b>Federal decree –law No 7/ 2016</b>	Article 120 Makes provision for the undertaking of community service by post-release offenders
Supervision Conditions	<b>Ministerial Resolution No 147 / 2013</b>	Article 4 An electronic tag can be placed on a supervised person to ensure compliance with supervision conditions
Supervision Conditions	<b>Ministerial Resolution No 147 / 2013</b>	Article 3 The supervised person can attend training courses and employment
Supervision Conditions	<b>Circular No 3 / 2014</b>	Circular No 3 / 2014 from the Judicial Department requests that judges clearly specify the period of supervision and any mitigation of restrictions, or relief of the penalty, and to include supervision penalties in optional cases even in the judgment of suspended sentence cases.
Administration	<b>Ministerial Resolution No 147 / 2013</b>	Article 6 Mandates electronic record creation of supervised person provides powers to obtain and store a wide range of electronic data on the offender under supervision including criminal and medical records, a



		copy of the judgement issued against the person, restrictions or referral to prosecution in case of non-compliance with supervision conditions with all necessary data, and social assessments.
Administration	<b>Letter No 3 / 2015 UAE Attorney General's Office</b>	The Third makes provision for the support of police administration of police supervision orders on a case by case basis stipulating that the public prosecution service shall support police supervision officers and consider and decide requests in relation to the application of police supervision orders and any obstacles faced, especially those related to supervision using electronic means.
Administration	<b>Letter No 3 / 2015 UAE Attorney General's Office</b>	The Fourth Paragraph of Letter No 3 / 2015 refers to police supervision over offenders in the context of a police supervision department which oversees application and administration of police supervision orders

## Appendix 7 CIFR Rating System

A rating of -1 connotes that the construct has a negative influence in the organisation and an impeding influence on work processes and/or implementation initiatives. Participants provide general statements alluding to the manifestation of negative influence within this construct however specific examples are not given.

- The construct is briefly mentioned however no actual concrete descriptions of how the construct is manifested are provided
- Different aspects of the construct can have mixed influences but overall there is a general negative effect
- Sufficient information is available which allows for an inference to be made on a generally negative influence
- The absence of the construct leads to a weakly negative evaluation

A rating of 0 signifies that the construct has a neutral influence. This is assigned if:

- There is no evidence of positive or negative influence
- There is contradiction between credible and reliable participants
- A neutral effect can be identified or it is mentioned only descriptively
- Positive and negative influences at different organisational levels balance each other out; and/or different aspects of the construct have positive or negative influences so that the overall effect is neutral

A rating of +1 denotes that the construct is a positive organisational influence with a facilitating influence on work processes and/or implementation initiatives. Participants provide general statements alluding to the manifestation of positive influence within this construct however specific examples are not given.

- The construct is briefly mentioned however no actual concrete descriptions of how the construct is manifested are provided
- Different aspects of the construct can have mixed influences but overall there is a general positive effect

- Sufficient information is available which allows for an inference to be made on a generally positive influence

A rating of +2 indicates that the construct is a positive organisational influence with a facilitating influence on work processes and/or implementation initiatives. Multiple examples are provided in the data of how aspects of the construct are positively manifested (Damschroder and Lowery, 2013).