



National Audit Office

Report

by the Comptroller
and Auditor General

Ministry of Justice

The new generation electronic monitoring programme

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National Audit Office

Ministry of Justice

The new generation electronic monitoring programme

Report by the Comptroller and Auditor General

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Commons in accordance with Section 9 of the Act

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Comptroller and Auditor General
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05 July 2017

This report examines the key reasons why the programme to deliver a new generation electronic monitoring service has not been delivered so far, and whether the Ministry of Justice is addressing the remaining risks in its current approach.

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Key facts

5 years

total delay to deployment of new electronic monitoring tags (originally planned from November 2013 and now expected to start at the end of 2018)

£130m

lifetime estimated cost of the programme to obtain the new electronic monitoring service by 2024-25, including £60 million sunk costs incurred to 31 March 2017

**160,000–
220,000**

number of subjects originally expected to be tagged in 2016-17

The actual number is expected to be less than 65,000 in 2016-17

£470 million

expected costs of running the monitoring service, including service payments and contract management, from 2017-18 to 2024-25

2

number of failed procurements for the development of new tags

£4.4 million

net settlement paid by the Ministry of Justice to the former tag supplier, Steatite

**9% (£9 million) to
30% (£30 million)**

savings expected by the Ministry in annual monitoring costs through a new service

10.6%

savings claimed by the Ministry through renegotiating the price of its existing monitoring contract with Capita

5

number of senior responsible owners for the programme since it began in 2011

Summary

1 Since 1999 the government has used contracted-out electronic monitoring ('tagging') services for sentencing and supervising offenders in England and Wales. Electronic monitoring allows the police, courts or probation services to monitor an offender's location and compliance with home curfews. Where appropriate it can provide a cheaper alternative to prison, support the offender's rehabilitation in the community and reduce reoffending.

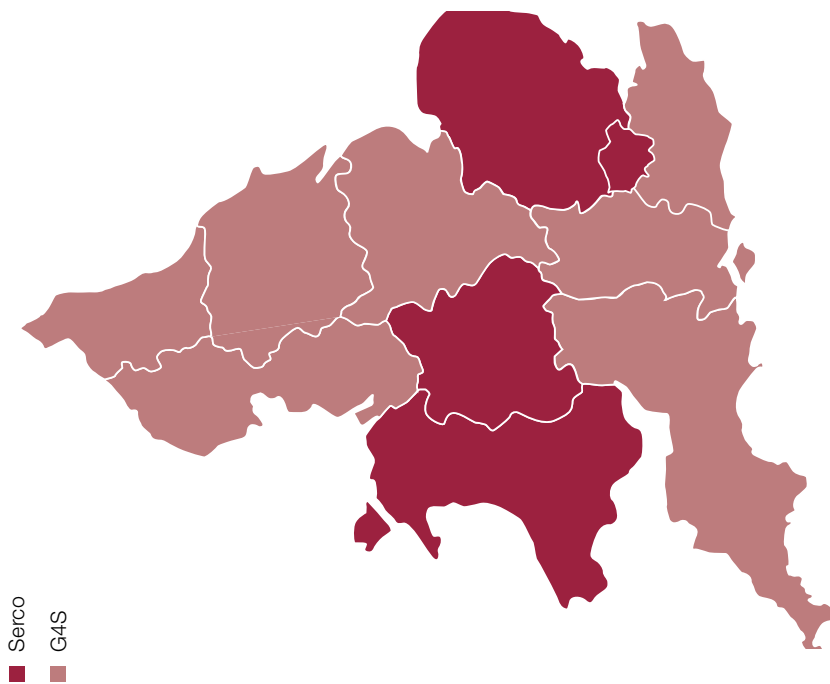
2 Currently there are two types of tags, both usually fitted to an individual's ankle: tags for curfew supervision using only radio frequency (RF) transmission, and tags for monitoring location and movement which combine RF with global positioning system (GPS) technology. The vast majority of cases, around 12,300–14,000 offenders at any one time in 2016-17, are under curfew tagging orders. Curfew tags transmit information on an individual's location only in relation to their home. The information is reviewed by staff at a monitoring centre to check that the individual is complying with their home curfew order. So far, location monitoring tags (with GPS capability) have been used on very few cases, usually fewer than 20 at any time. These allow an individual's location and movements to be monitored wherever they go.

3 In 2011 the Ministry of Justice (the Ministry), identified an opportunity to transform and expand its electronic monitoring service. It sought to reduce the cost of tagging, and also provide wider operational benefits and more sentencing options for the courts. It launched a programme to develop a new world-leading ankle tag, combining both RF and GPS functionality to be used on all tagged offenders. The Ministry also sought to procure the service under a new 'tower' delivery model. This split the end-to-end electronic monitoring service, previously delivered by G4S and Serco, into direct contracts with four different suppliers. Each would supply different elements of the service, with their work pulled together by a contracted integrator (**Figure 1** overleaf).

Figure 1
The change from geographical to functional contracts

Original service: geographical split where G4S and Serco delivered end-to-end electronic monitoring services

Electronic monitoring areas covered by G4S and Serco



New service: four national contracts, each delivering a specific part of the electronic monitoring service

Part of the electronic monitoring service	Supplier
Field service to fit/remove tags, operate the monitoring centre and report incidents/breaches to offender supervisors or police.	Capita
Systems and services integrator to manage and integrate the work of all the suppliers.	To 2016: Capita From 2016: Ministry of Justice
Develop and supply the tags for deployment by Capita field services.	To 2014: Buddi To 2016: Steatite From 2017: G4S
Process and verify data transmitted from the tag and present as information to Capita field services.	Airbus
Mobile network enabling the tags to communicate data to Airbus.	Telefonica

Note

1 Due to the failed development of new tags and the Ministry of Justice only recently appointing a new preferred bidder, the service currently still relies on legacy tags from the original service supplied by G4S Monitoring Technologies.

Source: National Audit Office

4 The Ministry's original aim was to replace the G4S and Serco contracts by April 2013, when they expired. It expected the new tags to be deployed from November 2013. But the programme has faced significant delays, and there have been two failed attempts to procure bespoke tags. As this report was being finalised in late June 2017, the Ministry informed us that it selected G4S as preferred bidder for supplying the new tags, which are already available in the market. The Ministry now expects to deploy tags from the end of 2018, five years later than the original date.

Scope of the report

5 This report examines why the programme has been delayed, and whether the Ministry has learned from its experiences in its current approach.

- Part One describes the use of electronic monitoring in England and Wales and summarises the programme's progress.
- Part Two examines how the ambition of the Ministry's requirements for the new electronic monitoring service, and its limited understanding of the implications, have affected the programme.
- Part Three examines how the Ministry managed the implications of adopting the tower model approach for the electronic monitoring service.

We do not focus on the management of the existing service, which we reported on previously.¹

Key findings

On the Ministry's aims and requirements

6 **The Ministry did not do enough to establish the case for location monitoring tagging using GPS.** There is still limited evidence on the effectiveness of electronic monitoring in the UK. Most experience of location monitoring is based on small numbers of volunteers rather than mainstream offenders. The Ministry assumed there would be high demand for location monitoring from those who sentence offenders but did not run a pilot to test this before launching the programme. It also did not understand the potential financial costs and benefits of expanding location monitoring. There was a lack of external scrutiny early on that would have provided opportunities to further challenge the justification for the programme. The Ministry is only now running location monitoring pilots to test how the use of a GPS tag might affect the behaviour of offenders and the take-up of services by decision-makers such as those sentencing them (paragraphs 2.3 and 2.12 to 2.20).

¹ Comptroller and Auditor General, *The Electronic Monitoring of Adult Offenders*, Session 2005-06, HC 800, National Audit Office, February 2006; Comptroller and Auditor General, *The Ministry of Justice's electronic monitoring contracts*, Session 2013-14, HC 737, National Audit Office, November 2013.

7 The Ministry's bespoke requirements for world-leading tags proved too ambitious. Over time, the Ministry evolved some 900 prescriptive requirements for the new combined RF and GPS tags. They would have to store and send much more location data than existing tags in the market, meet higher data security standards, and prove reliable and robust. They also had to be compact enough to wear comfortably, and not require continual recharging. The Ministry lost confidence in, and parted company with, two successive small and medium-sized enterprises (SMEs) selected to supply the tags (paragraphs 2.4, 2.5, 3.5 and 3.32).

8 The planned timescale for the programme was unachievable. The Ministry initially allowed 15 months after signing the contract for the tags in August 2012 to develop, test, produce, integrate and deploy the new tags. This timetable was further compressed for several reasons. Contracts were not signed until July 2014, because the Ministry discovered that G4S and Serco had been overbilling. This was followed by the two failed procurements for the tags. The new tags are now expected to be deployed from the end of 2018 (paragraphs 1.8, 1.9 and 3.18).

9 Five years after initiation, the programme has not delivered the intended benefits. The Ministry had expected the new programme to reduce annual monitoring costs by 9% (£9 million) to 30% (£30 million). The Ministry has so far (up to March 2017) spent around £60 million and still relies on the legacy service. However, it has claimed price reductions of 10.6% by negotiating with Capita, the new monitoring supplier, which has streamlined the existing operation over time. The Ministry also envisaged that the courts would apply the new tag for more offences and for more offenders, often as an alternative to costlier prison sentences. In its original 2011 business case it projected that between 160,000 and 220,000 offenders would be tagged during 2016-17, although the outturn for the year is expected to be less than 65,000. Besides expanding location monitoring services using GPS, the Ministry expected more use of existing curfew services. Use of this service has, however, declined. The extent to which the projected number of tagged offenders would have otherwise gone to prison, or been deterred from reoffending, is unclear (paragraphs 1.5, 2.17 and 2.21).

On the Ministry's approach

10 The Ministry adopted a new high-risk and unfamiliar delivery model to the procurement. The Ministry divided the service into four contracts to reduce its reliance on a single supplier, allow it to swap out suppliers over time and encourage innovation by attracting smaller companies. One of the suppliers would act as an integrator, pulling together the suppliers' work to deliver an end-to-end electronic monitoring service. The Ministry's original 2011 business case recognised that this approach posed the highest risk, due to the challenge of integrating the service. However, at the time it was promoted by the centre of government. In February 2015, the Government Digital Service stated that this tower model was "not condoned and not in line with government policy". This is because of the difficulty in transferring responsibility to a contracted integrator and the risk of buying incompatible parts of systems and services that are then hard to integrate (paragraphs 1.7, 3.2, 3.3 and 3.25).

11 The Ministry failed to anticipate and resolve the implications of its delivery model:

- The Ministry and its first preferred bidder for the tags, Buddi, disagreed about how to handle location data and protect intellectual property. These disagreements led to loss of trust, and after several months the Ministry terminated Buddi's involvement in March 2014, replacing it with another supplier (Steatite) (paragraphs 3.5 to 3.8).
- The Ministry made one supplier, Capita, responsible for integrating the work of all suppliers. But the parties had differing expectations of what this role entailed. The Ministry expected Capita to act like a traditional prime contractor, but Capita had no contractual responsibility for the work and performance of the other suppliers. The parties disputed each others' performance, but settled their differences in June 2016. As part of this agreement, the Ministry decided to bring the integrator role in-house. It is still building the capability needed for ongoing service integration (paragraphs 3.11 to 3.15).
- The contracts did not clearly specify which party would provide the electronic link to transfer data between the legacy tags and a new central data centre. It only became clear after the contracts were signed that no party had made plans to build the link. Agreeing on who was responsible for doing the work and meeting the cost proved a lengthy distraction, until the parties agreed not to proceed with this electronic link (paragraph 3.9).
- Capita designed the data centre to a security level that did not support the electronic link and to a size that did not fit the requirements of Airbus, the supplier that would use it. Capita had worked to the Ministry's original specifications, but the parties did not identify their divergent expectations and reconcile them in good time. The issues became a source of dispute with the Ministry and between the suppliers (paragraph 3.9).

12 The Ministry did not sufficiently adapt its approach to help smaller suppliers manage the pressures of a large and challenging programme. Its attempts to ensure the integration of the service placed proportionately greater burdens on the management teams of smaller companies, who struggled to cope given their much more limited staffing and financial resources. The Ministry's payment arrangements also exacerbated cash flow problems that smaller companies were less able to sustain (paragraphs 3.37 to 3.39).

13 The Ministry's governance arrangements were weak, resulting in slow decision-making and allowing internal disagreements to persist. The Ministry did not consistently fulfil its own obligations on the programme. Until 2016, internal and external reviews noted a lack of accountability to the senior responsible owner (SRO) and unhelpful disunity between operational, technical, commercial and programme staff. The Ministry's decision-making on some critical matters was excessively slow, creating delays of several months on the programme, and preventing suppliers from progressing their work (paragraphs 3.34 and 3.35).

14 The Ministry lacked the capacity and capability to manage the difficulties affecting the programme in the context of competing priorities and wider challenges.

Electronic monitoring, although itself an important programme, had lower priority than some of the Ministry of Justice's other programmes, particularly the concurrent major reforms to probation. The Ministry's limited specialist resources and management attention were further stretched by the discovery and rectification of overbilling in the legacy monitoring service, and the management of an aborted GPS pilot in 2014 (paragraphs 3.25 to 3.27, 3.29 and 3.33).

On the Ministry's response

15 Following internal and external reviews of the programme in 2015 and 2016, the Ministry has taken action to address many of the issues, although significant risks remain. The Ministry decided to persevere with the tower approach, given the time and cost of starting afresh (paragraph 1.10), but has made significant changes to set a more achievable requirement and strengthen programme management.

Setting a more achievable requirement

- The Ministry is running pilots to test how the use of location monitoring using GPS affects the behaviour of offenders and decision-makers such as sentencers, and how best to implement location monitoring in practice. However, the number of tags used in the pilots may not be high enough to produce robust quantitative evidence on the impact on reoffending or likely demand for monitoring. By the beginning of April 2017, 97 people had been tagged – far fewer than anticipated. This is against a backdrop of declining curfew tagging (paragraphs 2.16, 2.20 and 2.21).
- The Ministry has changed its approach to buying tags that are already available in the market, rather than requiring suppliers to develop a bespoke tag. It also no longer intends to use GPS-enabled tags on all tagged offenders, procuring instead separate curfew and location monitoring tags. This is a pragmatic approach but represents a marked departure from the Ministry's original aims. It also reduced its number of requirements for the tags. The Ministry considers that a tag that is already available in the market will meet all its major requirements (paragraphs 1.10, 2.8 and 2.10).
- The Ministry is setting a new baseline for its programme plan and timeline. It expects to start deploying the new tags from the end of 2018 and to complete the transition six months later (paragraph 3.22).

Strengthening programme management and capability

- The programme now has stable and cohesive leadership, and the Ministry is refreshing the governance structure. It remains to be seen how far this will lead to more timely and effective decision-making (paragraph 3.36).
- The Ministry has resolved disagreements with suppliers, resulting in a £4.4 million settlement with the former tag supplier, Steatite, and a broadly break-even settlement with Capita for its monitoring contract (paragraphs 3.15 and 3.32).
- The Ministry has established an organisation-wide project delivery function. It also intends to establish a central resource pool for its major projects to draw on. However, on electronic monitoring, it has not yet fully secured all of the specialist staff needed to manage its increased responsibilities for technical integration and ongoing service integration and management. Once this capability is in place, it will need to be sustained in the face of financial pressures and competing priorities such as the major prison and courts reform programmes (paragraphs 3.28 and 3.29).

16 Following a review in March 2017, the Infrastructure and Projects Authority assessed that the programme team had been reinvigorated and that delivery confidence had improved. Although it found significant issues, these appeared resolvable and, if addressed promptly, should not present a cost or schedule overrun. The review concluded that the main remaining issues related to successfully engaging stakeholders in the programme, and developing the Ministry's ongoing service integration and management function (paragraphs 1.11, 2.12 and 3.28).

Conclusion on value for money

17 The electronic monitoring of offenders plays an important role in supporting rehabilitation in the community and as an alternative to prison. The Ministry has so far failed to achieve value for money. It pursued an overly ambitious strategy that was not grounded in evidence, and failed to deliver against its vision. The case for location monitoring using GPS is still unproven and a new service will now not be operational until the end of 2018 at the earliest, five years later than planned. Having abandoned its original plan to develop a bespoke, world-leading tag, the new service will now be much closer to what was in place before the programme started.

18 The Ministry has chosen to improve its existing multi-supplier approach rather than restart the programme from scratch. This was deemed the 'least bad' option, taken to avoid further delay and costs. It has learned from its previous failings, and has begun to make necessary improvements. But major risks remain. Achieving an effective new monitoring service without relying on a contracted integrator will require the Ministry to be much more closely involved than before in integrating the end-to-end service. It will have to build its technical and programme management capabilities quickly to perform this expanded role effectively.

Recommendations

The electronic monitoring programme

- a** The Ministry should ensure that, whatever its progress in making available new GPS-enabled monitoring services, it actively promotes appropriate take-up by the courts of established curfew tagging services.
- b** The Ministry should use the results from its current pilots and from national roll-out of location monitoring services to develop a robust evidence base on the effectiveness of the new GPS-enabled tags and inform future decisions.
- c** The Ministry should keep sufficient technical and programme management capability in place for the remainder of the programme.
- d** The Ministry should avoid expanding the programme to incorporate additional uses for monitoring until the core services of curfew and location monitoring are in place.

Commercial and programme management

- e** The Ministry should ensure that when approving programmes:
 - it has a robust, well-evidenced business justification for developing new applications for technology before starting procurement, in particular whether there is good evidence of demand, and whether the operational implications for justice agencies are sufficiently understood; and
 - it clearly understands the complexities of delivering the programme, in particular interdependencies with other programmes and how the management resources will be secured.
- f** The Ministry should build on its establishment of a Ministry-wide project delivery function to:
 - develop a long-term strategy to build up SRO and programme delivery capabilities, in particular project management and systems integration; and
 - develop a clear understanding of the capacity demands of its programmes, so it can identify the impact on programme delivery arising from changing priorities or new programmes.
- g** The Ministry should learn the lessons from its separation with two successive SMEs, both through its own programmes and also through engagement with the Cabinet Office to:
 - understand where best to use SMEs in future procurements; and
 - adapt its procurement and programme management processes to match the capacities of SMEs to comply with them.

Part One

The role of electronic monitoring services in England and Wales

1.1 This part of the report summarises the use of electronic monitoring in England and Wales and gives an overview of the Ministry of Justice's (the Ministry's) progress with its current programme.

Overview of electronic monitoring

1.2 Since 1999 government has used contracted-out electronic monitoring ('tagging') in England and Wales for sentencing and supervising offenders. Currently there are two types of tags, both usually fitted to an individual's ankle: tags for curfew supervision (linked to a base unit in the home using only radio frequency (RF) transmission), and tags for monitoring wider location and movement (which combine RF with global positioning system (GPS) technology). They enable the police, courts or probation services to monitor an offender's location and compliance with home curfews, and to take action as necessary. Tagging can support the supervision and rehabilitation of offenders in the community and can, where appropriate, be an alternative to costly prison detention.

1.3 In February 2014 the Ministry transferred the running of the service from the incumbent suppliers, G4S and Serco, to Capita. Capita now manages the field workers who fit the tags and the central monitoring centres, although the service still relies on systems and tags from the original service supplied by G4S Monitoring Technologies.

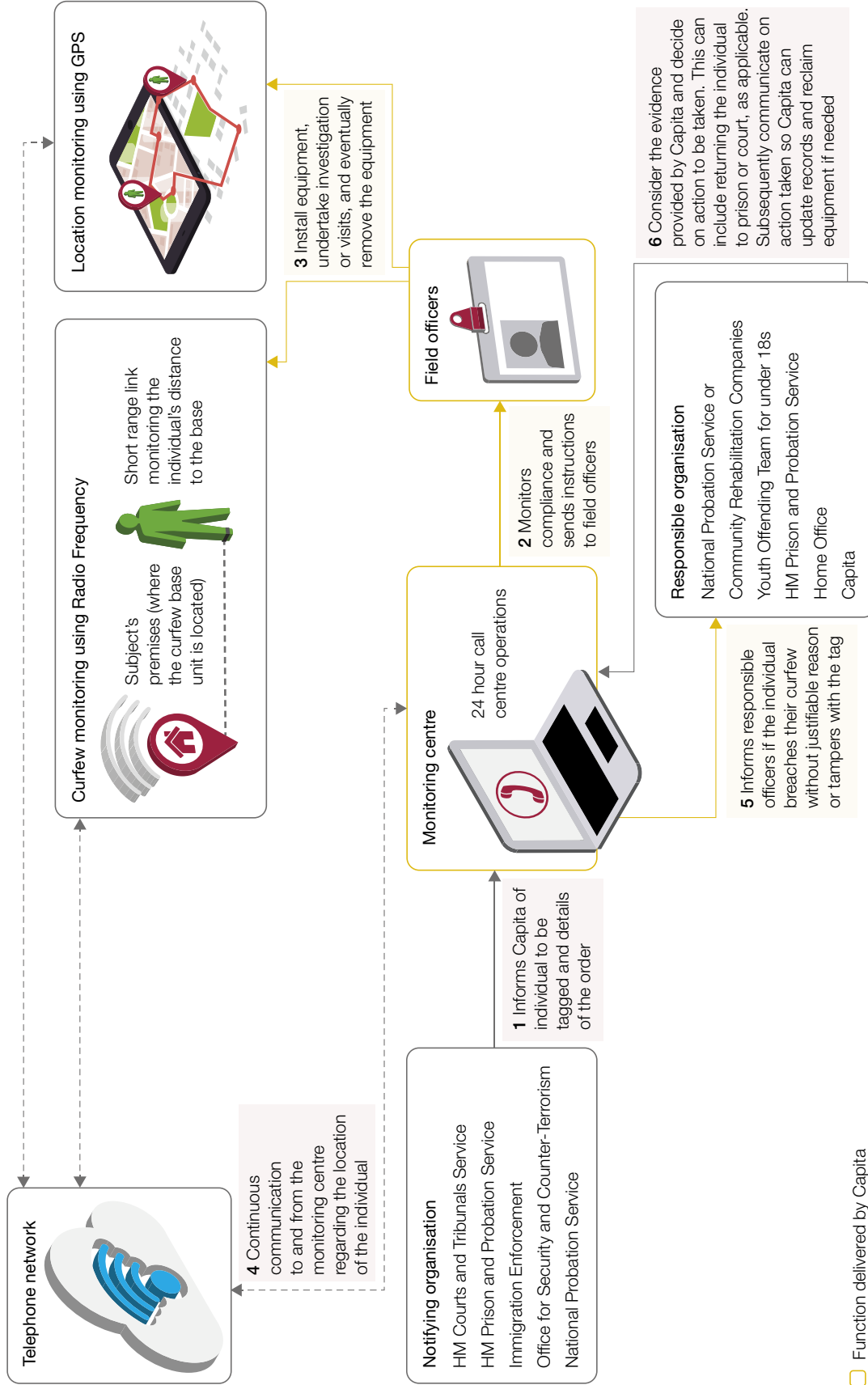
Figure 2 overleaf shows how the main forms of electronic monitoring, using curfew and GPS technologies, are applied.

1.4 In 2016-17, around 12,300 to 14,000 offenders were under tagging orders at any one time.² But of these, up to 20 subjects, equivalent to less than one person for every other police force area, had their movements tracked using GPS. GPS location monitoring is generally used to monitor subjects on specialist orders, usually where action is being taken on national security grounds. Beyond the Ministry-provided service, some UK police forces have used location monitoring on a small scale to track offenders who agree to wear tags.

Figure 3 on page 15 shows the use of electronic monitoring under the Ministry's contracts since July 2013. **Figure 4** on page 16 shows a breakdown of the population under tagging orders by sentence type and demographics.

² This is based on management information that was not yet fully quality assured at the time of our work. It differs from the official statistics published by the Ministry showing the number of offenders wearing tags (rather than those under tagging orders). The difference comprises cases where the monitoring equipment may never have been installed, for example, if the subject is taken into custody prior to installation. The *2016-17 Annual National Offender Management Service (NOMS) Digest* is due to be published on 27 July 2017.

Figure 2
Electronic monitoring: how it works



Note

1 Capita is responsible for enforcement of curfew-only community orders without other sentence elements.

Source: National Audit Office

Figure 3

The number of offenders under tagging orders at any one time between July 2013 and March 2017

The number of offenders under tagging orders at any one time has been falling

Number of offenders under tagging orders at any one time



Notes

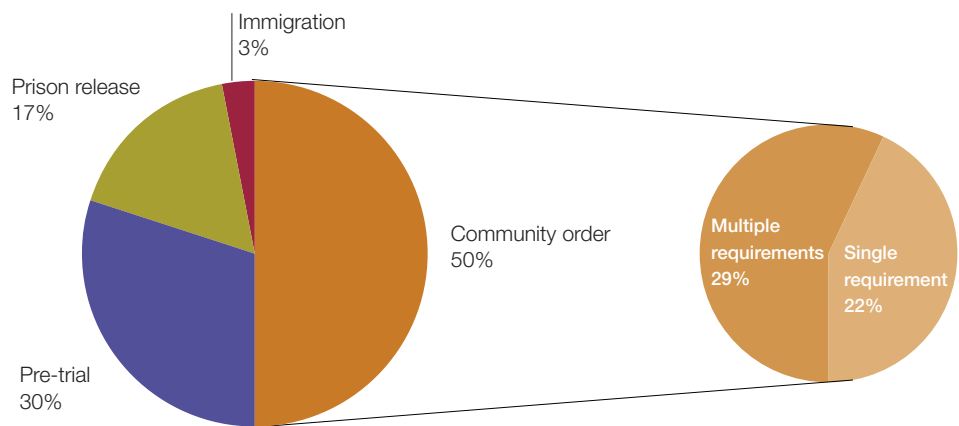
- 1 Curfew cases make up the great majority of all cases. In 2016-17, the number of location monitoring cases using GPS fluctuated between 11 and 20 cases.
- 2 Location monitoring data were not available before March 2016 so the earlier data capture only curfew cases. Curfew data were not available before July 2013.
- 3 The figure is based on management information that was not yet fully quality assured at the time of our work. It differs from the official statistics published by the Ministry of Justice showing the number of offenders wearing tags (rather than those under tagging orders). The difference comprises cases where the monitoring equipment may never have been installed, for example, if the subject is taken into custody prior to installation. The 2016-17 Annual National Offender Management Service (NOMS) Digest is due to be published on 27 July 2017.

Source: Service provider data

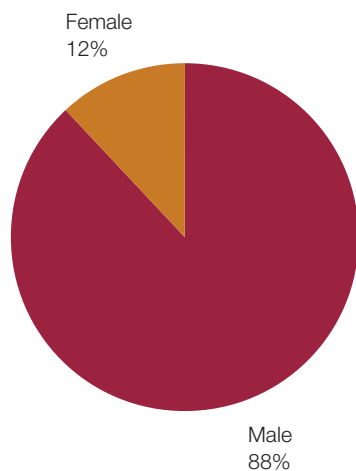
Figure 4

Composition of the population under tagging orders, as at November 2016

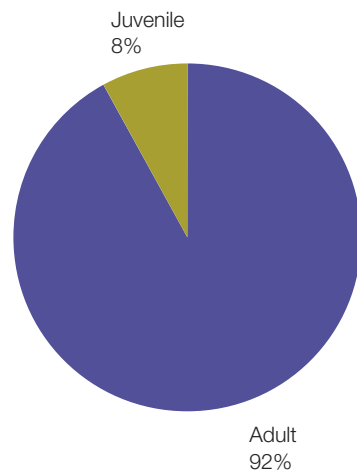
Curfew cases represent a mix of pre- and post-trial orders and early prison releases



The majority of subjects under tagging orders are male



Almost all subjects under tagging orders are adults



Average age of 31 years old (eldest 81; youngest 11)

Notes

- 1 Percentages may not sum due to rounding.
- 2 Single requirement: individuals with curfew-only community orders without other sentence elements.
Multiple requirements: individuals under curfew with other sentence elements – for example, community service.

Source: Service provider data

The ‘new world’ electronic monitoring programme

1.5 By 2011 the Ministry saw an opportunity to save money and enhance the service. It launched a new procurement that aimed to reduce annual monitoring costs by 9% (£9 million) to 30% (£30 million). Due to delays in the programme, the Ministry still relies on the legacy service and has so far (up to March 2017) spent £60 million, out of an estimated £130 million lifetime programme cost by 2024-25 to obtain the new service. This covers the cost of programme management, payments to suppliers to compensate them for delays and elements of a dispute settlement with Capita (paragraph 3.15). However, the Ministry has claimed savings of 10.6% on monitoring rates through its contract with Capita, which has streamlined the existing operation over time.³ The expected cost of running the monitoring service from 2017-18 to 2024-25, including service payments and contract management, is £470 million.⁴

1.6 The Ministry also sought to exploit advances in GPS technology. It intended to use GPS location monitoring for many more offenders, to track their movements beyond their homes or to exclude them from specific locations. It sought to develop a new world-leading tag, combining both curfew and location monitoring functionality, to be used on all tagged offenders. It intended the new capability to provide more options to meet future changes in sentencing policy. It also expected that shifting from two types of tags to a single type, and a single monitoring centre, would also simplify operations. Part Two explores the implications for the programme and for the justice system of this greater ambition.

1.7 The Ministry also changed the way it contracts for the service. Rather than continue with two regional contracts for the end-to-end service, it sought to contract separately for field and monitoring services, for managing location data, for the new tags and for telephony. One of the suppliers would act as an integrator, pulling together the suppliers’ work (Figure 1). Part Three examines the implications for the programme of adopting this more complex approach. The programme is managed by a team within Her Majesty’s Prison and Probation Service (HMPPS), supported by commercial, analytical and other specialists from the Ministry.

Overview of progress since 2011

1.8 The programme is five years late. The Ministry originally intended the new tags to be deployed from November 2013. It now expects deployment to start from the end of 2018, and this still depends on detailed planning. Successive events, summarised in **Figure 5** on pages 18 and 19, led to serious delays.

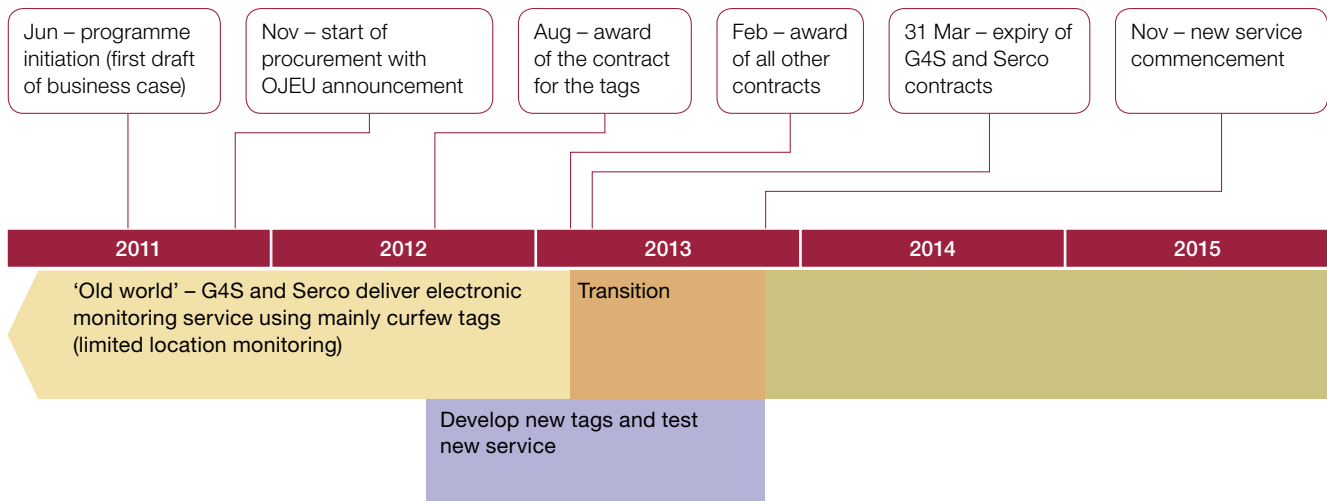
³ These savings are not directly equivalent to the Ministry’s 9%–30% savings target as they were achieved only through renegotiating Capita’s contract rather than the whole electronic monitoring service.

⁴ Includes £74 million for running the existing service until the new service is deployed from late 2018.

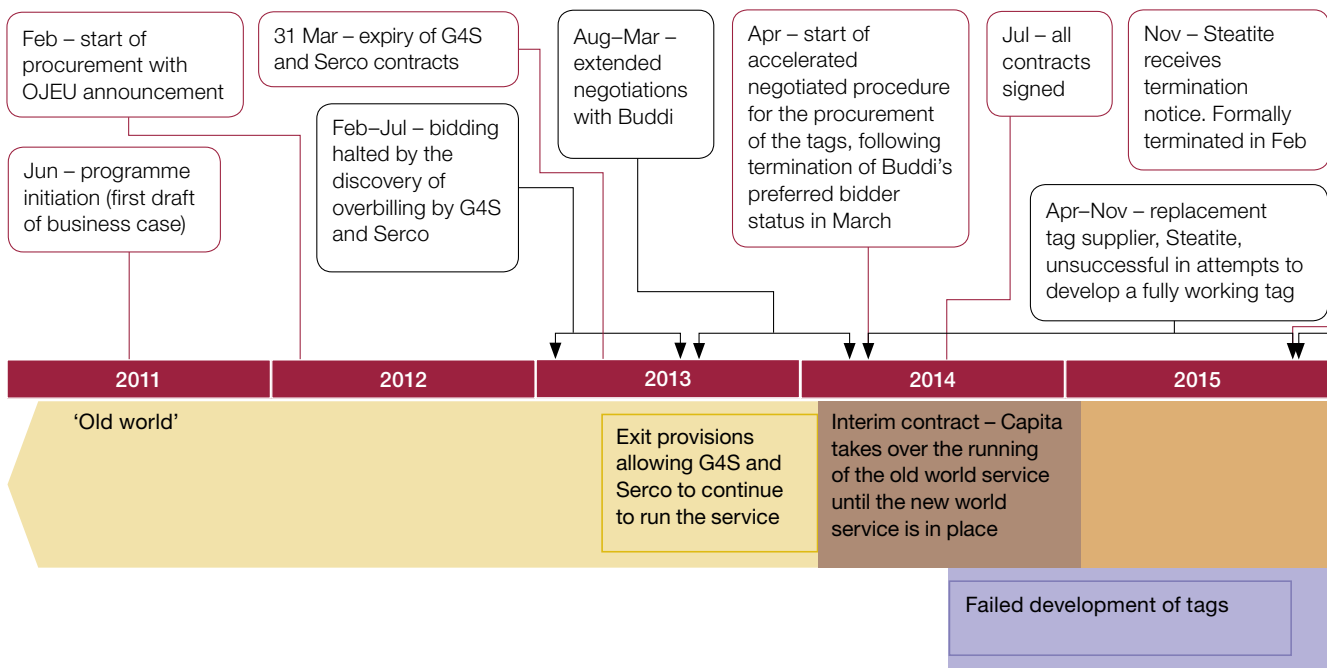
Figure 5

The Ministry of Justice’s original timeline for the programme compared with actual and planned events

Original timeline

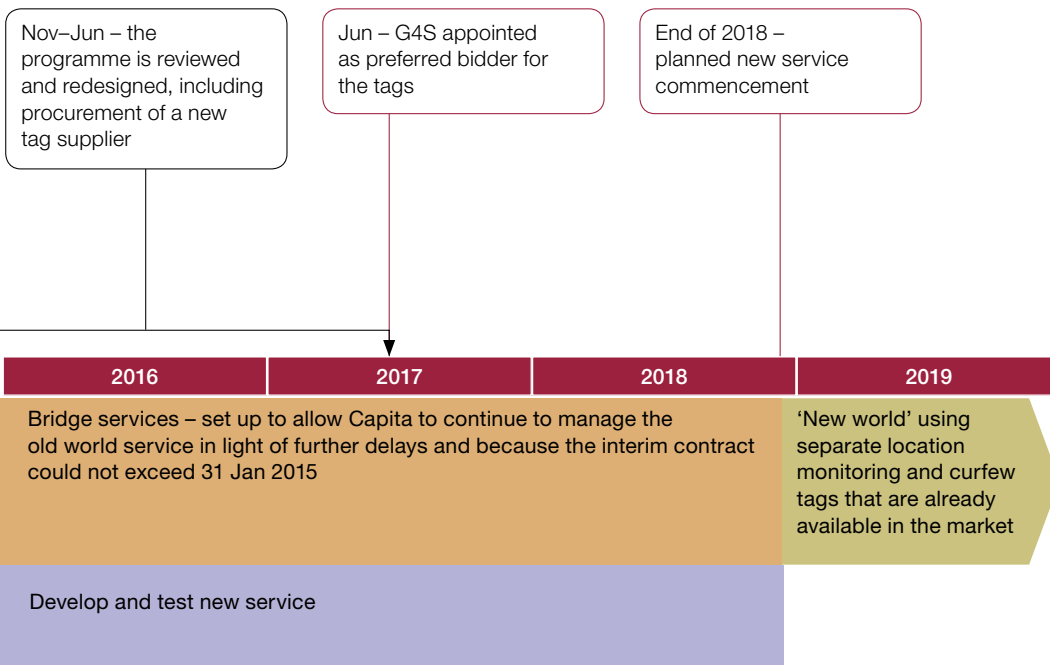
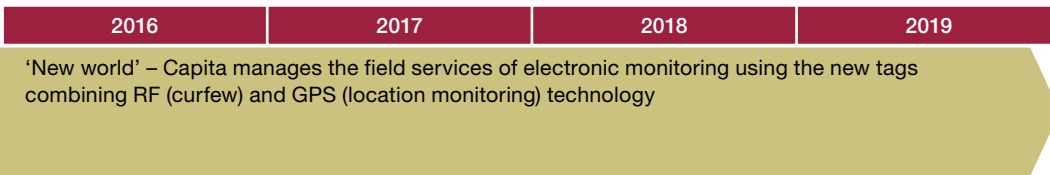


Actual and planned events



Note

1 The dates for the original timeline come from the programme’s 2011 outline business case.



1.9 The main phases of delays to date include:

- A five-month period between February and July 2013 when bidding was halted following the discovery of substantial and protracted overbilling by the incumbent suppliers, Serco and G4S. This led to both suppliers exiting the competition for the field and integration services contract, leaving just one supplier in the bidding process. We have previously reported on the causes and consequences of the overbilling, and the Ministry's response.⁵
- Seven months between August 2013 and March 2014 when the Ministry failed to reach agreement with its preferred supplier of tags, a small and medium-sized enterprise (SME) called Buddi. Part Three examines this dispute and wider aspects of the Ministry's engagement with SMEs during the programme.
- A 19-month period from April 2014 during which the Ministry procured a replacement tag supplier, an SME called Steatite, which was unable to produce a tag that met the Ministry's requirements. This was due to a combination of factors, including poor management by the Ministry (see Part Three).
- A 19-month period from Steatite's termination notice in November 2015, during which the Ministry and the Cabinet Office reviewed and redesigned the programme, before appointing G4S as preferred bidder for the new tags in June 2017.

Current status of the programme

1.10 The Ministry has now changed its approach from developing a bespoke tag to procuring separate location monitoring and curfew tags that are already available in the market. Subject to agreeing a contract, G4S will work with the other suppliers to integrate its tags with their systems. Deployment of the new tags is then expected to start from the end of 2018, ending six months later. A Cabinet Office review completed in June 2016 confirmed that continuing with this four-supplier model is the 'least bad' option – given the additional cost and time in starting afresh on a different basis.

1.11 In March 2017, the Infrastructure and Projects Authority assessed that the programme team had been reinvigorated and that delivery confidence had improved. Although significant issues existed, these appeared resolvable and, if addressed promptly, should not present a cost or schedule overrun.

⁵ Comptroller and Auditor General, *Home Office and Ministry of Justice: Transforming contract management*, Session 2014-15, HC 268, National Audit Office, September 2014; Comptroller and Auditor General, *The Ministry of Justice's electronic monitoring contracts*, Session 2013-14, HC 737, National Audit Office, November 2013.

Part Two

The capability required from electronic monitoring

2.1 This part of the report examines the Ministry of Justice's (the Ministry's) ambitious requirements for the 'new world' tagging system, and its limited understanding of their implications for the criminal justice system. It then outlines the Ministry's planned improvements in this area.

The ambition and scope of the programme

2.2 The Ministry's 2011 business case for the future electronic monitoring programme set a challenging agenda. The scope extended far beyond simply replacing the existing contracts, which provided a service based largely on home curfews. It would include more advanced GPS-enabled monitoring of offenders' locations, to check whether they are staying out of exclusion zones, and abstaining from alcohol or drug abuse. The Ministry's 11 strategic objectives (Appendix Three) were not ranked, but included:

- reducing the cost of the service, later expressed as between 9% and 30%, and driving out inefficiency;
- attracting new entrants to the market, particularly small and medium-sized enterprises (SMEs), to secure innovation in technology and services at the forefront of monitoring capability;
- integrating delivery with other areas of the justice system, particularly the courts, probation and prisons;
- providing flexibility to support other changes in the justice system, such as the concurrent reforms to probation and possible future changes in sentencing policy; and
- meeting much higher standards of data security than in the current service.

2.3 The programme first received formal external scrutiny from the Cabinet Office's Major Projects Authority (now the Infrastructure and Projects Authority (IPA)) in August 2011. As a Gateway 2 project-level assessment, the review focused mainly on the arrangements for conducting the procurement. An earlier Gateway 0 or Gateway 1 review would have provided opportunities to examine the justification for the programme, and to explore whether it was achievable and how it linked to wider business benefits. This was a particularly important gap in formal scrutiny for such a transformative programme.

2.4 The Ministry identified from early discussions with industry that achieving all of its objectives would need new software and hardware that were not already available in the market. It decided to select suppliers who would work with it to develop a world-leading ankle tag that combined both curfew and GPS monitoring for use on all tagged offenders. Although a combined tag would be costlier to buy and bulkier for offenders to wear, it would avoid the cost and complexity of operating two types of tags. Also, combining both curfew technology and GPS tracking would provide more accurate and robust monitoring data. Although it was aware of a 2007 UK study which identified constraints with GPS technology, the Ministry concluded from its market surveys that subsequent technological advances had largely resolved problems such as limited battery life.⁶

2.5 Over time, the Ministry evolved some 900 prescriptive requirements for the new tags but did not sufficiently appreciate that it could not have all that it wanted. Development would require compromises between different aspects of the tags' performance, such as their capacity to exchange and store data, their battery life, size, robustness and higher security standards. At the time the Ministry took assurance from its discussions with potential suppliers that such challenges could be overcome, despite a lack of working prototypes meeting its specification. Part Three of the report explores how such challenges were managed.

2.6 The Ministry's timescale represented an additional challenge. The objective was to meet a deadline for transferring to new contractors by April 2013, when the existing monitoring contracts lapsed. Time pressures remained a constant factor, particularly when delays resulted in a conspicuous absence of new tags in service. In 2014, ministers requested a large-scale roll-out of some 2,000 tags for fitting on offenders who were released on temporary licence. The programme, by then on its second tag supplier, tried but failed to achieve this additional commitment. Consequences of this intervention are addressed in Part Three.

2.7 The Ministry considers that its revised 2017 business case for the programme represents a more deliverable and prioritised set of objectives. It intends to focus these on first sustaining and enhancing the curfew monitoring system, before progressively rolling out more advanced GPS-enabled location services. It is also developing a wider electronic monitoring strategy for the programme to fit within. The programme's scope has shown more stability. For example, in May 2016 the Ministry decided not to increase the scope to include additional requirements for tagging foreign national offenders subject to immigration bail.

⁶ Stephen Shute, *Satellite tracking of offenders: a study of the pilots in England and Wales*, August 2007. Although curfew-only tags do not need to be charged, tags that include GPS functionality need to be charged. Some providers offer a portable charging pack that can be clipped onto the tag.

2.8 The Ministry has also changed its approach from developing a bespoke tag to buying tags that are already available in the market. The programme no longer aspires to be world-leading. On the contrary, the Ministry considers that the programme is benefitting from technological advances and new products developed since it last surveyed the international location tracking market in 2012. The Ministry also no longer aspires to apply the same tag to all tagged offenders, procuring instead separate curfew and location monitoring tags. Buying separate tags is a pragmatic approach, recognising that GPS tracking is not required for all cases, but it represents a major departure from the Ministry's original objectives.

2.9 The programme will still need to integrate its selected tag with the other parts of the system, particularly the location mapping services supplied by Airbus (Figure 1). This is a significant challenge, since software and hardware developed by different companies require links to enable them to exchange data, and was highlighted as a risk in the IPA's March 2017 review. Airbus now has substantial experience of linking its mapping software to tags provided by various suppliers. It has expressed confidence to us and the Ministry in its ability to integrate successfully with a new tag supplier. To assist with integration, the Ministry involved Airbus and the other suppliers in its evaluation of the products and proposals of shortlisted tag suppliers.

2.10 The Ministry must also understand the compromises it will have to make compared with its previous bespoke specification. The Ministry has worked to reduce and simplify its requirements, making them less prescriptive and determined more by intended outcomes. It is convinced that in doing so it has made no compromises to essential functionality, including in areas previously considered mandatory such as information security standards (paragraph 3.9) and access to raw location data (paragraph 3.5). The Ministry evaluated rival tags as part of the procurement process and was satisfied that the preferred bidder, G4S, met its requirements.

Cost-effectiveness and demand for tagging

2.11 Delivering a functioning monitoring service is only part of the challenge. The extent to which monitoring benefits the criminal justice system, offenders and society depends on how far the courts and prison governors decide to use it. Effectiveness also depends on the capacity of the police and probation services to respond to a higher level of reported breaches and other incidents that a more powerful system could generate.

The evidence base on the effectiveness of electronic monitoring

2.12 The management of relationships with intended users of an enhanced electronic monitoring service was an area of particular weakness during the formative years of the programme. The Ministry and Her Majesty's Prison and Probation Service (HMPPS) have never operated a monitoring service themselves; they have depended entirely on contractors to serve the courts. Their direct operational experience and understanding, particularly of location monitoring services using GPS, were limited. Programme leaders visited at least one police-based GPS scheme to increase their understanding. However, the Ministry did not then conduct its own pilots to identify the practical issues around location monitoring, and the implications for the courts, police and probation services. Stakeholder representation in programme steering groups comprised mainly officials from the Ministry's agencies and branches rather than practising judges, police and probation officers. The IPA's March 2017 review identified the need for further stakeholder engagement.

2.13 There are many studies on the application of electronic monitoring to offenders. However, a recent systematic review of the international research identified no statistically significant effects on levels of crime or rates of offender reimprisonment.⁷ Most academic and other studies are mainly qualitative in nature. They report various positive effects, such as the way in which tags can reinforce good behaviour by deterring peer pressure on offenders to break curfews or other sentence conditions. Frequently reported negative effects include the extent to which the stigma of a visible tag can inhibit successful rehabilitation into society.

2.14 Different countries have diverse legal and penal systems, which reduces the replicability of international lessons and benefits to the UK. In the UK, most evidence of effectiveness is weak and difficult to generalise to the wider offender population, because:

- researchers have lacked access to contractor data with which to analyse the effects on offenders of the existing curfew service;⁸
- most independent evaluations of GPS-enabled location monitoring have been done on some schemes run by police forces for small numbers of selected volunteers. The nature of those schemes and the characteristics of the volunteers differ from the population that the Ministry intends to reach with its electronic monitoring programme; and
- there is a shortage of quantified evidence, such as comparative data from control trials, to help policy-makers and the courts understand how strong and sustained the effects of tagging on offenders can be. In part this reflects the challenge of differentiating the additional effects of tagging when combined with other aspects of the sentence.

⁷ College of Policing, 'Electronic monitoring', *Crime Reduction Toolkit*, February 2015.

⁸ Anthea Hucklesby et al, *Electronic monitoring in England and Wales*, May 2016.

2.15 Lack of evidence on effectiveness is not a new issue. The Committee of Public Accounts recommended in 2006 that the Home Office carry out further research to establish the role that electronic monitoring could play in minimising reoffending, making the results available to courts and prisons.⁹ The Home Office committed to undertaking analysis of the reconviction rates of offenders on community sentences with an electronically monitored curfew compared with those without.¹⁰ In 2011 the Ministry published statistical analysis of offenders tagged and released early on home detention curfews, which indicated that reoffending rates were no higher than for other comparable prisoners.¹¹

2.16 The Ministry is acting to improve the evidence base on the effectiveness and cost-effectiveness of GPS location tagging in the UK. From October 2016 it started pilots in two regions. **Figure 6** overleaf summarises the objectives and scale of the pilots. The objectives would, if met, address the main areas where better evidence is required. However, it remains to be seen whether the pilots will yield sufficient robust quantitative evidence on the impact on reoffending. As at the beginning of April 2017, 97 persons had been tagged in total, fewer than expected at that stage. The Ministry has also convened an advisory group including leading academics to help inform its decisions on the programme. It also intends to introduce a new case management system that provides better information and data.

Implications of GPS location monitoring for criminal justice agencies

2.17 The Ministry also needs better information on the costs and benefits for the UK criminal justice system as a whole, as opposed to just HMPPS. Its business cases focused frequently on the potential savings from extending the use of monitoring as an alternative to prison. The direct cost of electronic monitoring services, currently at some £12 to £13 per subject per day, is small compared with the reported average costs for imprisonment of around £90 per day.¹² However, the tagged population includes many offenders who would not have received a prison sentence anyway. Evidence from 2000 suggested that about half of bail curfews represented in the study would not have gone to prison.¹³ The Ministry's 2011 business case was more conservative – it identified savings in occupied prison places of around 3,700 out of the then-assumed 21,000 subjects under curfew. The extent to which GPS-tagged offenders would be diverted from the prison population is even more uncertain. And freeing up prison places will not necessarily lead to significant cash savings, at least in the short term.

9 HC Committee of Public Accounts, *The electronic monitoring of adult offenders*, Sixty-second Report of Session 2005-06, HC 997, October 2006.

The Ministry of Justice was only established in May 2007, through combining the criminal justice elements of the Home Office with the Department for Constitutional Affairs.

10 HM Treasury, '62nd Report: The electronic monitoring of adult offenders', *Treasury Minutes on the Fifty-eighth, Fifty-ninth, Sixty-first and the Sixty-second Reports from the Committee of Public Accounts 2005-2006*, December 2006.

11 Oliver Marie et al, *The effect of early release of prisoners on Home Detention Curfew (HDC) on recidivism*, May 2011, available at: www.gov.uk/government/publications

12 Ministry of Justice, 'Costs per place and costs per prisoner by individual prison', *Prison performance statistics 2015 to 2016*, October 2016. We divided the total cost per prisoner derived from the overall resource expenditure in Table 1: Summary by Prison Function 2015-16 by the number of days in a year.

13 Airs et al, (2000), cited in Anthea Hucklesby et al, *Electronic monitoring in England and Wales*, May 2016.

Figure 6

The Ministry of Justice's pilots on the location monitoring of offenders using GPS

Objectives

The pilots will gather evidence on:

- whether location monitoring might help reduce future demand on the prison estate as a credible alternative to imprisonment;
- the behaviour of offenders subjected to location monitoring, such as rates of compliance and potentially reoffending;
- the response of decision-makers when provided with the option of location monitoring; and
- the extent to which location monitoring can facilitate more informed conversations between probation officers and offenders about their behaviours in the community as part of their rehabilitation.

Parameters

Locations: Midlands and BeNCH (Bedfordshire, Northamptonshire, Cambridgeshire and Hertfordshire).

Timescales: Tags to be fitted for one year starting from October 2016. Evaluation report expected in early 2018. Reoffending analysis, if feasible and subject to confirmation, in late 2019.

Expected volumes: Allowance for up to 1,500 tags to be deployed, depending on take-up by sentencers and other decision-makers.

Actual volumes: As at the beginning of April 2017, 97 persons had been tagged in total.

Cost: Estimated at £6.5 million.

Case types included: Court-imposed bail, community sentences, releases on home detention curfews and Parole Board.

Source: Ministry of Justice business case for location monitoring pilots using GPS, 2016

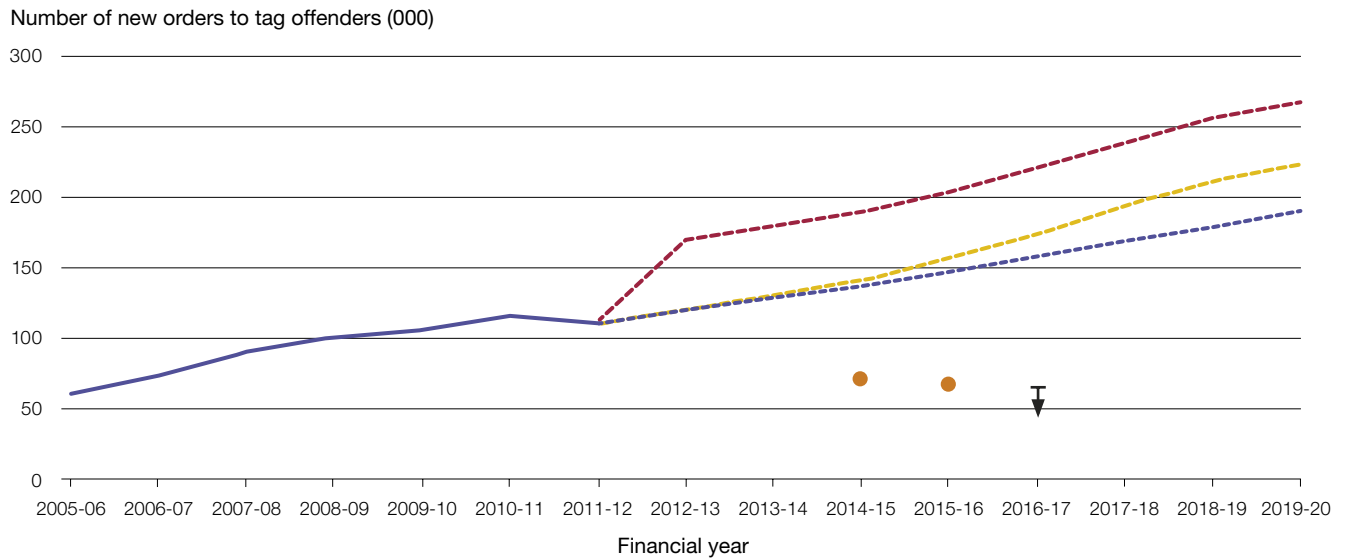
2.18 Another important factor that was not captured well in the Ministry's business cases is the trade-off between the benefits of having more robust supervision of offenders and the additional burden it places on the courts, the police and probation services. Tagging generates an additional workload of incidents for investigation, more breaches of sentence conditions and, potentially, more recalls to prison than would have resulted from less exacting methods of supervision. Some incidents will be false alarms not attributable to the offender but caused by accidental loss of electronic signals. For location monitoring, the need for offenders, including those with chaotic or difficult lifestyles, to regularly recharge their tags, typically for up to one hour each day, remains an important practical constraint. Under the new arrangements, the monitoring centre will be able to warn individuals that their battery is running low if alerting them is considered appropriate.

2.19 Against this background, we observed scepticism from staff and commentators that expansion of location monitoring on the scale envisaged by the Ministry in 2011 (**Figure 7**) was realistic. Officials had projected usage mainly by extrapolating from the prison population and by assuming high take-up of new location, sobriety and drug monitoring by the courts. Their assumptions were not based on empirical evidence that the courts would normally apply location monitoring as part of sentences.

Figure 7

Projected increases in the use of electronic monitoring in the Ministry of Justice’s original 2011 business case, compared with actual volumes

The Ministry projected a large increase in the use of electronic monitoring yet actual volumes have been much lower



Data from the Ministry’s original 2011 business case

- High scenario forecast
- Intermediate scenario forecast
- Baseline scenario forecast
- Volume data that the Ministry used to forecast its scenarios in 2011. It was found to be overstated when overbilling by the incumbent suppliers was identified in 2013

● Actual data for 2014-15 and 2015-16

⌵ Estimate of under 65,000 in 2016-17

Notes

- 1 The different scenarios presented made different assumptions about the potential growth caused by different policies being implemented. They were created before the Ministry discovered in 2013 that it had been overbilled by the incumbent suppliers, leading to a restatement of the data.
- 2 The data include cases where the monitoring equipment may never have been installed, for example, if the subject is taken into custody prior to installation. One subject may be given multiple orders over the course of the year. In these figures each is counted individually, that is, one person with four orders counts as four.
- 3 The estimate for 2016-17 is based on extrapolating data obtained up to November 2016. The Ministry will publish final volumes as official statistics in the 2016-17 Annual NOMS Digest, due to be published on 27 July 2017.

Source: Ministry of Justice outline business case, 2011; 2015-16 Annual National Offender Management Service (NOMS) Digest; Projection for 2016-17 using service provider data

2.20 The IPA's March 2017 review noted that the Ministry still lacks a robust demand management model. The Ministry's pilots using GPS-enabled tags should, if completed on the required scale and well evaluated, provide more insight into the implications of expanded location tagging for the police, probation and courts. The programme and pilot teams are working to build such evidence in the Ministry's wider electronic monitoring strategy.

Sustaining the curfew service

2.21 Besides expanding location monitoring, the Ministry originally intended much of the increase in tagging to arise from increased take-up of already-established curfew services. It projected that between 160,000 and 220,000 offenders would be tagged during 2016-17 (Figure 7). In fact, the opposite has occurred. The discovery of overbilling (paragraph 1.9) led to a restatement of the estimated number of individuals under tagging orders at any one time, representing a 40% decrease in 2014-15. The number subsequently fell to a low of 12,255 in September 2016 (Figure 3).¹⁴ Correspondingly, the total number of new orders to tag offenders in 2016-17 was much lower than initially expected, estimated to be under 65,000.¹⁵ This decline is not due to any single cause, and the Ministry is working to better understand it. Factors cited to us include:

- a general reduction in the number of offenders eligible for electronic monitoring, as part of a wider reduction in demand on the criminal justice system;
- reduced capability within the contractor to market the existing curfew service to courts or prison governors, leaving take-up highly variable between regions;
- withdrawal of the electronic monitoring provider from court proceedings (contributing to the judiciary being less aware of tagging options). The provider's role in prosecuting breach and enforcement actions was transferred to the National Probation Service as part of the Transforming Rehabilitation reforms; and
- delays in the programme, leading to greater pessimism about tagging among the judiciary and police forces.

2.22 The Ministry has made no commitment to procuring a minimum number of tags, and its suppliers bear the risk of being unable to recover their costs if volumes are lower than expected. But it recognises that it has more to do to exploit the full potential of the proven curfew service. For example, sentencers tend not to use the flexibility available to vary curfews to meet different circumstances. Although courts have considerable latitude in the curfew hours that they can impose, in practice sentences usually specify standard overnight curfews of between 7pm and 7am daily throughout the sentence.

¹⁴ As noted in Figure 3, this is management information that was not yet fully quality assured at the time of our work.

¹⁵ This is an estimate based on extrapolating data obtained up to November 2016. The Ministry will publish final volumes as official statistics in the *2016-17 Annual National Offender Management Service (NOMS) Digest*, due to be published on 27 July 2017.

Part Three

How the Ministry has managed the programme

3.1 This part of the report examines how the Ministry of Justice (the Ministry) came to adopt a new and unfamiliar approach to replacing the electronic monitoring service, and the main issues that arose with this approach. It also outlines the Ministry's planned improvements.

Adopting the tower model

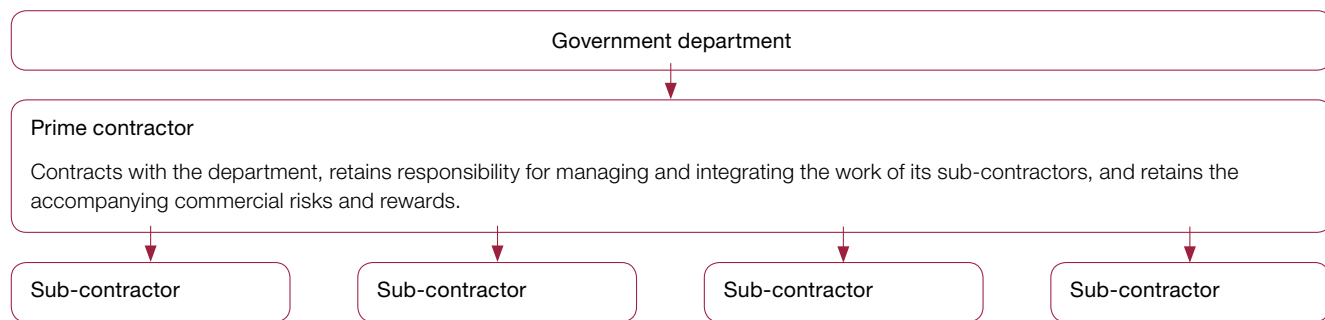
3.2 The Ministry adopted a tower model for delivering the electronic monitoring service, by splitting the end-to-end service into a four-supplier 'tower' structure. This was a shift from the traditional prime contractor model it had previously used with G4S and Serco (**Figure 8a and 8b** overleaf). It did this to achieve:

- **reduced dependence on any single supplier.** The Ministry prevented bidders from bidding for certain combinations of the four lots. For example, bidders for the main field operations service (lot 1) could not also bid to supply tags (lot 3). However, lot 1 still holds more than 80% of the total contract costs;
- **greater transparency on costs.** The Ministry's concerns that it had had insufficient visibility of the costs and profitability of the existing service were heightened with the discovery in 2013 of substantial overbilling (paragraph 1.9);
- **flexibility and innovation.** The Ministry wanted more innovation than it had obtained from the existing 'one-stop' arrangements. For example, it wanted to exchange tag suppliers more easily and incorporate new types of tags (for example, sobriety testing). Shorter three-year contracts would allow it to substitute tag suppliers over time; and
- **increased competition and participation by small and medium-sized enterprises (SMEs),** specifically for the mapping and tag services. There was a very limited number of suppliers that could provide a fully integrated service, so breaking up the service was a way to attract new entrants and widen competition. However, this also meant that new entrants would bring less of a track record in monitoring offenders.

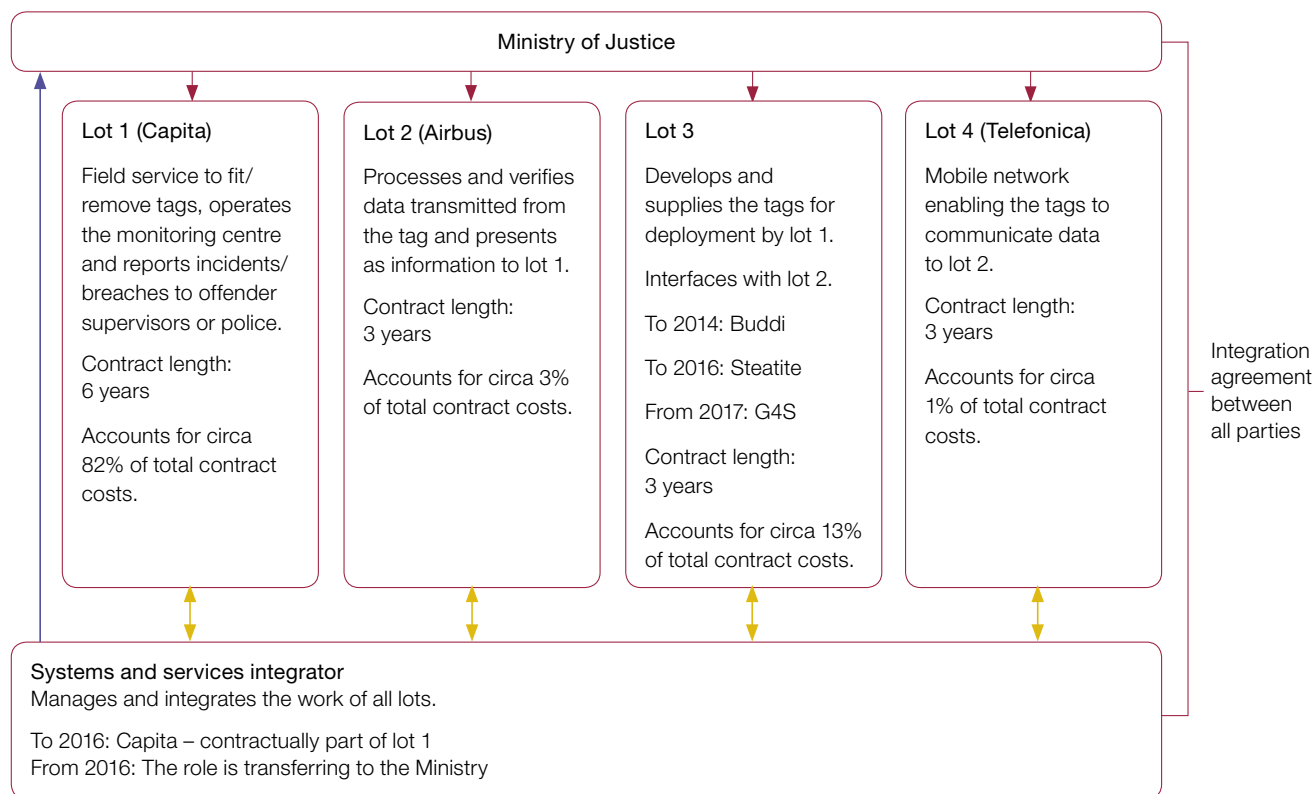
Figure 8

The Ministry of Justice moved from a prime contractor model to a ‘tower’ approach

a) An example of the traditional prime contractor model



b) The ‘tower’ approach as applied to the electronic monitoring programme



- ➔ Contractual link
- ↔ The integrator interacts with the lots to bring together their work and deliver an end-to-end service
- ➡ The integrator seeks input from the Ministry when necessary and reports on progress

Notes

- 1 Percentages may not sum due to rounding.
- 2 The share of costs reflects the initial allocation of work within the programme.

3.3 At the time the programme started in 2011, the centre of government advocated the tower model for large single-supplier information technology contracts. It was adopted enthusiastically by the Ministry's commercial practice, although other officials were less convinced. The 2011 original business case highlighted the approach as the highest risk procurement strategy, mainly because of the challenge of procuring, integrating and managing multiple lots. Since then, the centre of government has changed its stance on the tower approach. In February 2015, the Government Digital Service (GDS) stated that it was "not condoned and not in line with government policy". This is because of the difficulty in transferring responsibility to a contracted integrator and the risk of buying incompatible parts of systems and services that are then hard to integrate.¹⁶

3.4 Serious issues arose from the Ministry's adoption and implementation of a tower approach on electronic monitoring, echoing GDS's later concerns. These most directly affected working relationships with the first prospective tag supplier, Buddi, and with the integrator and field services provider, Capita.

The aborted first procurement of tags

3.5 The Ministry appointed an SME, Buddi, as preferred bidder in August 2013 to develop and produce the tags. It ended the company's involvement in March 2014 after being unable to resolve fundamental disagreements between them. The Ministry's decision to separate the supply of tags from the mapping service underlay these disagreements.

- Buddi expressed concern about sharing information on the internal workings of its tag with other suppliers. It refused to share such information as widely as the Ministry desired, for instance with any other company that the Ministry might include in the contracts in future, given that these would likely be competitors. Buddi wanted to send processed location data to the mapping supplier, but the Ministry argued that it needed extensive data showing how the location was computed. It did not accept that this risked Buddi's intellectual property. It also suggested that by presenting processed data, Buddi would be duplicating part of the mapping supplier's role.
- In part, the Ministry wanted unprocessed data so that the provenance of a tag's location data could be quickly established in the event of court challenge to the evidence. This in itself was an area of disagreement as Buddi argued that no court would need to see how the data were processed in the tag in order to make a judgement. The two sides did not reconcile their contrary advice on the subject.

¹⁶ Alex Holmes, 'Knocking down the Towers of SIAM', *Government Digital Service blog*, 18 February 2015, available at: <https://governmenttechnology.blog.gov.uk>

- Buddi warned the Ministry that sending extensive data from the tag to the mapping supplier would have consequences for the tag's operation and battery life. The company considers that the Ministry never properly prioritised its requirements to help reach a compromise on these issues. When Buddi's involvement was terminated, it said it was left unclear about what specification it was deemed to have missed because the Ministry was still refining its requirements at that stage. The Ministry said it had not received enough assurance on Buddi's technical capability or commercial willingness to deliver a fit-for-purpose integrated solution, although the company contested this.

3.6 Separating the supply of tags from mapping services was not aligned with normal industry practice in electronic monitoring. Tag suppliers tend to supply mapping software designed to work specifically with their own tags. Buddi had bid to supply both services, but the Ministry made it preferred bidder only for supplying the tags. The company proposed the same tag for its successful 'tag-only' bid as it had for the combined service.¹⁷

3.7 The Ministry did not sufficiently identify and mitigate these commercial sensitivities and incompatibilities before making Buddi a preferred bidder. The issues also reflected a breakdown in trust between the parties about each others' intentions and behaviours.

3.8 In July 2014, the Ministry contracted with another SME, Steatite, even though they had scored below the minimum benchmark in the procurement. Steatite was by then the last remaining shortlisted bidder, after a competing large tag supplier withdrew over concerns that the Ministry would own the new intellectual property of the tags. By this stage, following Buddi's withdrawal, each of the appointed suppliers for field services, mapping and tag supply, were new to the electronic monitoring of offenders. Steatite then started to develop the new tag despite making a much later start than the other suppliers.

Inconsistencies between other suppliers' proposals

3.9 In critical areas, the suppliers and the Ministry had made incompatible assumptions about their respective parts of the system to be developed. Some suppliers put this down to a lack of time during the preferred bidder stage to resolve integration challenges and the Ministry's dispute with Buddi for distracting attention.

- The contracts did not clearly specify which party would deliver the electronic link required to transfer data between the legacy tags and the electronic monitoring data centre, which Capita would build to house software from the different suppliers. Capita understood from the contract that it should provide 'co-location' – a space for the link in the data centre – but not that it should build and maintain the link. The Ministry made the opposite assumption. It only became clear after contracts were signed that no party had made plans to build the link. Agreeing on who was responsible for doing the work and meeting the cost proved a lengthy distraction, until the parties agreed not to proceed with this electronic link (paragraph 3.34).

¹⁷ The Ministry placed validation and verification of location data in lot 2 because processes there could take into account factors that could degrade location information. These include atmospheric and meteorological conditions, satellite signal performance, local topography that could affect signal performance, and the exact position and performance of GSM telephone masts. It did not exclude location processing in lot 3, but sought to make it more robust through support from lot 2.

- It became clear in late 2014 that the data centre that Capita's subcontractor was designing would not work securely with the electronic link without the cost of additional security measures. The Ministry and Capita disagreed over who should have identified these additional costs early on and therefore bear them.
- It also emerged at that time that Capita's subcontractor was building the data centre to a size that did not meet the specifications needed by the mapping service supplier. Capita had worked to the Ministry's original specification, but the parties did not identify and reconcile in good time divergent expectations about size requirements. This became a source of dispute between the suppliers and with the Ministry.

Underlying causes

3.10 The above issues (paragraph 3.9) could have been resolved with effective management. They might be expected in a development programme where detailed requirements and solutions must be iterated between suppliers and with the customer. However, the handling of the issues, and the progress of the programme generally, were undermined by challenges in other areas, particularly:

- an inadequate system and service integrator function (paragraphs 3.11 to 3.15 below);
- time and budget constraints (paragraphs 3.18 to 3.22);
- a lack of trust and effective joint working between suppliers and with the Ministry (paragraphs 3.23 and 3.24);
- capacity and capability constraints in the Ministry (paragraphs 3.25 to 3.29), worsened by distractions that drained resources and focus (paragraphs 3.30 to 3.33);
- weaknesses in the Ministry's governance arrangements, which contributed to it not meeting its own obligations and dependencies (paragraphs 3.34 to 3.36); and
- the way in which the Ministry managed SMEs (paragraphs 3.37 to 3.39).

The system and service integrator function

3.11 The Ministry's multi-supplier approach required it to find an entity to integrate the work of the four suppliers and ensure a working end-to-end system. Its unclear understanding and application of the integrator role was a key reason for the delays on the programme. The Ministry considered performing the role itself but decided that it lacked capacity to do so successfully. Instead it added the systems and services integration (integrator) role to its contract with the field service supplier Capita.

3.12 The Ministry and Capita held differing understandings of the role of the integrator because they interpreted the contract differently. The Ministry saw the role as taking on some of the risk that would traditionally fall to a prime contractor and managing the other suppliers proactively. However, Capita was contractually not responsible for the work and performance of the other suppliers. The company also considered that it lacked leverage to perform the integrator role as expected by the Ministry anyway, because the Ministry owned the other suppliers' contracts (Figure 8a and 8b).

3.13 This difference in opinion grew into a dispute, rooted in the Ministry's view that the integrator was not performing to the standard it had expected. There were significant delays in suppliers producing their own plans and in the integrator pulling these into an overarching programme plan that was acceptable to the Ministry. Ongoing changes in the individual lots' designs also meant that Capita had to produce multiple iterations of the integrated high-level design before it could be agreed, later than expected. An integrated high-level design for the end-to-end service was not formally agreed until September 2015. Capita contended that many of the delays were due to the Ministry failing to make timely decisions, rather than because it was underperforming.

3.14 As delays worsened, the Ministry became concerned about Capita's incentives as the integrator:

- It had made Capita responsible for both the field services and the integrator role, having included the latter function after the procurement had started. The contract required 'Chinese wall' separation between both Capita teams and the integrator to treat all suppliers impartially. However, the Ministry and other suppliers raised concerns about whether this was happening in practice. It also went against subsequent guidance from the centre of government – in 2014 the GDS stated that a service integrator should not also be involved in service provision because it "should not manage the performance of itself".¹⁸ We found no hard evidence that Capita's integrator team favoured Capita field services; in fact, we noted some evidence of disagreements between the two Capita teams.

¹⁸ Alex Holmes, 'Red lines for IT procurement', *Government Digital Service blog*, 26 February 2014, available at: <https://gds.blog.gov.uk>

- An external assurance review noted a potential conflict of interest caused by Capita receiving income from providing monitoring services under the existing system during delays to the programme. This potentially reduces its incentive to resolve development issues quickly, although we found no evidence of that being the case in practice.

3.15 The Ministry and Capita mutually agreed to resolve their contractual differences in June 2016. The parties broadly equalised their claims against each other over the life of the programme. The Ministry paid Capita £9.5 million in 2016, representing nearly half of the unpaid costs that the company had incurred on the programme. In return, Capita will pay the Ministry £9.3 million in 2017 and 2018, mainly representing a share of profits it made on the legacy contracts for electronic monitoring.¹⁹ As part of this agreement, the Ministry has decided to bring the system and service integrator role in-house, although it is still building the capability needed to manage the ongoing service.

3.16 While planning for a new system the Ministry has managed issues within the legacy service. In December 2016, the Ministry and Capita began investigating allegations that Capita employees had been paid by offenders to remove their tags and so avoid detection when breaching their curfews. The Ministry believes that the issue was centred in the London borough of Newham, involved employees that were in post before Capita took over the service, and may have involved some 37 offenders. A police investigation is currently in progress. The suppliers are taking steps to prevent this from happening again, including by making use of previously undisclosed data recorded by G4S equipment to better identify suspicious activity.

3.17 In January 2017, the Ministry identified and subsequently investigated with suppliers an increase in the number of alerts that are raised when a tag is tampered with. In February, G4S confirmed an issue with faulty straps affecting around 1% (115) of all straps in use. Only new straps that have entered the system since September 2016 are affected. Some enforcement action may have been taken against offenders or suspects in response to false tamper reports. But the Ministry considers it unlikely that a single tamper alert without additional evidence would have resulted in an offender being recalled to prison. It has been working with suppliers to investigate further. G4S has introduced further manufacturing quality checks and all potentially faulty straps will be removed or replaced. It will meet the costs incurred as a result of the issue.²⁰

¹⁹ Both of these amounts exclude VAT.

²⁰ Sam Gyimah on behalf of the Ministry of Justice, 'Justice update: Written statement – HCWS561', 28 March 2017, available at: www.parliament.uk/business/publications/written-questions-answers-statements

Time and budget constraints

3.18 The original timeline for the programme (Figure 5) was too tight given the ambition of the Ministry's requirements (Part Two). The Ministry initially allowed 15 months after signing the contract for the tags in August 2012 to develop, test, produce, integrate and deploy the new tags. The timeline was also increasingly condensed by events including the discovery of overbilling, the two failed procurements for the tags and other delays. Suppliers told us that the Ministry did not shift declared programme end dates in response to earlier slippage, which stripped out all existing contingency. Successive external assurance reviews commented on the limited assurance that milestones were achievable.

3.19 The lack of contingency in the timeline contributed to further delays because suppliers were unwilling to commit to milestones that they thought were unachievable. At one stage the suppliers' view of what would be a feasible delivery date diverged from the Ministry's expected delivery date by up to a year.

3.20 The suppliers also felt there was not enough financial contingency in the programme, characterised by the fact that:

- the Ministry took longer to approve change requests or make decisions that had an impact on costs, compared with those that had no financial impact;
- the Ministry was unwilling to release funds for partially met milestones. The payment arrangements required all suppliers to reach shared milestones together, to encourage joined-up working across the contracts. However, this did not work effectively in practice, and it particularly affected suppliers who had to wait for Steatite to catch up, as it had joined the programme later (paragraph 3.8); and
- the milestone payments themselves were only split into four across the whole development period, adding financial pressure on the suppliers. The suppliers went deep into their cash reserves, some relying on parent companies to maintain solvency. The Ministry is currently considering how to address this issue.

3.21 Suppliers considered that the Ministry should have shown more flexibility in providing additional time and releasing funding; especially given the context of a development programme for a new system, where integration and the Ministry's detailed requirements had to be worked through after the contracts were signed.

3.22 The Ministry is setting new baselines for its programme plan and timeline. It expects to deploy the new tags from the end of 2018. Transition is then expected to complete six months later. The extent to which this is realistic or not will largely depend on the plans of G4S, the new preferred bidder for the tags.

Joint working between the suppliers and with the Ministry

3.23 The Ministry's contractual and management approach was a barrier to collaborative working:

- The Ministry took steps through its contracts with suppliers to protect itself from blame-shifting. Under the integration agreement (Figure 8b), the suppliers are expected to settle claims between each other if they cause any delays to each other's work. However, this made suppliers reluctant to agree to milestones that exposed them to liability for any subsequent delays that they caused.
- Some of the inherent trade-offs between the lots posed further challenges to joint working. For example, it was in the mapping supplier's interest to demand extensive data from the tag, to improve the mapping service. But it was in the tag supplier's interest to limit data transmission because large and frequent flows reduce the tag's battery life (paragraph 3.5). This could have been overcome by the creation of an integrated high-level design, but this was not formally agreed until late in the process (paragraph 3.13).
- The suppliers considered that the Ministry's approach to making payment decisions weakened relationships (paragraphs 3.20 and 3.21). Suppliers already under financial stress became more reluctant to progress work under goodwill without confidence that they would be reimbursed.
- There was no co-location. The Ministry and suppliers were geographically dispersed, adding to the burden of holding face-to-face meetings. The programme team reported that some suppliers refused to meet them unless it said in the contract that they had to.

3.24 The Ministry intends to reform the culture of the programme to improve cooperative working with suppliers, and there are clear signs of progress. The long-standing disagreements with Capita and Steatite, and negotiations about the delays that affected the other suppliers, are now resolved. The Ministry and supplier representatives we met in our work expressed confidence that lessons have been learned from the past to deliver a successful programme. We note the Ministry's intention to adopt a less rigidly contractual approach in the future to support a better culture. However, much work remains to put in place working arrangements and appropriate commercial incentives to achieve this.

The Ministry's capabilities

3.25 The Ministry was unprepared for what emerged to be a transformation programme, rather than a simple re-procurement for an existing service. It adopted the tower model without adequate consideration of the capabilities required to manage it successfully. The Ministry did not have any experience of running tower models before adopting it as a procurement approach in 2011, despite knowing it was high risk. Tower models were new across government but we found no evidence that the Ministry drew on any examples of the approach being successfully applied to determine what capabilities it needed. There was also little input from operational contract managers whom could have provided constructive challenge to the approach and the Ministry's requirements.

3.26 The team originally put in place to manage the programme was small, and it continued to experience staff shortages over the years. The programme's project management office (PMO) was particularly overstretched, especially when it progressively took on roles that it considered belonged to the integrator, Capita. During the time of our audit, the team operated at a 50% vacancy rate with just three staff. Given these capacity constraints, the PMO tended to be reactive rather than proactive in responding to issues that arose. The Ministry was effectively constantly firefighting problems rather being able to plan ahead and mitigate issues before they escalated. This began with the overbilling scandal which significantly drained resources, although the Ministry could not have anticipated this particular issue.

3.27 In addition, there was a lack of continuity at senior management level. The programme has been led by five senior responsible owners (SROs) in its six-year life. Early SROs lacked the seniority, experience and time required to manage a programme of this size and complexity.

3.28 In the past year, the Ministry has taken steps to bolster its capability on the programme, although there are still large gaps it must address. It awarded a one-year contract to PA Consulting to increase its PMO capability and has plans to transfer knowledge to newly recruited permanent staff during that period. A new SRO, programme director and a new commercial lead also took up post since the end of 2015, reinvigorating the programme. Going forward, the Ministry will need to focus on addressing gaps in technical skills and developing the ongoing service integration and management function. This function will need to be in place by the end of 2018 and was characterised as still in its infancy in the Infrastructure and Projects Authority's March 2017 review.

3.29 It also remains to be seen whether the Ministry can maintain the required posts given its wider financial and resource constraints. There are high, competing demands for scarce skills, in particular for technical expertise. The Ministry itself is currently managing a portfolio of 16 other major projects, including extensive prison and courts reforms.²¹ In the case of electronic monitoring, many staff were pulled onto higher-priority programmes such as the Transforming Rehabilitation reforms. All four past SROs moved on to other such Ministry priorities. The Ministry has recently created a project delivery function to help it better manage resources and interdependencies across programmes. It also intends to establish a central resource pool for major projects to draw on. However, the necessity of maintaining sufficient expertise on this programme continues to be a critical risk for the Ministry to manage.

Distractions to the programme

3.30 By May 2014 the Ministry decided at the request of ministers to run a major pilot of the new tags. Although this was potentially a way to obtain much-needed insight into large-scale location monitoring, it was a significant distraction because of the stage at which it was introduced. The Ministry had originally intended to carry out a 'proof of concept' test, but expanded this to tagging 2,000 offenders released on temporary license, with the potential to go up to 6,000. The pilot was due to start in December 2014, primarily to provide early internal and external assurance of the tags' functionality. This was considered especially important as the issues with Buddi had made the Ministry more concerned about deploying this technology on a large scale.

3.31 The pilot represented a large new commitment for the replacement tag provider Steatite, which had only joined the programme in July 2014. Piloting the tags with real prisoners required the company to develop the tags to a much higher specification earlier than it had planned when signing its contract. Steatite diverted its resources to support the pilot but a combination of factors caused delays in producing the tags for both the pilot and the programme. The pilot was postponed until June 2015, de-scoped from 2,000 offenders to 200 volunteer staff. It was then halted to limit the burden on suppliers. The Ministry considered that the pilot had met its revised objectives, although it did not provide useful results from use on real offenders.

3.32 In light of growing delays to the programme, which shifted the tag delivery date from March 2015 to August 2018, the Ministry ended Steatite's contract in November 2015. It recognised that it bore its own share of responsibility so compensated the company £4.4 million on top of the £3.3 million it had paid during its contract.²² In hindsight, Steatite thinks it should have refused to support the pilot because the timeline was too tight and this affected its ability to deliver on the programme.

²¹ These are projects with whole-life costs and/or benefits of more than £30 million.

²² These numbers exclude VAT.

3.33 The pilot also distracted the Ministry because of the additional stress it placed on an already compressed timetable. Although it technically had a separate governance structure, in practice it diverted many of the same skilled staff. The programme team's involvement was especially time-consuming as it performed the systems integrator role, due to the pilot not being included in Capita's integrator contract. The current pilot using GPS-enabled tags (paragraph 2.16) is being managed separately from the programme and uses a different tag supplier.

The Ministry's governance and decision-making

3.34 The Ministry recognises that it bears its own share of responsibility for delays to the programme. In particular, it failed to meet its obligations with respect to decision-making. Contractually, the Ministry has five days to accept or reject a deliverable, yet it held some for up to 35 days. This made it harder for the Ministry to hold suppliers to account for their own delays. A serious example was that the Ministry took 16 months to make a final decision about how best to link the legacy G4S tags into the new monitoring system. It also changed its mind twice in the process, delaying the programme.²³ In part, the delay reflected divergent advice from the integrator and lot suppliers, although it also reflected divisions and governance weaknesses within the Ministry.

3.35 The Ministry suffered in particular from a lack of cohesive decision-making, characterised by:

- a lack of accountability to the SRO of the programme. Important decisions were made outside of the project board without the SRO's consent and were sometimes not properly documented;
- the Ministry's governance operated in four separate silos – operations, technical, commercial and the programme team. There was a lack of communication between them. For instance, the technical team felt it was not adequately consulted about the electronic link from the legacy G4S tags into the new system. The teams also at times had conflicting opinions – the technical team disagreed about allowing Capita to subcontract responsibility for the data centre, an area of subsequent difficulty (paragraph 3.9); and
- the suppliers also felt that the predominance of the commercial team over the others may have contributed to an unhelpful focus on commercial and financial criteria above deliverability.

²³ The current decision is to not build a link to the legacy tags, accepting that the new and legacy tags will operate on separate systems. This imposes an additional burden on the field service supplier. This added complexity is a result of the Ministry's need to maintain the legacy tags for longer than originally expected, because of the delays in producing the new tags.

3.36 The Ministry is in the process of reviewing its governance structure and putting a new one in place. A 2016 external assurance review reported improvements, including a closer working relationship between programme, policy and commercial teams, with key decisions taken at appropriate levels. The Ministry has also assigned a full-time (rather than part-time) SRO to the programme since 2015, although the current SRO has recently taken on other responsibilities in the Ministry.

The Ministry's management of smaller suppliers

3.37 Both unsuccessful SME tag suppliers told us that the Ministry did not adapt its approach enough to take into account their much more limited staffing and financial resources compared with the other suppliers. The programme would have been demanding for any supplier due to its inherent complexity and the Ministry's selected multi-lot approach, yet it was proportionately more challenging for the SMEs.

3.38 The following practices placed a particular burden on the suppliers and the tag SMEs during the procurement:

- The Ministry had reserved the right to develop and extend its requirements during the procurement, because it recognised that it could not fully detail them at the pre-contract stage.²⁴ Although allowed under the rules, for Buddi the impact of more detailed requirements was greater.
- Although Buddi had worked with government bodies before, it was more surprised than other bidders by the high burdens of the process, which it considered both unusual and unnecessary. It appears that the scale of commitment required was not communicated well enough and fully appreciated by Buddi from the outset.
- As an SME, the company was also concerned about its exposure to investing heavily in a contract without the financial security of a minimum guaranteed number of tags.

²⁴ For example, the OJEU notice published 9 February 2012 stated: "Due to the complexity and technical nature of the services to be procured, it is not possible to fully specify in advance any preferred solutions and the Ministry wishes to engage with bidders in order to identify what solutions are available on the market".

3.39 The post-contract stages of the programme were also demanding for the successor tag supplier Steatite. Examples included:

- The burden on the company to attend up to 40 meetings per week, a big commitment for an SME that began the programme with seven employees. It recruited four extra project managers in large part to help it comply with this obligation, but expressed discontent, shared by other suppliers, that many of these meetings did not produce actions or results. Other suppliers told us that they too had had to expand their management teams with temporary staff largely to service the many compulsory meetings.
- The diversion of the company's limited resources to new Ministry priorities (paragraphs 3.30 to 3.32).
- Steatite's financial constraints (paragraph 3.20) led it to reduce the size of its team working on the programme. The Ministry had originally envisaged committing a ring-fenced fund of some £2 million over the first two years of the contract to support SME innovation. Steatite had built expectations on this, but the funds were never agreed or paid.

Appendix One

Our audit approach

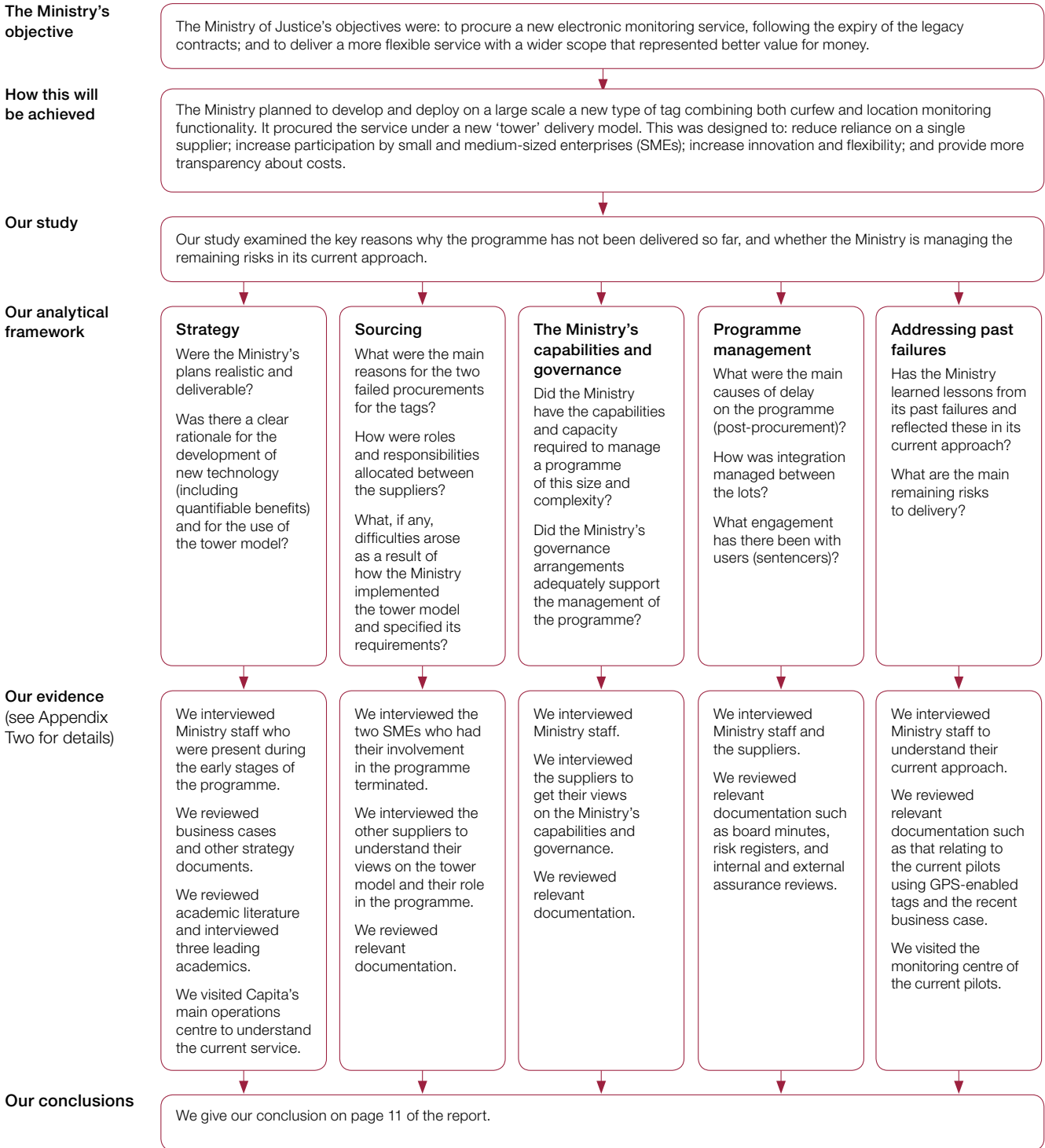
1 This study examined the key reasons why the electronic monitoring programme has not been delivered so far, and whether the Ministry of Justice (the Ministry) is addressing the remaining risks in its current approach. We looked at:

- the strategy for the programme, including the rationale for developing new technology and rolling it out on a large scale, and for adopting the tower model;
- what the main causes of delay have been, and reasons why there have been two failed procurements for the tags;
- issues, if any, that arose because of how the Ministry chose to implement the tower model and assign roles and responsibilities between the lots;
- whether the Ministry had the capabilities, capacity and governance arrangements in place to manage a programme of this size and complexity; and
- whether the Ministry's current approach shows it has learned lessons, and what the main remaining risks are.

This report does not cover the management of the existing service, which we have reported on previously.

2 Our audit approach is summarised in **Figure 9** overleaf. Our evidence base is described in Appendix Two.

Figure 9
Our audit approach



Appendix Two

Our evidence base

1 Our main methods were:

Semi-structured interviews with:

- **Programme staff** – current members of the programme team, and past members including the previous four senior responsible owners (SROs).
- **Other Ministry of Justice (the Ministry) staff** – the internal audit team that reviewed the programme in 2016 and the project lead of the current location monitoring pilots using GPS.
- **Suppliers** – the existing suppliers Capita and Airbus. We also spoke to the past suppliers for the tags, Buddi and Steatite.
- **Other parties** – three leading UK-based academics active in the field of the application of electronic monitoring to criminal justice.

Reviewing documents:

- Documents pertaining to the early stages of the programme, including business cases, and other strategy documents.
- Board minutes and risk registers for the programme. We also reviewed external assurance documents by the Cabinet Office and a large consultancy firm employed by the Ministry.
- Academic literature on the effectiveness of electronic monitoring. We reviewed documents relating to the current location monitoring pilots.
- Contract documentation including the integration agreement signed between the parties, and documentation relating to the payments to Capita and Steatite.

Site visits:

- We visited Capita's main operations centre to understand how the monitoring of tagged offenders works, and to get an overview of the legacy G4S tags that are still being used.
- We also visited the monitoring centre of the current pilot areas to understand the practicalities of GPS operations, implications for stakeholders, and how learning will be captured for the programme.

Appendix Three

The original objectives of the programme

1 The original business case for the new generation electronic monitoring programme in late 2011 listed 11 strategic objectives, without prioritisation. These were to:

- reduce the overall cost of the contracted operations;
- increase the inter-operability and flexibility of use of the services by and between providers including probation trusts, police, local authorities and integrated offender management in the community setting;
- support the 'Transforming Justice' programme by incorporating a number of service changes, including a payment mechanism that supports expected fluctuations in the volume of services;
- stimulate the competitive environment to attract new entrants, encourage new ideas and drive down costs;
- explore potential provider proposals for investment in information technologies to improve the flow of information among key stakeholders;
- enable market access and introduction of new technologies as they develop and mature;
- explore potential provider proposals for integrating delivery with other areas of operation, for example, prisoner escort and custody services, probation services and prisons;
- develop an alternative cost and performance mechanism to incentivise the efficient use of contractors' resources including vehicles and staff;
- adopt an appropriate form of contract to improve the legal and working relationships between the National Offender Management Service (now called Her Majesty's Prison and Probation Service) and contractors;

- ensure that the successful bidders offer a service that complies with the Ministry of Justice's information and communication technology (ICT) requirements for the handling of restricted data, which is likely to require that the contractors' staff, processes, procedures and ICT solutions/infrastructure will require formal information assurance (IA) accreditation; and
- explore with bidders options (innovation) for the introduction of secure methods for the capture/exchange of relevant restricted data through compliant secure means, in particular an electronic solution from court order to end providers (including stakeholders).

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