



Knowledge & Information Services (KIS) Strategy

April 2014 – March 2018

Delivering high-performing, customer focused, efficient and effective Knowledge & Information Services and real cashable savings

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V1.0	Interim ICT Strategy report Issued to Business Transformation Programme Board (BTPB)	M Ebert	10/12/12	Includes feedback to v0.5	10/12/12
V1.1	Interim ICT Strategy report revised after BTPB	M Ebert	13/12/12	Reflects feedback from Programme Board 13/12/1012	13/12/12
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V4.0	Final Interim ICT Strategy report	M Ebert	21/03/13	Reflects Fire Authority amendment at Section 4.4.5, & updated status at Section 1.3.	21/03/13
V5.0 – V5.8	4 year ICT Strategy	D Tate	19/02/14	Interim ICT Strategy report V4.0 converted in incremental steps into 4 year ICT Strategy 2014 – 2018 with no alterations of substance to the strategic objectives.	19/02/14
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Record of Issue - KIS Strategy

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1. Introduction

1.1 Background

- 1.1.1 This Knowledge and Information Services (KIS) Strategy is a key component in transforming Buckinghamshire & Milton Keynes Fire Authority (BMKFA) and Buckinghamshire Fire and Rescue Service (BFRS).
- 1.2.1 It was developed through the Business Transformation Programme (Aug 2011 – Sept 2013) for ICT and Information to resolve current issues with ICT and Information, and to meet the agreed and endorsed Strategic Business Requirements (SBRs) listed in Appendix C.
- 1.2.2 This KIS Strategy sets out how it will deliver high-performing, customer focused, efficient and effective Knowledge and Information Services and real cashable savings.
- 1.2.3 The Strategic Business Requirements listed in Appendix C are aligned to both the strategic direction of the Service and its priorities and have been endorsed by the Senior Management Team. Therefore, there is a direct relationship between corporate and programme governance, and the need for formal oversight of the programme. In 2013 the Service introduced a revised governance structure and within that new structure this strategy falls broadly within the terms of reference of the Business Transformation Board. It is intended that the Performance Management Board, which also formed a part of the new governance structure, will meet regularly to review, among other things, KIS strategy progress, consider changes to it and agree any delivery projects proposed in support of the Strategy, subject to the approval of the Business Transformation Board, the Strategic Management Board, and as appropriate Executive Committee.
- 1.2.4 Finally, there is a recognised need to continue to change and evolve working practices and behaviours within the KIS environment.

2. Executive Summary

2.1 Strategic Principles

- 2.1.1 The strategic principles found in this KIS Strategy align well with the strategic principles in the UK Government's ICT Strategy (2011), which is based on four themes:
 - 1) Reducing waste and project failure;
 - 2) Creating a common ICT infrastructure;
 - 3) Using ICT to enable and deliver change;
 - 4) Strengthening governance;
- 2.1.2 Under Item 1, there are four principles – to share and re-use solutions, to improve sourcing, to apply agile development methods, and to apply benchmarking and performance measuring.
- 2.1.3 Under Item 2, the five principles are
 - to apply common standards,
 - to use a standard cloud platform,

- to promote interoperability,
- to use modern knowledge-based service delivery,
- to use common document standards.

- 2.1.4 Under Item 3, there are three principles - to develop personalised and responsive services, to develop collaborative and mobile working, and to scan the horizon for future-proofing.
- 2.1.5 Under Item 4, the four principles are – to nurture opportunities for innovation, to scrutinise, measure and enforce compliance with mandated standards and actions, to identify successful solutions and leverage their wider adoption, and to coordinate engagement with suppliers to commoditise services and deliver better commercial outcomes.
- 2.1.6 These principles will underpin the ICT aspects of the BMKFA/BFRS KIS Strategy.

2.2 Where the Service has come from and where it is now with its Knowledge and Information Services' provision?

- 2.2.1 In the Strategic Review of Resources (June 2012), 34 issues were identified that needed to be addressed. Whilst recognising a number of things that were being done well, the effectiveness scorecard showed a low level of effectiveness overall, with 15 of the 24 indicators shown as red while nine were amber. The efficiency benchmarking also showed potential for improvement. These three sources of analysis (the overall number of issues that needed to be addressed, the effectiveness scorecard and the efficiency benchmarking) provide three views of the state of KIS provision within the Service.
- 2.2.2 In addition to these three views, the KIS Strategy also considers the current state from the perspective of the Services business systems/applications. Due to the paucity of documentation for the ICT environment (apart from network information), this material was not easy to collate and largely remains outstanding. Nevertheless, a list of applications has been compiled as part of the strategy process. This will need validating, testing updating and maintaining throughout strategy execution.
- 2.2.3 There are a number of strategic applications in use (notably the mobilising, availability, rota management, finance, human resources, payroll and transport applications). There are also a wide range of smaller applications (such as front-end and back-end spreadsheets and specialist databases) that have mostly been developed or procured to fill gaps in the coverage of the strategic applications. Several of these smaller applications pose a risk to service delivery continuity as their maintenance and upkeep have not been catered for within resourcing provisions.
- 2.2.4 As is well-known within the Service, applications are mostly stand-alone and poorly joined-up. Many manual processes therefore have to take place to link everything together, with resultant inefficiency, ineffectiveness and proneness to error. The applications identified include communications (28 applications), finance (4), GIS (6), HR (1), office (16), Performance and Intelligence (2), Property (5), H&S (1), Response/Operations (10) and Transport (3). Some of these application exist in more than one form (e.g. MS Word '97 and MS Word 2010 are two applications not one), and these variants will increase the number of application shown above. There is considerable scope for rationalisation and optimisation.
- 2.2.5 The ICT infrastructure is distributed over 21 locations and, as of September 2013, is connected together over the Public Services Network. This has resulted in a very substantial improvement, particularly for our station crews, eliminating the frustrations that

they had previously been experienced on a daily basis and providing a much more stable, robust and responsive experience in their use of business systems/applications.

2.3 Where does the Service want to get to with its Knowledge and Information Services?

- 2.3.1 As part of this KIS Strategy, a Vision Statement has been developed (see section 5) showing where we expect to be by March 2018.
- 2.3.2 In support of this, a set of 36 Strategic Business Requirements and a corresponding Outcomes Map has been developed which, taken together, lay out the future state that the Service wants to get to. The Strategic Business Requirements and the associated Outcomes Map forms the basis for this KIS Strategy.
- 2.3.3 The journey, simply stated, is that the key issues, effectiveness scorecard and efficiency benchmarking together identify the current state, while the Strategic Business Requirements identify the endorsed future state. The new KIS organisation structure provides a mechanism for managing and bridging the gap between KIS Users and KIS Providers, while this KIS Strategy articulates the means.
- 2.3.4 Finally, some key themes for the future state, as seen from the twin perspectives of the KIS Users and KIS Providers have been provided and summarised.

2.4 How can the Service get there?

- 2.4.1 A set of Outcomes has been developed that will deliver the Strategic Business Requirements. These have been portrayed on an Outcomes Map, which distributes them over a four-year period. This presentation clearly shows short-term (0-6 months), medium-term (6-24 months) and longer-term (24-48 months) deliverables.
- 2.4.2 Alongside the Outcomes Map, seven strategic themes have been identified and form the basis for the Project Portfolio and Road Map that will deliver this KIS Strategy:
 - 1) Public Safety - Prevention, Protection and Response;
 - 2) ICT Development;
 - 3) Support Systems;
 - 4) Cash Saving;
 - 5) Governance;
 - 6) Organisational Development;
 - 7) Communication.

2.5 Project Portfolio

- 2.5.1 The Project Portfolio is marshalled around the seven strategic themes listed in Section 2.4.
- 2.5.2 In outline, the projects under the seven themes are:
 - Theme 1: Combined Fire Control - Basic and optimised; Joining-up Response Support Information; Performance and Intelligence; Mobile Working of Community Protection Team; Self-Service Rostering; and Integration of Rostering and Payroll;
 - Theme 2: Ongoing ICT service Delivery; ICT Protocols & Procedures; Corporate Information Store; Wide Area and Local Area Communication; Mobile Communications; Mobile Working; Documentation of ICT Environment; Optimisation of Application Development; Internet/Intranet/Documentation Management; Optimisation of Infrastructure; Training; Optimisation of Sourcing Routes; Supplier Relationship Management; Service Desk; Disaster recovery;

- Theme 3: Review of Finance, Personnel and Payroll; SAP Phase 2 – Training; SAP Phase 3 – Self Service; Asset Management;
- Theme 4: Identification and Realisation of Real Cashable Savings;
- Theme 5: ICT Governance;
- Theme 6: Organisational Design, Role Definition, Recruitment; Staff Development and Staff Performance;
- Theme 7: Communications.

2.6 Road Map

2.6.1 A Road Map laying out the projects in the Project Portfolio is shown in Section 8, Figure 8.1.

3. Strategic Principles

3.1 Introduction

3.1.1 This section outlines the principles that will be followed in defining and executing this KIS Strategy.

3.2 Principles from UK Government’s ICT Strategy

3.2.1 As far as prudently possible and proportionate, BFRS will follow the principles within the UK Government’s ICT Strategy (Cabinet Office, March 2011, Crown Copyright), which consists of four themes:

- 1) Reducing waste and project failure, and stimulating economic growth;
- 2) Creating a common ICT infrastructure;
- 3) Using ICT to enable and deliver change;
- 4) Strengthening governance;

3.2.2 See Appendix A for a brief distillation of the principles within the four themes of the Government’s ICT Strategy.

3.3 Principles Applicable to BFRS KIS Strategy

3.3.1 Eliminating the principles that are relevant to national Government, but not relevant to the Fire and Rescue Service, leaves the following principles, with a brief commentary on how they will be applied to BFRS:

	Principles	Application to BFRS
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1 Reducing Waste and Project Failure

	<i>Consider technology earlier in policy making</i>	Consider policy and technology in tandem, with the impact on the technological environment considered as part of policy development, and the policy opportunities offered by technology routinely identified and considered.
	<i>Move away from large and expensive ICT projects</i>	Ensure that the KIS Strategy is all-encompassing, but the projects used to implement are manageable

	Principles	Application to BFRS
		in size.
	<i>End large-company dominance, and remove barriers to SMEs</i>	Follow central Government in this regard, with principles like value-for-money, whole life costs, dynamism and flexibility governing procurement decisions.
	<i>Share and re-use solutions</i>	Buy each item once only. This will be facilitated by holding single corporate portfolios of business systems and KIS projects.
	<i>Improve sourcing of ICT, leveraging scale towards VFM</i>	Source everything strategically not tactically, involving partner organisations wherever prudent to do so.
	<i>Apply agile methods</i>	Stay nimble and responsive in developing knowledge and Information Services, but also employ the right disciplines.
	<i>Apply benchmarking and performance measurement</i>	Build on the first round of benchmarking that has been done by identifying improvements.

2 Creating a Common ICT Infrastructure

	<i>Apply common technology standards</i>	Use standards wherever possible, and beware of suppliers' proprietary agendas.
	<i>Use a standardised cloud platform</i>	Adopt the cloud prudently, and in stages, as it becomes more mature at a national level. Start with things like Microsoft Office 365.
	<i>Promote interoperability through open standards</i>	Specify interoperability and open standards in all procurements, except where security issues or other special circumstances militate against doing so.
	<i>Use modern knowledge-based service delivery</i>	Support knowledge-based service delivery by establishing an Information Management Department, or similar, which will supersede and subsume existing ICT structures.
	<i>Use standard document formats</i>	Develop tools and templates to enable seamless portability between business systems.

3 Using ICT to Enable and Deliver Change

	<i>Develop agile, personalised and responsive services</i>	Use such techniques to address the need for timely and accurate responses to changing requirements.
	<i>Develop collaborative and mobile public sector working</i>	Apply this principle to working within the Service, with partner agencies, and with all other stakeholder groups.
	<i>Scan the horizon for future-proofed solutions</i>	Hold this aspiration in mind to achieve dividends in terms of value for money and return on investment (although history would suggest that the Government's aim of future-proofing might not be fully achievable).

	Principles	Application to BFRS
4 Strengthening Governance		
	<i>Nurture opportunities for innovation</i>	Establish good governance, which will promote, and not stifle, innovation.
	<i>Scrutinise, measure and enforce compliance with mandated standards and actions</i>	Establish and maintain all KIS development in a properly controlled environment, with the right balance between controls and freedoms.
	<i>Identify successful solutions and leverage their wider adoption</i>	Seek out potential sources of successful solutions within the Service itself, in other Fire and Rescue Services, in the wider public sector, and in the private sector.
	<i>Coordinate engagement with suppliers to commoditise services and deliver better commercial outcomes</i>	Start by consolidating the current suppliers, alongside a close examination of alternative sources of supply.

3.4 In Summary ...

3.4.1 These principles apply well to BFRS. As well as chiming with the UK Government's ICT Strategy, they are consistent with the BFRS Strategic Business Requirements and Outcomes. The Society of IT Managers (SOCITM, www.socitm.net) has submitted a response to the UK Government's ICT Strategy, but has proposed very few amendments, while the Chief Fire Officers' Association (CFOA, www.cfoa.org.uk) has a sub-group focused on ICT which does good work. It is focused on targeted projects and initiatives, and provides little strategic direction on ICT over and above the UK Government ICT Strategy.

4. Where is the Service now with its Knowledge and Information Services?

4.1 Introduction

4.1.1 In the Strategic Review of Resources Report (V2.0, dated 11/06/2012), several views were developed to identify the current state of the Service's functions, including those pertaining to ICT and Information. Two of these views - key issues and effectiveness scorecard - are summarised in sections 4.2 and 4.3 respectively and form the rationale for taking forward the KIS developments outlined in this strategy.

4.1.2 Other views are:

- The business applications – see Section 4.4;
- Costs - see Section 4.5;
- People - see Section 4.6;
- Infrastructure – see Section 4.7.

4.2 Key Issues

4.2.1 In Section 5 of the Strategic Review of Resources Report, a total of 34 issues were identified. These are reproduced for ease of reference in Appendix B of this report.

4.2.2 The following summary of issues has been brought-forward from Section 5 of the Strategic Review of Resources Report. *Note: It is recognised that progress has been made to address some of these issues since the Strategic Review of Resources Report:*

1. *ICT Strategy.* There is no up-to-date, comprehensive, coherent ICT Strategy for the organisation, and no clear ownership;
2. *ICT Governance.* There is no effective ICT governance framework for sponsorship, direction, authorisation of ICT developments, applications development and management, or change management;
3. *ICT Information User Needs.* ICT systems are not joined-up and interoperable, resulting in multiple manual entry of the same information. There is no Information Architecture, Systems Architecture, Data Architecture or Applications Architecture to record the ICT environment, and guide its ongoing development. Personnel lack access to current and reliable information;
4. *ICT Systems Access.* System access is a major cause of frustration and irritation for many members of the user community, and remote working, an important capability especially for operational officers, is still not working as it should;
5. *ICT Systems Responsiveness.* The system response is often very slow, especially for remote working, but even within the HQ building, which has led to awkward “work arounds”;
6. *ICT Support.* Operational users believe that there is a lack of understanding of the requirements of a 365-24-7 emergency service, and a lack of understanding of the risks of failure. There is also a perceived lack of empathy and understanding in what is important to the customer, rather than the ICT department.
7. *ICT Resourcing.* There are inadequate capability and capacity within the organisation to provide a co-ordinated and comprehensive ICT function;
8. *ICT Infrastructure and Investment.* There has been a recognised lack of investment over a number of years, and the infrastructure does not support the Service as it should. Poor communications mean that the reliability of remote access is still a significant issue. Connections frequently break down, meaning that users have to keep logging on with attendant delays, frustrations, and loss of productivity;
9. *ICT Applications.* Historically, much of the application development has not followed a rigorous development methodology, with many of the aspects of good application development not in place, including outcome-based functional specifications, project plans, and a co-ordinated process. Processes have not been systematically documented across the organisation. While there is a useful network architecture, there are no information architecture, systems architecture, applications architecture or data model to aid understanding of the ICT environment and guide developments.

4.2.3 These issues are the issues that this KIS Strategy and the KIS group will address.

4.3 Effectiveness Scorecard

4.3.1 The following effectiveness scorecard has been brought forward from Section 7 of the Strategic Review of Resources Report.

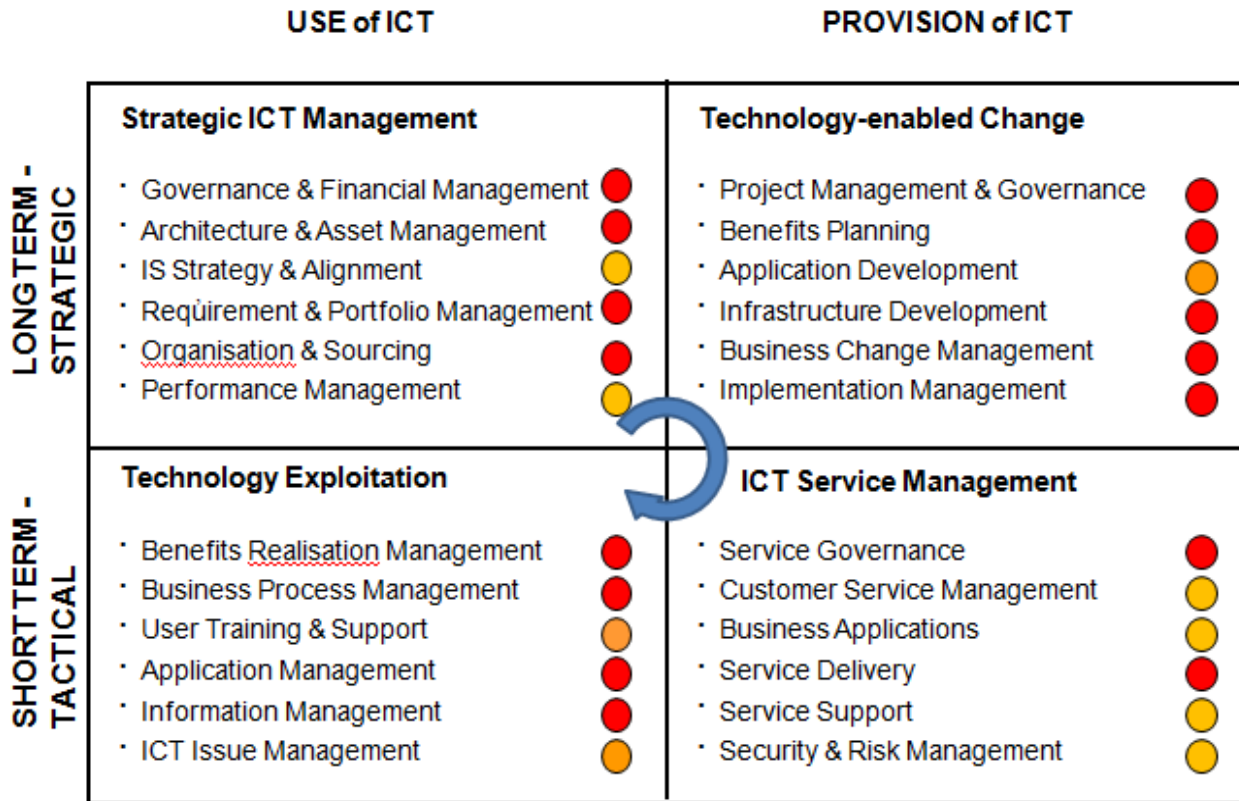


Figure 4.1: Effectiveness Scorecard for KIS

4.3.2 For a commentary on each of the scorecard parameters, see the Strategic Review of Resources Report, Section 7 and Appendix G.

4.3.3 A key aim of this KIS Strategy is to progress these issues such that the effectiveness scorecard steadily moves towards being completely green.

4.4 Current Business Applications

4.4.1 The main functions, applications and flows currently in use across the service are illustrated in Figure 4.2, and a more complete set of applications grouped by function is shown in Figure 4.3

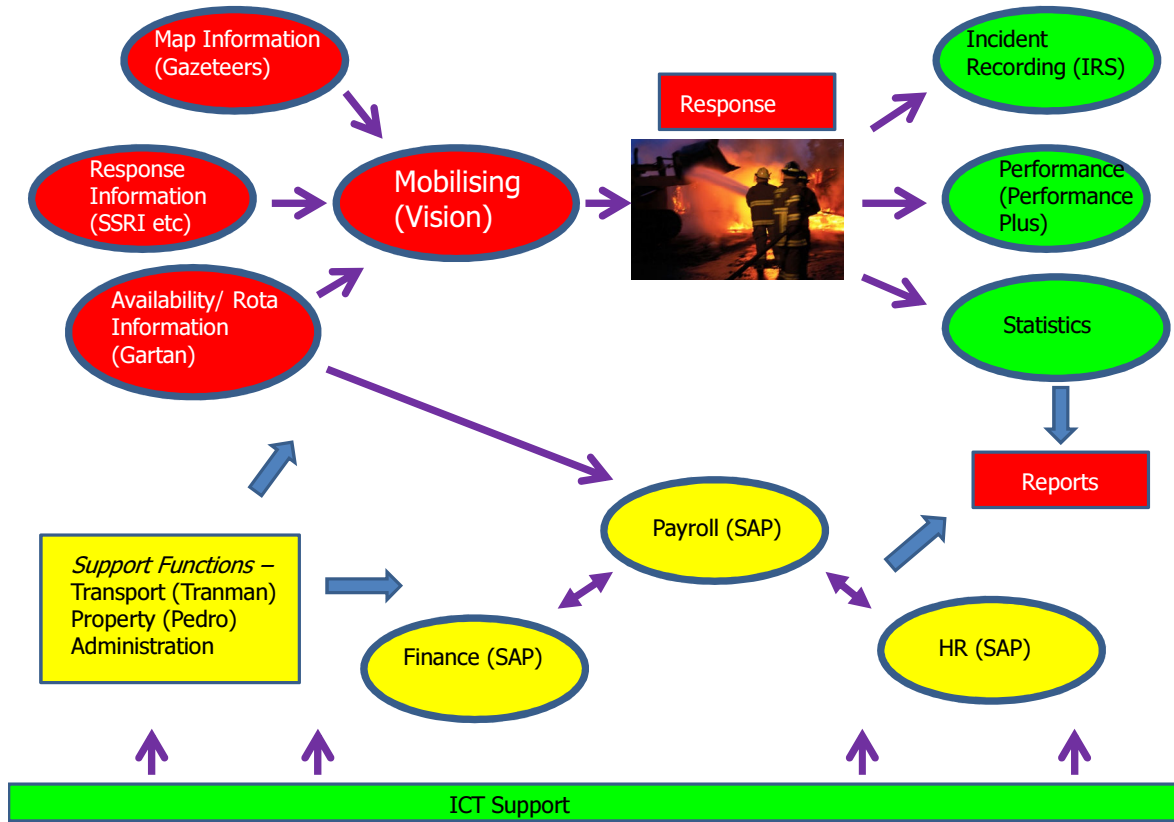


Figure 4.2: Main Functions, Applications and Flows

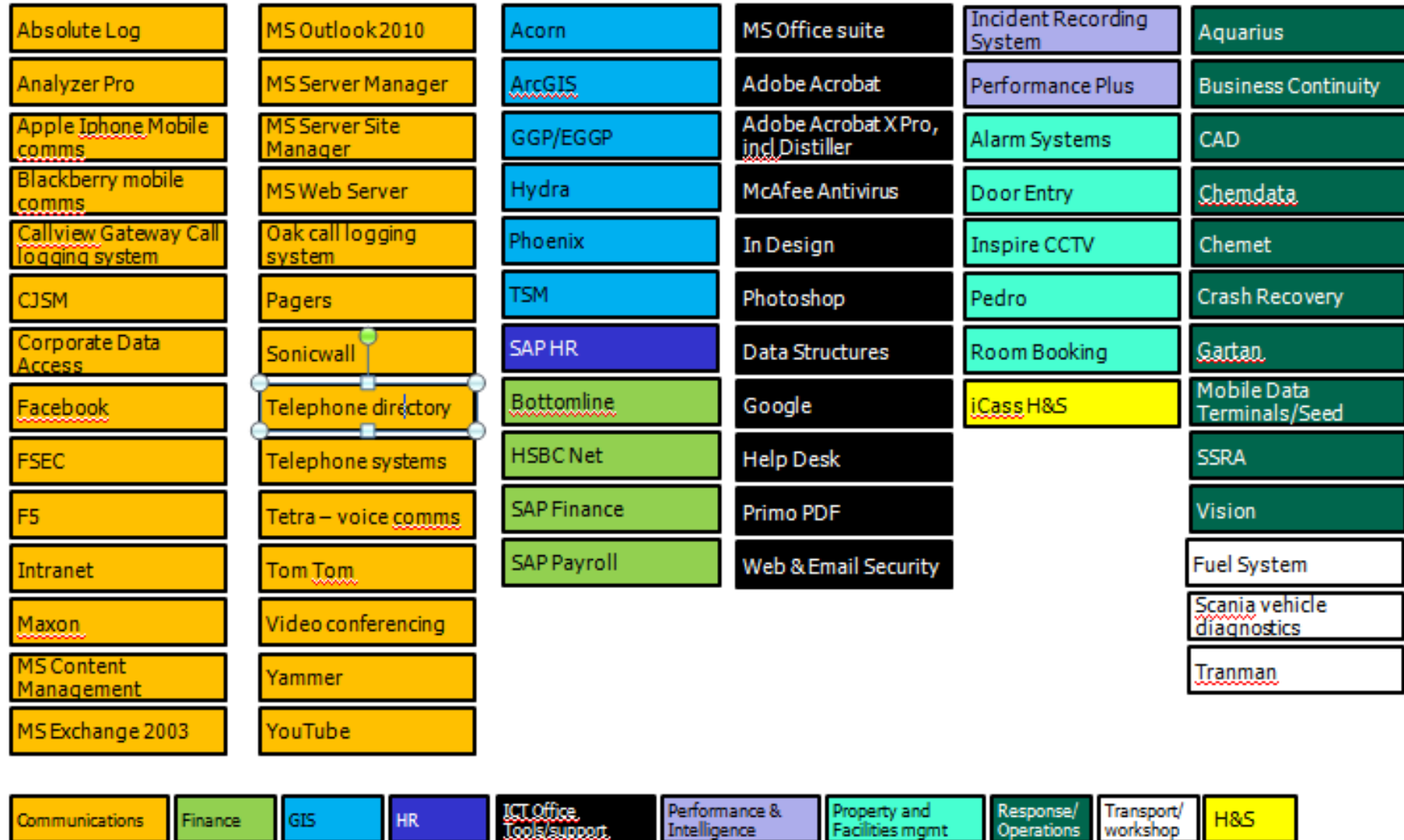


Figure 4.3: Applications by Function

4.5 Costs

4.5.1 The baseline summary of BFRS's KIS spend for 2013/2014 is shown below:

Cost Code	Rev/Capital	2011/12		2012/13		2013/14		2014/15
		Budget £	Actual £	Budget £	Actual £	Budget £	Projected £	Budget £
UBACI	Revenue	268,118	277,177	231,052 ¹	232,978	210,641	153,177	169,262
UGACS	Revenue	0	0	0	0	71,322	44,295	84,987
UGACP	Revenue	822,803	586,942	775,548 ²	590,683	652,588	706,196	707,282
UGAIT	Revenue	303,256	241,498	538,756 ³	469,042	542,085	511,452	580,085
Total	Revenue	1,394,177	1,105,617	1,545,356	1,292,703	1,476,636	1,415,120⁴	1,541,616⁵
CFA.09.FIT	Capital		179,440		155,381	99,000	99,468	360,000 ⁶

4.5.2 The opportunities for cash savings are many and are highlighted in this strategy. Good work by the newly formed Knowledge and Information Services Group in the current year has resulted in projected revenue costs for 2013/2014 being significantly less (£1,415,120) than its original planned budget (£1,476,636)

¹ Savings of £31k through KIS restructuring and £6k through removal of car lease costs

² Savings of £38k on computer maintenance/software/hardware and £1.5k through removal of car lease costs

³ Growth of £212k for Firelink and £20k computer software in support of the TVCCP

⁴ Savings realised largely through KIS restructuring

⁵ Growth of £65k to support successful Capital growth bid for the ICU (£60k) & ICT (£5k)

⁶ This budget figure includes 100k that was moved from the 2013/14 budget for the telephony project

4.6 People

4.6.1 A best practice and professional service should include all KIS governance, strategy, projects, applications development and management, support and maintenance arrangements, integrated and run as a coherent whole. This scope of Knowledge and Information services is valid regardless of which team or individual provide them.

4.7 Infrastructure

4.7.1 In all, there are 21 locations across the Service, including the Stocklake site, which serves as the headquarters, the base for the Aylesbury fire station, the urban search and rescue facility and the workshop. A project is in progress to update and standardise the desktop environment, and a project is underway to increase the number of virtualised servers, thus reducing the overall number of servers.

4.7.2 For security reasons, no further detail is provided in this document.

4.8 In Summary...

4.8.1 The current state of the Service's Knowledge and Information Services has been identified through a range of 34 key issues, an effectiveness scorecard, an appraisal of its Business systems, which show them to be largely isolated, not joined up, and with many manual processes interspersed between them, the costs and people.

4.8.2 The next section considers where the Service wants to get to.

5. Where does the Service want to get to?

5.1 Introduction

5.1.1 This section looks at the future direction for KIS in the Service.

5.1.2 It considers:

- 1) Support for the Service's Vision;
- 2) Future state for KIS in 2018;
- 3) The Strategic Business Requirements that will underpin the future state, and which are the basis for this KIS Strategy;
- 4) The journey, simply stated;
- 5) Key themes, as viewed by KIS Users and KIS Providers.

5.2 KIS Support for the Service's Vision

5.2.1 The KIS mission is to contribute to delivering the Service's vision: *'To make Buckinghamshire and Milton Keynes the safest areas in England in which to live, work and travel'*.

5.2.2 The KIS service of the future will support this vision by providing what the Service needs quickly, reliably and securely in all endorsed modes, and being seamlessly integrated with the business, as well as responsive, well-directed and managed.

5.3 Future State for KIS in 2018

5.3.1 The following is the future state for KIS in the Buckinghamshire & Milton Keynes Fire Authority in 2018, from the perspective of a typical staff member.

People don't talk about IT or Information issues anymore. They don't see a need to. All they know is that their needs are well understood by the KIS group, they have mobile devices that are always connected, quick and have real time secure information that they can trust as accurate and up to date. People are also much more disciplined and respectful of KIS and its capability and importance to the Service. This respect is the result of a lot of hard work, not only from KIS but from the whole Service.

The results don't come from just investing in new systems. They came from expanding the role and responsibility of KIS and from adopting a more intelligent approach to it. Our KIS group is responsible for all IT and Information services – from their provision right through to their use in all of the different areas of the Service. They manage both aspects over the long as well as the short term, and in doing so, see the whole cycle of a solution - from its inception, design and testing all the way through to its use. This broader role for the KIS group means that they understand and are much more in tune with our needs as users and that of the Service as a whole.

Our KIS governance model helps to achieve the above, and its focus on effective use means that we make much better use of the business systems and information that we already have. We use our KIS effectiveness scorecard to assess our progress and performance, and although it's mostly all now green (with a few ambers), it wasn't always that way. We run the scorecard every 12 months to ensure that we are maximising the potential that we have and the investments that we have made. It's fair to say that as a result of the new Customer Services culture within KIS, the Service now understands what its staff use to do their jobs and what they value - and in doing so, we are able to focus on maximising that use building on that value. Getting the relationship right between use and provision means we get significantly better value for the money from the resources we invest.

The creation of intelligence and its use to be more efficient and effective has become a theme at BMKFA. The information that we get from our service desk is particularly impressive and has been modelled by other directorates within the Services and is being sold to other FRS's. We don't know how we used to make function effectively without it. We have this information because we have much more discipline – from the customer and from the KIS group – in using the service desk as the single point of information capture for incidents. It now captures everything from password re-sets to FOI requests to new application requests and is being used in POD to manage case work and within Finance to manage their work queues. The subsequent information that is captured is used proactively by KIS, Finance, POD and other Providers to target the root causes to issues and manage down demands by highlighting user training issues and frequent callers who have specific issues. We now have a single sign-on and mobile desktop, so people can log on at any time anywhere! This is just one example of how bringing the ICT and Information teams together under KIS and creating a Customer Services team within it is more efficient, effective and influential than the services previously provided. From a user's point of view, it's quick, flexible and responsive. It is also proactive at spotting issues and putting in place solutions before things become visible to users or, failing that, too much of a problem.

Part of the reason that we have achieved so much is that the Service has Strategic Business Requirements for the function – or SBRs as we all call them. They were first defined four years ago, but we re-refresh and validate them every 12 months, and they have stood the test of time. The KIS team say the SBRs provide clear direction to users, as well as to them in their delivery. These SBRs are the foundation of our KIS strategy and all that we do. We have built the Outcomes Map to outline how we deliver them.

The results of all the hard work are clear. User satisfaction is high and the Service works much closer with KIS in almost everything we do and involves them from the outset because of the value that they add to decisions about how to take things forward. It helps that, as part of the journey, we have delivered real cashable savings. We began a two-track programme four years ago – one to implement targeted cashable savings and the other to assess invest-to-save initiatives. The two work hand-in-hand, and as a result of all of the changes above, we now invest more consciously and intelligently. This two-track programme means we have delivered cashable savings back to BMKFA that we wouldn't have thought possible four years ago.

When we look back four years, we had the ambition but none of the above. The Service has worked hard to deliver our Moving Forward vision, and I can now say with confidence that the service that BMKFA provides to its citizens is significantly better quality and value for money. This is a Service that we feel proud to be part of!

5.4 Strategic Business Requirements

- 5.4.1 In the Strategic Review of Resources Report (V2.0, dated 11/06/2012), a set of Strategic Business Requirements was developed. These Strategic Business Requirements provide a robust statement of the target future state towards which the Service is heading.
- 5.4.2 The Strategic Business Requirements have been reproduced for ease of reference in Appendix C. They were endorsed by the Senior Management Team in April 2012.

5.5 The Journey, Simply Stated

- 5.5.1 The graphic in Figure 5.1 illustrates the journey of the KIS Strategy from where we are now to where we want to be.
- 5.5.2 The current state is identified by the issues, efficiency benchmarking, and effectiveness scorecard, while the future state is identified by the Strategic Business Requirements.

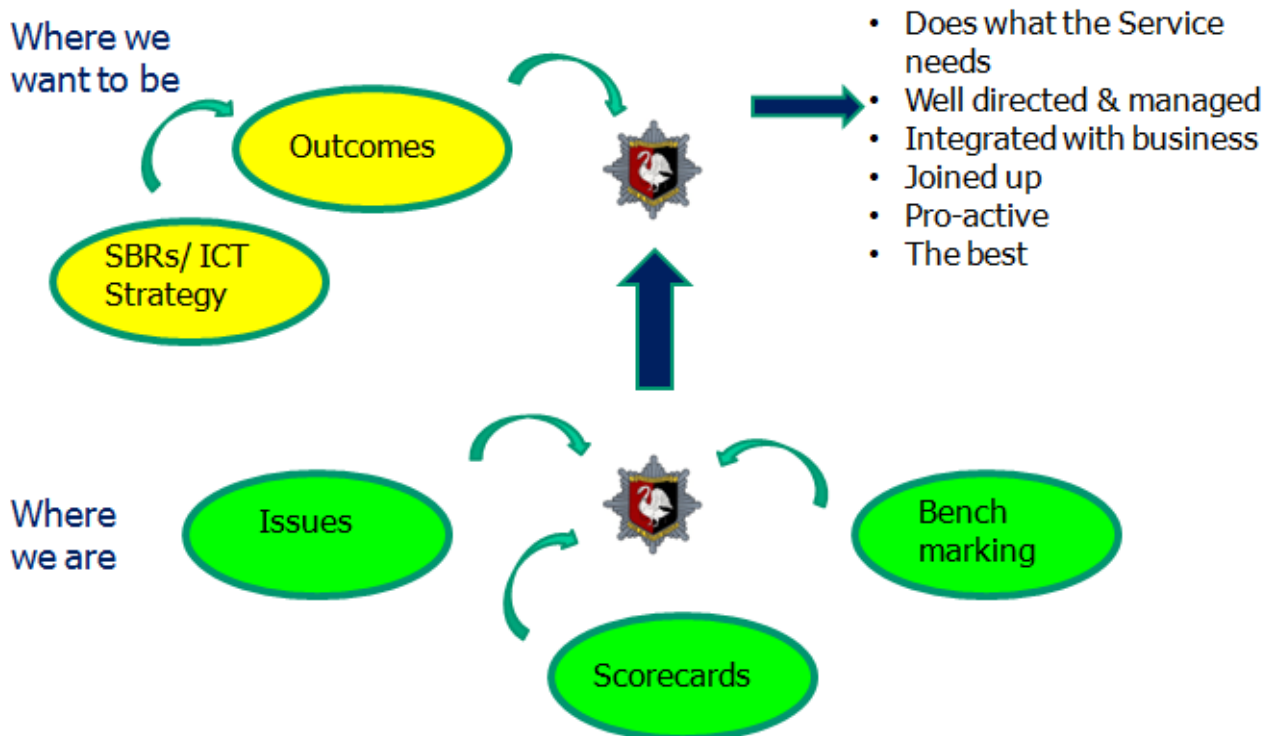


Figure 5.1: The Journey from Where We Are to Where We Want to Be

5.6 Key Themes, as Viewed by KIS Users and Providers

5.6.1 As another way of seeing the journey, there are some key themes that will be delivered through this strategy. They are expressed in terms of the two-way communication between the users and providers of Knowledge and Information services, the single feature that was identified as the root cause behind the current state. The following features are expected to be achieved as a result of delivering the transformation:

5.6.2 KIS providers communicate well with the rest of the organisation ...

- They are co-ordinated across the Service;
- They are pro-active in identifying requirements;
- They are good at communicating progress in a disciplined manner;
- They are good at communicating plans, objectives, and what the Service can expect, on the intranet and in other visible places;
- They are good at running projects in a disciplined manner;
- They are good at expectation management with the user community;

So ... the user community knows how to work with the KIS providers to best effect.

5.6.3 KIS users communicate well with KIS providers ...

- They provide the necessary leadership & direction;
- They are co-ordinated across the Service;
- They are clear on what they want and when they want it;
- They are realistic in their expectations;
- They have discipline in running their projects;
- They engage early with KIS providers;
- They have a co-ordinated portfolio of requirements and projects;
- They are good at prioritising new requirements in relation to the overall portfolio of requirements.

So ... KIS providers are well-sighted on where they should be going and what the user community wants, and are able to deal with a well-disciplined customer.

5.7 The Shift from ICT Provision to Information and its Management

5.7.1 One of the key aims of this KIS strategy is the shift from ICT provision to information and knowledge, and its management across the Service.

5.7.2 Figure 5.2 indicates the information journey across the Service, and how it engages users and providers at all levels.

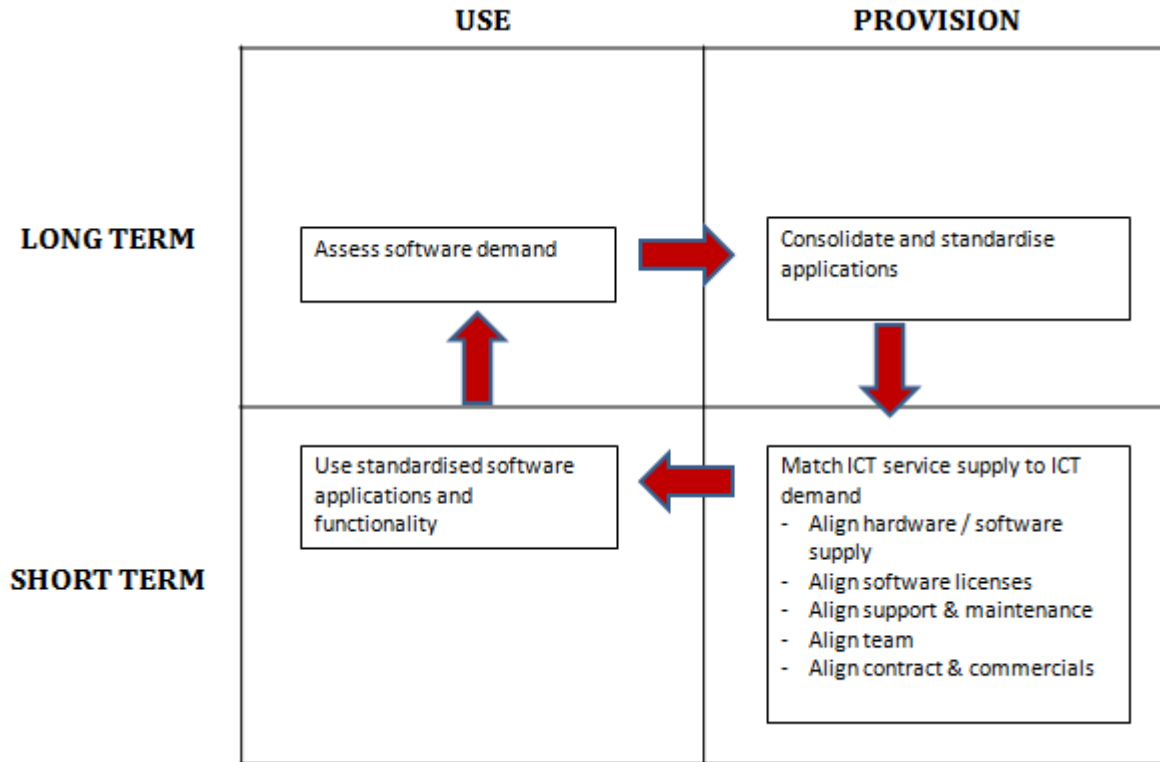


Figure 5.2: Information Journey

5.8 In Summary...

- 5.8.1 The Service is clear on what it wants to achieve. The envisaged future state for KIS is clear. Strategic Business Requirements have been identified and endorsed by the Senior Management Team. The translation of the Strategic Business Requirements into the expected behaviours that will underpin the two-way relationship between the KIS users and KIS providers is also clear, as is the strategic aim of the information journey.
- 5.8.2 The next section addresses the means by which the future state will be achieved.

6. How can the Service get where it needs to go?

6.1 Introduction

6.1.1 This section considers the following:

- 1) Outcomes from Strategic Business Requirements;
- 2) Outcomes Map;
- 3) Short-term, Medium-term and Longer-term Outcomes;
- 4) Strategic Themes;
- 5) Sourcing Options.

6.2 Outcomes from Strategic Business Requirements

6.2.1 As noted in the previous section, the Strategic Business Requirements are a statement of the endorsed future state for Knowledge and Information provision, and the basis for this KIS Strategy.

6.2.2 Appendix D maps the Strategic Business Requirements onto a set of outcomes that will be necessary to achieve the delivery of the SBRs.

6.3 Outcomes Map

6.3.1 These outcomes are shown graphically in Figure 6.1.

6.3.2 The outcomes are shown in bands, distributed along a timeline spanning four years. The starting position is in the bottom left corner, while the achievement of this KIS vision is in the top right corner.

6.3.3 Some Strategic Business Requirements break down into more than one outcome. As one example, the process SBR Pr4: *“Business systems and processes are so good that they are invisible, joined-up as appropriate, and support the needs of the organisation in a user-friendly, fast, reliable, and interactive manner”* breaks down into Outcome 4a: *“Business processes are defined”* to be achieved within 6 months, Outcome 4b: *“Business processes & systems are joined-up as appropriate”* to be achieved within 24 months, and Outcome 4c: *“Business processes & systems are user-friendly, fast, & reliable”* to be achieved within 48 months.

6.3.4 This version of the Outcomes Map represents the unconstrained circumstance, in which a full range of capacity and commitment is available. Other versions of the Outcomes Map would apply to represent circumstances with less capacity and commitment.

6.4 Short-term, Medium-term and Longer-term Outcomes

6.4.1 The outcomes may usefully be brigaded into:

- Short term (0-6 months);
- Medium term (6-24 months);
- Longer term (24-48 months).

Buckinghamshire Fire and Rescue Service 4 year KIS Strategy

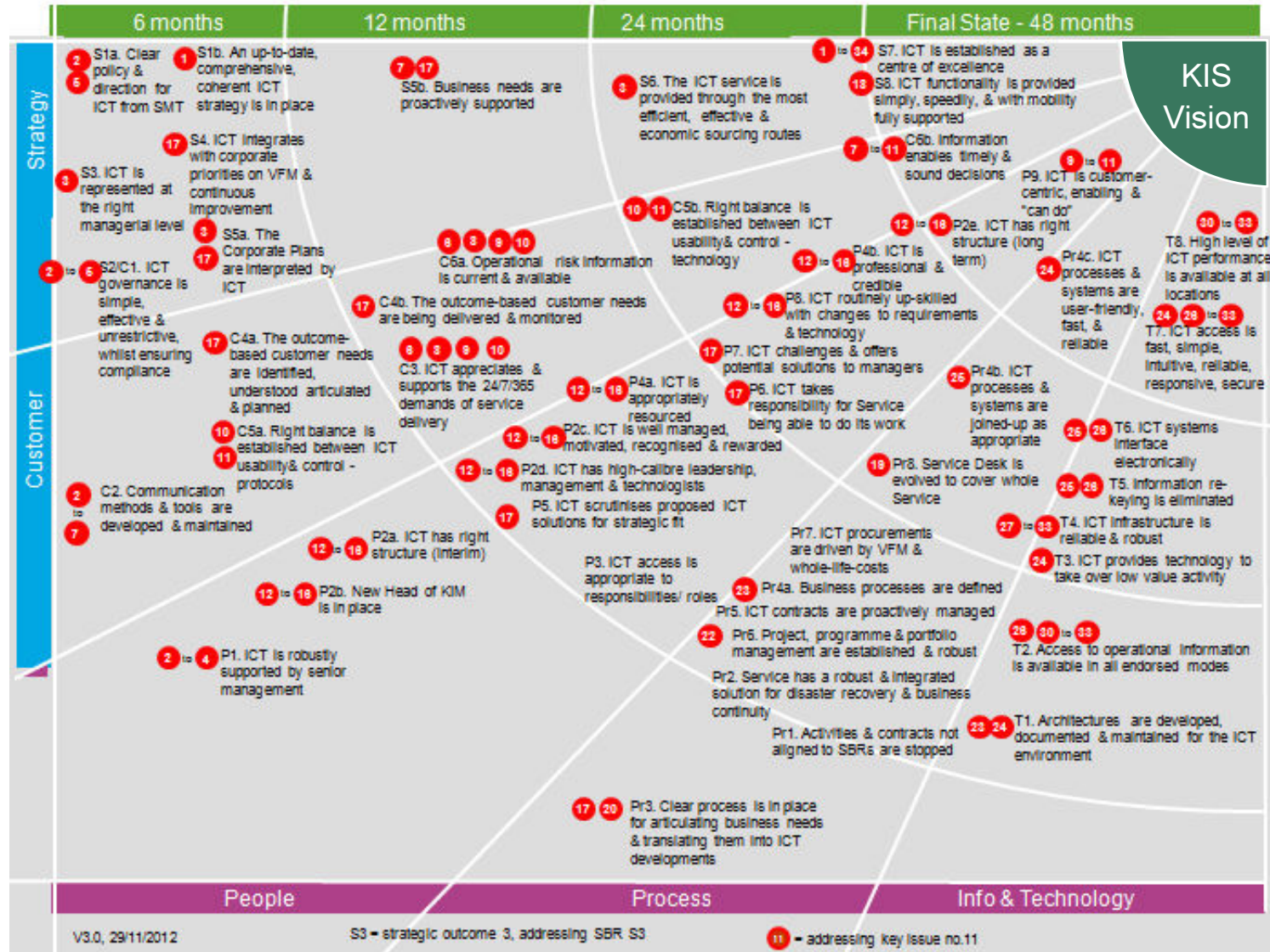


Figure 6.1: Outcomes Map

6.5 Strategic Themes

6.5.1 Building on the Strategic Principles in Section 3, the Strategic Business Requirements in Section 5, and the Outcomes earlier in this Section 6, leads to the following strategic themes:

- 1) *Public Safety – Prevention, Protection and Response.* This theme covers the KIS developments necessary to support the primary purpose of the Service in Public Safety – Prevention, Protection and Response. It includes the Combined Control Project with whichever partners the Service decides to align, a close examination of the business processes required to support the Combined Control relationship, and the development of joined-up systems to support all aspects of mobilisation, control, prevention and protection;
- 2) *KIS Development.* This theme will establish a range of KIS facilities, including ongoing KIS service delivery, protocols and procedures, a data warehouse, fast and secure wide and local area networks, robust and integrated mobile communications, mobile working, documentation of the KIS environment, and optimisation of application development. Also included are development of the intranet as a corporate resource, infrastructure optimisation, optimisation of sourcing routes, supplier relationship management, an enhanced service desk, and disaster recovery;
- 3) *Support Systems.* This theme will cover the development of all necessary support systems, such as a thorough review of the sourcing of the finance, personnel and payroll area for business fit, value for money, and return on investment; self-service human resources; and the procurement of a fit-for-purpose asset management system;
- 4) *Cash Saving.* This theme addresses the need to identify cash savings, whilst at the same time developing a much enhanced KIS environment. As of March 2013, 34 areas of potential cash saving had been identified, all of which are covered by the projects identified under these seven themes, and some of which will be addressed by this specific theme, theme 4;
- 5) *Governance.* This theme covers the establishment of the necessary governance to control the development and maintenance of the KIS environment;
- 6) *Organisational Development.* This theme addresses the development of organisational structures, roles and job descriptions to carry forward the transformation of the KIS environment into a knowledge-based organisation, as well as ongoing staff development. It is about building people capacity and capability, organising people effectively to deliver customer services as efficiently as possible, and the development of high performing teams and ways of working;
- 7) *Communication.* This theme will put in place all aspects of communication necessary to ensure that the KIS Transformation, proceeds with all stakeholders fully informed and engaged.

6.6 Sourcing Options

6.6.1 As indicated under the Strategic Themes above, the sourcing of KIS services may be via a range of different routes.

6.6.2 *In-house KIS Service Provision.* BFRS already does some development in-house. However, the available pool of resource is small. A significant enhancement in capability and capacity would be required if the developments identified in this KIS Strategy and the proposed KIS organisation structure, were these to be continued to be undertaken in-house, either in whole or in part. Business system development is not a core competence or a specific strategic objective of the Service.

6.6.3 *Sharing Services with other Organisations*

Finance, Personnel and Payroll. BFRS already shares some services with Buckinghamshire County Council for finance, human resources and payroll systems. BFRS does not get all that it would like from this arrangement, but it is not yet clear whether this circumstance gives BFRS at least the minimum of what it needs functionally, or whether BFRS is receiving value for money when compared with alternative sources. This is something that will need to be closely examined as part of the implementation of this strategy.

Combined Fire Control. It is the intention of the Service to share a mobilising and control system with its Thames Valley partners, Royal Berkshire FRS and Oxfordshire FRS. According to the business case, this will enable cash savings to be made. There is also an opportunity to examine the scope for sharing the business systems/applications that feed the mobilising and control process, as part of the process of joining-up the various systems.

Other Opportunities. In a similar manner, there may be opportunities for wider sharing of systems and services.

6.6.4 *Whole-sale Outsourcing.* This has proved to be a hardy perennial option for businesses, especially those who find themselves frustrated with their in-house service provision. However, such a course must be treated with caution. There have been many examples of outsourcing deals that have not worked out, and have cost the clients a lot of money. The principle of just giving the problem to an outsource supplier seldom works well. Outsourcing suppliers will invariably charge substantially for bringing the client organisation up to a satisfactory level, and will continue to charge substantially for maintaining and developing the circumstance. Furthermore, the client must definitely establish an intelligent client function in house to manage the contract, and not delegate this crucial role to the supplier, as many organisations have done. In the case of BFRS, the KIS function as it currently exists is probably too small to be attractive to typical outsourcing suppliers. In any event, the most prudent course of action would be to complete the re-organisational aspects of the KIS Strategy before considering outsourcing as a candidate sourcing route, and this is the course of action to be followed by this Strategy. This position does not exclude the use of third parties where their services offer better value for money and more sustainable support and maintenance than in-house alternatives.

6.6.5 *Accessing Services via the Cloud.* Over the last few years, the cloud has arrived, heralded by a noisy fanfare. It is not really a new concept, in that bureau services have been available for many years. Is it the panacea for all ills? Probably not, but it may offer a useful sourcing route for some parts of the BFRS KIS environment – like the standard office applications. The UK Government has made the G-Cloud a key component of its ICT Strategy (see Appendix A for a few extracts), with standardisation and cost savings as two key objectives, but the development of the G-Cloud is still relatively immature. The Government's strategy is that organisations should access the G-Cloud via the Public Services Network, to which BFRS should have access in 2013, and this KIS Strategy will be based on careful and staged access to the G-Cloud.

6.7 **In Summary ...**

6.7.1 This section has shown how the Strategic Business Requirements lead to a set of Outcomes that will need to be delivered in order to deliver this KIS Strategy.

6.7.2 It has also identified seven Strategic Themes that underpin the Strategic Business Requirements and Outcomes.

6.7.3 The Strategic Themes and Outcomes now need to be converted into a Project Portfolio, which is the subject of the next section.

7. Project Portfolio

7.1 Introduction

7.1.1 This section identifies a project portfolio to address the information management and KIS requirements identified by the Strategic Business Requirements (Section 5), Outcomes (Section 6), and Strategic Themes (Section 6).

7.2 Strategic Themes

7.2.1 As noted in Section 6, the following seven themes have been identified and will be used as the framework for the portfolio of projects necessary to deliver the strategy:

- 1) Public Safety – Prevention, Protection and Response;
- 2) ICT Development;
- 3) Support Systems;
- 4) Cash Saving;
- 5) Governance;
- 6) Organisational Development;
- 7) Communication.

7.3 Project Portfolio Table

7.3.1 The identified projects under the above project themes are listed in Table 7.1, together with the Strategic Business Requirements and Outcomes that they deliver, and the anticipated benefits. The costs will be developed separately as part of the Business Case.

Table 7.1: Project Portfolio

Project Theme	Project Title	Project Description	SBRs and Outcomes Met	Anticipated Benefits	Original Timeframe
1. Public Safety – Prevention, Protection and Response	Project PS1: Combined Fire Control - Basic	This project will ensure that BFRS integrates with the Combined Fire Control Project, at least at a basic level, in a timely, efficient and effective manner.	T2-T8	The strategic decision to establish Combined Fire Control will be met.	Oct 12 – Mar 14
	Project PS2: Combined Fire Control - Optimised	This project will examine and re-engineer the ICT aspects of the mobilisation and response processes. The focus will be on integrating optimally with the Combined Fire Control initiative, using common or interoperable applications where possible, reducing manual parts of the processes, eliminating multiple entry of the same information, and joining-up processes. The project will ensure that the mobilising application (currently Vision) is integrated and harmonised with the application for determining staff and equipment availability and rota management (currently Gartan), and any other relevant applications.	S7, S8, C6, Pr4, T5	More efficient and effective, and less risky, mobilising and response will be established.	Apr 14 – Sep 16
	Project PS3: Joining-up Response Support Information.	This project will ensure that all information necessary to support mobilisation and response is joined-up, coherent and readily available at the point of delivery. This will include site-specific risk information, gazetteer mapping information, satellite navigation, crash information and hazardous chemical information.	Pr4a-c, C6	More efficient and effective, and less risky, mobilising and response will be established.	Oct 12 – Sep 16
	Project PS4: Performance and Intelligence	This project will develop the necessary support to provide management information, record and measure performance, and develop intelligence around all aspects of the Service.	C3, C6, T2, T8	Leading edge performance and intelligence information will be available for all areas of the service.	Oct 12 – Mar 15

	Project PS5: Mobile Working of Community Protection Team	This project will examine and re-engineer the processes involved in the Home Fire Risk Check and Fire Safety Inspections, to streamline the processes end-to-end, automate them, and eliminate or significantly reduce manual data entry.	Pr4, T3-T8	These re-engineered processes will deliver much enhanced efficiency and effectiveness, potentially freeing-up staff for other activities.	Apr 13 - Mar 15
	Project PS6: Self-Service Rostering	This project will establish self-service rostering.	Pr4, T5, T6	Self-service will eliminate the need for third party involvement in the entry of rostering information, leading to greater efficiency and effectiveness.	Apr 14 - Sep 16
	Project PS7: Integration of Rostering and Payroll	This project will ensure that operational rostering is electronically linked with payroll and other human resources functions.	Pr4, T5, T6	This will lead to very much cleaner and tidier processes, less scope for recording erroneous information, and single point data entry.	Apr 14 - Sep 16
2. ICT Development	Project ICT1: On-going ICT Service Delivery	This project will ensure that the baseline ICT service delivery is maintained at a robust level.		The baseline service will be maintained.	Oct 12 - Sep 16
	Project ICT2: ICT Protocols & Procedures	This project will establish the necessary framework of ICT protocols and procedures (including ICT use, communication use, security and data protection) to govern the development and maintenance of all information management and ICT.	S2/C1, C5	Information and ICT development will proceed in an appropriately controlled environment, ensuring all necessary compliance whilst enabling appropriate freedom.	Oct 12 - Sep 16

	Project ICT3: Corporate Information Store	This project will research and establish a coherent and consistent corporate information store (data warehouse or similar), based on common data definitions, single data entry with multiple use, and the overarching objective of ensuring that applications are appropriately joined up. This will include the corporate gazetteer and other graphical information systems.	T2-T8, C3-C6, S7-S8	This will lead to a coherent data management environment, properly joined-up systems, and very much enhanced efficiency and effectiveness.	Jan 13 – Sep 15
	Project ICT4: Wide Area and Local Area Communication	This project will establish a fit-for-purpose, fast, robust, secure, efficient and effective wide area network (WAN), local area networks (LAN), and telephony , probably – subject to closer analysis – based on the Public Service Network, due to be available from 2013.	T2-T8	A major source of user frustration and irritation - the slow and erratic network response - will be reduced. Remote communications will be radically enhanced, and operational risks will be reduced.	Oct 12 – Mar 14
	Project ICT5: Mobile Communications	This project will establish integrated, efficient and effective mobile communications - radio communication, mobile telephony, pagers, and mobile data handling - harmonised across the Service.	T2-T8	Another major source of user frustration and irritation - the uncoordinated and erratic mobile communications - will be reduced.	Apr 13 – Mar 15
	Project ICT6: Mobile Working	This project will rigorously examine the need for mobile working, and optimise the processes required to achieve this.	Pr4, T2-T8	Mobile working will address the need for a flexible working environment, allowing personnel to work from all endorsed locations.	Apr 14 – Sep 16
	Project ICT7: Documentation of ICT Environment	This project will document the current and planned KIS environment – including applications, systems, networks, processes, information, and interfaces.	T1	This will provide a solid basis from which to understand the current KIS environment, and guide its ongoing development.	Oct 12 – Sep 16
	Project ICT8:	This project will span across all functional areas within the Service,	Pr3, C3-C6	This will lead to a very much	Oct 12 –

	Optimisation of Application Development	and lead to an integrated and costed portfolio of ICT requirements (cross-referenced to the endorsed Strategic Business Requirements, the outcomes, and the identified issues), and optimisation of the development of applications in support of all functions.		more controlled ICT development environment, with fewer maverick developments. Note: with solid governance and control there will be none.	Sep 16
	Project ICT9: Internet/Intranet/Documentation Management	This project will examine the scope for development of the internet, intranet, and documentation management environment, which will involve purging the current document store of redundant material, establishing protocols for future usage, and expanding the use of the intranet/internet environment.	Pr4, C6, T2	This will lead to cleaner and more effective working, and make a better return on the investment in these areas.	Jan 13 – Sep 16
	Project ICT10: ICT Optimisation of Infrastructure	This project will take forward the ICT hardware environment, including virtual servers, and standardised inter-working of desktop computers and portable devices.	T2-T4, T7-T8	The hardware environment will be modern, consistent and integrated, allowing for more effective working from all endorsed locations.	Apr 14 – Sep 16
	Project ICT11: Training	This project will provide all necessary training for the new KIS environment, starting with a training needs analysis.	P2, P4	The user community will be optimally equipped to use all KIS facilities to which they need to have access.	Jan 13 - Sep 16
	Project ICT12: Optimisation of Sourcing Routes	This project will consider the best and most appropriate sourcing option for each component of the KIS service, including insourcing versus outsourcing, sharing services, making versus buying services, and use of the cloud.	Pr1, Pr7	The Service will procure its KIS services through optimal channels.	Jan 13 - Dec 15
	Project ICT13: Supplier Relationship Management	In this project, relationships with all existing and future suppliers will be managed in a tight and controlled manner. Duplicate and redundant contracts and services will be eliminated, and remaining suppliers rationalised.	Pr5	Tight control will be in place over all suppliers of KIS services.	Jan 13 – Sep 16
	Project ICT14: Service Desk	This project will refine the service desk function, to review the current software against other candidate software, enhance performance reporting, and support change requests.	C2, C3, Pr4, T8	The Service will receive timely and accurate responses to all KIS matters, as well as performance reports.	Jan 13 – Sep 16

	Project ICT15: Disaster Recovery	This project will review the risk scenarios, and establish an optimal disaster recovery process.	Pr2	The Service will be proof against disasters and will be able to continue to run its business.	Jan 13 - Dec 15
3. Support Systems	Project S1: Review of Finance, Personnel and Payroll	This project will assess the current SAP applications support for the finance, personnel and payroll functions, and compare it for VFM and return on investment with other candidate applications meeting the same objectives. This will include front end (input) and back end (reporting) processes. If necessary, the finance, HR and payroll systems will be re-tendered against an outcome-based specification.	C4, Pr4 C6,	This will establish whether the current SAP environment really represents good value for money and return on investment, as well as providing what the user community needs.	Jan 13 - Dec 15
	Project S2: Training, (ref SAP Phase 2)	This project will address training needs, including e-learning. With regard to SAP Phase 2 (training), this will need to take account of the findings from Project S1, and may prove to be unnecessary. However, nationally and regionally, the National Operating standards for fire fighters are to be based on e-learning modules. BFRS will therefore need to ensure that it has something in place in 2013 -14, so it will need an e learning project though Q1 2013.		Automated support will be provided for training.	Apr 13 – Sep 15
	Project S3: Self-Service Human Resources (ref SAP Phase 3)	This project will establish facilities enabling personnel to administer their own basic HR functions. This project will also need to take account of the findings from Project S1	Pr4, T5, T6	Personnel will be able do their own basic HR functions, with resultant gains in efficiency & effectiveness.	Oct 14 – Sep 16
	Project S4: Asset Management	This project will procure an asset management capability.	Pr5, Pr7	Tighter asset management will lead to better control of spending.	Oct 12 – Sep 16
4. Cash Saving	Project CS1: Identification and Realisation of Real Cashable Savings.	This project will critically examine the current spend on ICT, and the contracts and projects underway and planned, against the Strategic Business Requirements, and identify areas of waste and duplication of service provision. Many aspects of cash saving will also be addressed through the other projects in this portfolio.	Pr1, S6	Real cash savings, with better value for money and return on investment from ICT investment, will be achieved. As at the date of this report 34 areas of potential cash saving had been identified.	Oct 12 – Sep 16

5. Governance	Project G1: ICT Governance		This project will establish robust mechanisms to ensure that all aspects of KIS management and development are handled in a robust, coherent, systematic manner.	S1-5, C1, C5	Appropriate control of the KIS development and maintenance process will be established.	Oct 12 – Sep 16
6. Organisation Development	Project OD1a: Organisational Design, Definition and Recruitment.	OD1a: Role and	This project will examine, design and put in place the necessary organisation and roles to reflect a coherent information management and KIS function across the Service.	P1-P9	A fit-for-purpose organisation to handle the transforming and transformed KIS environment will be established.	Oct 12 – Mar 13,
	Project OD1b: Introduce new ways or working, culture change, and performance measures	OD1b:	Subsequent to OD1a, the project will address ways or working, culture change, and performance.	P1-P9	An ever increasing focus on customer service, business outcomes and increased project delivery performance.	Apr 13 – Sep 16
	Project OD2: Staff Development.	Staff	This project will ensure ongoing development of all staff, and the skill base, in line with the KIS Strategy. It will cover all KIS training, including classroom and online training, as well as KIS support for operational training.	P2, P4	Staff and skills will be developed in tandem with the implementation of the KIS Strategy.	Apr 13 - Sep 16
7. Communication	Project C1: Communications	C1:	This project will establish and maintain the necessary communication mechanisms to ensure that developments in the KIS environment are clearly and simply communicated to all stakeholders.	C1-C6	All stakeholders will be aware of on-going KIS developments, and able fully to participate according to their roles.	Oct 12 – Sep 18

8. Road Map

8.1 Introduction

8.1.1 This section lays-out the Project Portfolio in terms of a Road Map for delivery over the term of this KIS Strategy

8.2 Gantt Chart

8.2.1 Figure 8.1 shows the Road Map expressed as a Gantt Chart, showing the projects from the Project Portfolio of the previous section.

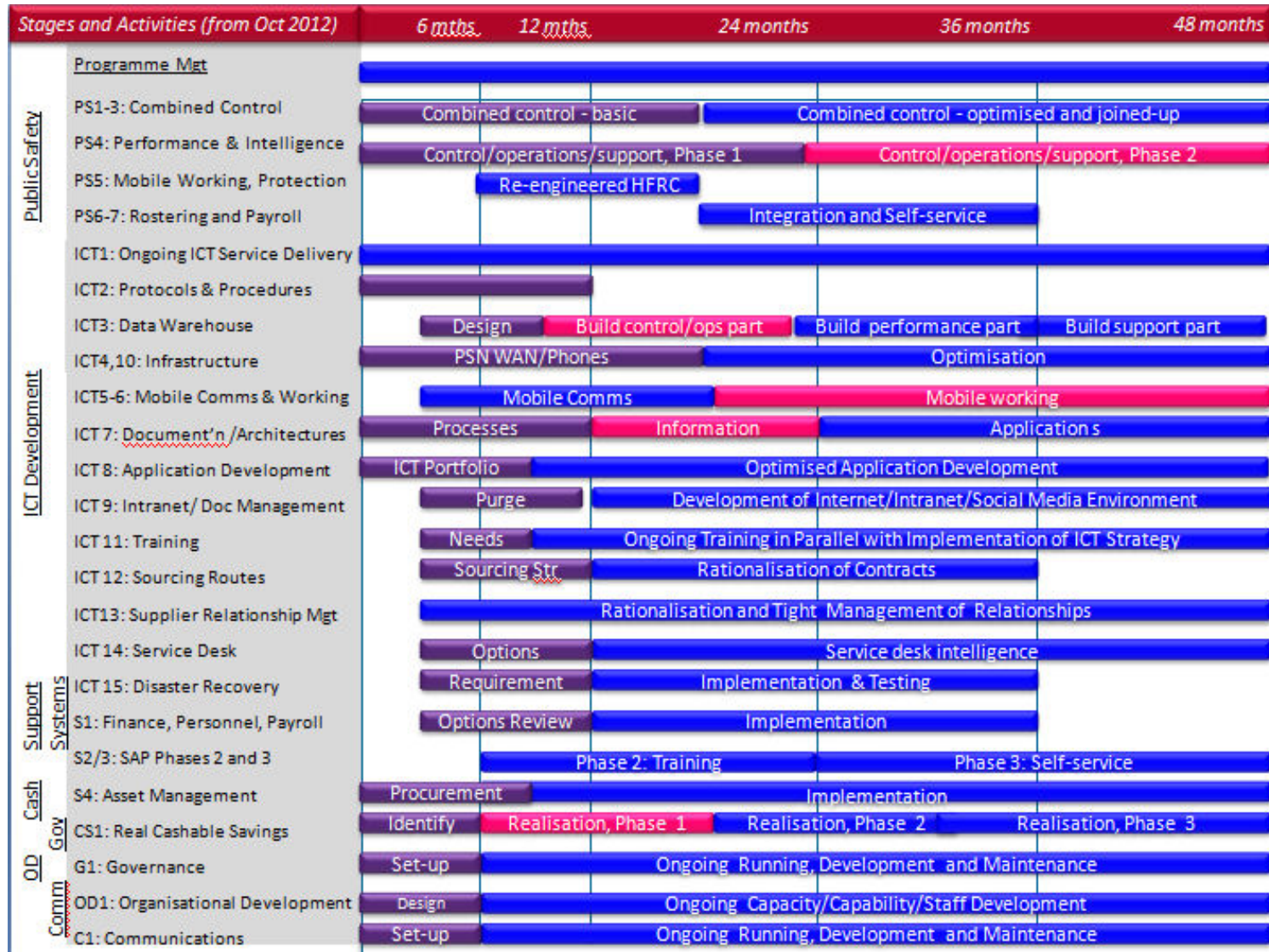


Figure 8.1: Road Map for Delivery of the KIS Project Portfolio

Appendix A: Government ICT Strategies

A1. Introduction

This appendix support Section 3, and outlines relevant Government ICT strategies and strategic initiatives:

- Government ICT Strategy;
- Government Cloud Strategy;
- Public Services Network.

A2. Cabinet Office, Government ICT Strategy (March 2011, Crown Copyright)

The following is a brief distillation of the Government's ICT Strategy. This strategy applies to central government, executive agencies and arm's length bodies. It consists of four parts:

1) Reducing waste and project failure, and stimulating economic growth:

- Consider technology earlier in policy making;
- Move away from large and expensive ICT projects;
- End large-company dominance, and remove barriers to SMEs;
- Share and re-use solutions;
- Improve sourcing of ICT, leveraging scale towards VFM;
- Apply agile methods;
- Apply benchmarking and performance measurement.

2) Creating a common ICT infrastructure

- Apply common technology standards;
- Use a standardised cloud platform;
- Promote interoperability through open standards;
- Use modern knowledge-based service delivery;
- Use standard document formats;

3) Using ICT to enable and deliver change

- Develop agile, personalised and responsive services;
- Develop collaborative and mobile public sector working;
- Scan horizon for future-proofed solutions.

4) Strengthening governance

- Nurture opportunities for innovation;
- Scrutinise, measure and enforce compliance with mandated standards and actions;
- Identify successful solutions and leverage their wider adoption;
- Coordinate engagement with suppliers to commoditise services and deliver better commercial outcomes for government.

A3. HM Government – Government Cloud Strategy (a sub-strategy of the ICT Strategy, undated, Crown Copyright)

The following are a few extracts from the Government's Cloud Strategy.

“Cloud computing has brought about a step change in the economics and sustainability of Information and Communication Technology (ICT) enabled service provision. Government is committed to the adoption of cloud computing and delivering computing resources to users as needed (an on-demand delivery model). By exploiting innovations in cloud computing we will transform the public sector ICT estate into one that is agile, cost effective and environmentally sustainable.

Government cloud is not a single, government owned, entity; it is an ongoing and iterative programme of work which will enable the use of a range of cloud services, and changes in the way we procure and operate ICT, throughout the public sector. The vision is for government to robustly adopt a public cloud first policy, though this will not be possible in every case and there will also be a requirement for a private G cloud.

The US National Institute of Standards and Technology's (NIST) definition of cloud computing is the most widely adopted one, and has been adopted for G-Cloud; it states that:

“Cloud computing is a model for enabling convenient, on-demand network access to a shared pool of configurable computing resources (e.g. networks, servers, storage, applications, and services) that can be rapidly provisioned and released with minimal management effort or cloud provider interaction.”

The G-Cloud Programme will establish the government's G-Cloud Authority through aligning tightly with the Public Services Network Authority, and exploring opportunities to integrate with the PSN Authority as soon as is practicable.

The G-Cloud programme is responsible to the CIO Delivery Board for the successful adoption of cloud computing and commodity ICT by government. The Programme is governed via a Delivery Board, supported by key working groups and boards for the different elements of the programme.”

A4. Public Services Network

“The Public Services Network (PSN) is the foundation layer of the Government ICT Strategy. It provides the platform required by the UK public sector to deliver increasingly innovative, shared and cost-effective services. The PSN represents a radical step change in the way the public sector consumes and operates its telecommunications and will deliver significant savings as well as a vastly improved ability to share services and integrate the provision of services to citizens.

The PSN is now a reality. Central Government departments and a rapidly growing number of local public service providers are progressing plans to adopt PSN standards and consume PSN-compliant services. Industry is responding to this by aligning its own investments with plans to provide better value telecommunications services that adhere to PSN standards.

Procurement Frameworks for PSN

Furthermore, the establishment of two major government procurement frameworks for PSN Connectivity and PSN Services during the course of 2012 will provide a simple and cost-effective way for public service providers to obtain PSN-assured services that will not only offer best value, but also ensure interoperability across the public sector and enable more

flexibility in the way we buy and share telecommunications services. It is hugely important now for both the public sector and the telecommunications industry to understand what the PSN is, how it works and what it enables so that they are able to establish their own plans for convergence to the PSN and ensure resources are no longer expended upon duplicated infrastructure, services and procurements”.

Source: Society of IT Managers

Appendix B: Key Issues

B1. Introduction

B1.1 This appendix supports Section 4, and summarises the key issues from the Strategic Review of Resources Report (V2.0, dated 11/06/2012)

B2. Key Issues

B2.1 The following issues have been brought-forward from Appendix E of the Strategic Review of Resources Report (V2.0, dated 11/06/2012). They have re-marshalled against the five headings that have used elsewhere – Strategy, Customers, People, Process, and Technology.

These are the issues that the Knowledge and Information Services team will use this KIS strategy to address.

No.	ISSUES
Strategy	
1	There is no up-to-date, comprehensive, coherent ICT Strategy for the organisation.
2	The ICT Strategy has no clear ownership or senior sponsor.
3	There is currently no effective ICT governance framework for direction, authorisation of ICT developments, applications development and management, or change management.
4	Sponsorship and ownership of projects has often not been clear, and changes of personnel have led to orphan projects.
5	BFRS lacks clear policy direction on the use of the internet, web access and social media sites, and its translation into a workable ICT practice.
Customers	
6	Personnel lack access to current and reliable information.
7	Elected Members do not currently have access to the systems for performance monitoring, as required by the CEO/CFO.
8	Users state that the system response is often very slow, especially for remote working, but even within the HQ building, which has led to awkward “work arounds”.
9	ICT support is not always as responsive as it should be to user requests, upgrade or development.
10	Operational users believe that there is a lack of understanding of the requirements of a 365-24-7 emergency service, especially with regard to out-of-hours cover, and a lack of understanding of the risks of failure - “a <i>gulf of appreciation</i> ”, as one user stated it. They point to a “ <i>not down to us</i> ” attitude. However, there are instances where the ICT Team have worked through the night to maintain an IT or Communication service, which is to be commended.
11	Some non-operational users likewise have expressed the view that the ICT Team does not have an appreciation of what is involved in their work and does not follow-up very well.

No.	ISSUES
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People

12	Due to a lack of support capacity, very little preventative maintenance has been carried-out, with the result that there are many sudden failures requiring reactive action from the team. There is also no strategic term of replacement for computers, with the result that some are as old as 7 years.
13	Whilst recognising the work being done by the various teams that are providing ICT services, a widely-held view is that there are inadequate skills, capability and capacity within the organisation to provide a more co-ordinated and comprehensive ICT function - including direction/management, systems analysis and design, information management, database management, supplier management, and SLA management - into the future.
14	It is not clear what resourcing requirements are required to support the Combined Control Room Project over the critical period to April 2014, or how much resource might be available in house, and how much will need to be procured from elsewhere.
15	The temporary contractual arrangements for most of the ICT team members has had, and will have, ramifications for staff motivation, retention, and the maintenance of a fit-for-purpose ICT complement.
16	There is inadequate resilience with regard to commitment to the organisation. There needs to be greater clarity about the support that is provided, both during office hours (08:00-18:30), and what on-call support is available for operational areas 24-7-365.

Process

17	There is no clear process for articulating the business needs in a form that can be translated into agreed and endorsed ICT developments.
18	Remote working, an important capability especially for operational officers, is not working as it should be (although it is reportedly better than it was)
19	A number of basic elements of support are not provided – e.g. a help page on the intranet with responses to frequently asked questions, and a list of people to talk to on specific topics.
20	It is not clear what the expectations of the organisation actually are in terms of ICT coverage and support, nor the extent to which the expectations are being met.
21	There is no formal programme of training and development for ICT personnel or those using ICT.
22	Historically, much of the application development has not followed a rigorous development methodology, with many of the aspects of good application development not in place, including outcome-based functional specifications, project plans, and a co-ordinated process.
23	With a few exceptions, processes have not been documented across the organisation. There are also no architectures for data, information, systems, or applications, to record the ICT environment and guide its development.

Technology

24	The ICT infrastructure and systems are often slow, unreliable and not easy to use.
25	ICT systems are not joined-up and interoperable, resulting in multiple manual entry of the same information.
26	System access is a major cause of frustration and irritation for many (though not all) members of the user community.
27	There has been a recognised lack of investment over a number of years, and the infrastructure does not

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	support the Service as it should.
28	The Performance and Intelligence Unit (PIU), which has developed or is developing a number of applications, is worried about reputational risk to itself due to the perception of the user community when presented with poorly functioning applications due to poor infrastructure.
29	Desktop upgrades are reportedly often not properly planned and implemented. Phased implementations sometimes leave desktops mutually incompatible, with applications and peripherals that no longer work.
30	There are issues with the pagers issued to retained fire fighting staff, because of patchy coverage, which can mean inefficient and potentially dangerous mobilisation. These problems apparently lead to the response that there is <i>"nothing you can do about that"</i> .
31	Poor communications mean that the reliability of remote access is still a significant issue. Connections frequently break down, meaning that users have to keep logging on with attendant delays, frustrations, and loss of productivity.
32	In addition to the patchy performance of the network communications, the mobile phone system (Vodafone-based) is reported to have poor coverage across the county, meaning that it is often hard to sustain conversations. Mobile phones often do not work in the secondary control room (on the HQ site) or even in the HQ building. Note however that these buildings have metal roofs and walls, which is a major challenge for communications.
33	Peripherals at stations are described by some users as poor.
34	There is currently no inventory of the computer systems and applications in use across BFRS.

Appendix C: Strategic Business Requirements

C1. Introduction

C1.1 This appendix supports Section 5, and summarises the Strategic Business Requirements, which provide a robust statement of the target future state towards which the Service is heading.

C2. SBR Statements

C2.1 The following Strategic Business Requirements have been brought-forward from Section 4 of the Strategic Review of Resources Report (V2.0, dated 11/06/2012). They were endorsed by the Senior Management Team in April 2012, and represent the target future state for the Service. For the purpose of this strategy, they have been re-ordered to map onto the outcomes through which they will be delivered, and the wording of a few of them has been refined without changing the intention behind them.

Headings	Description with 2013/2014 status
Strategy	1. There is a clear direction, ownership and sponsorship of ICT based on clear policy from the SMT and an up-to-date, comprehensive, coherent ICT Strategy for the organisation;
	2. ICT governance is effective, in the best interests of the Service, and at a level that it is unrestrictive to the business, whilst ensuring compliance and preventing malpractice;
	3. The ICT service has a constructive “voice at the table” at the appropriate level of seniority;
	4. The ICT service integrates with the Service’s value for money and continuous improvement priorities;
	5. The business needs of the organisation are supported in a proactive and positive manner, with business and ICT managers taking the Corporate Plans, and interpreting what they mean for ICT;
	6. The ICT service is provided through the most economic, efficient and effective sourcing routes, with a clear position on insourcing and outsourcing, as well as specific technologies;
	7. The ICT service is the centre of excellence that translates the strategy and policy into an action plan and helps to deliver it;
	8. All necessary functionality is provided simply, speedily, and with mobility fully supported, thus enabling a flexible work force to work remotely;

Customers	<ol style="list-style-type: none"> 1. ICT governance is simple and effective (e.g. the organisation does not invest in new technology until a conscious decision is made that: <ol style="list-style-type: none"> a) the Service needs it; b) the Service doesn't currently have it; c) there is a sound business and financial case to support it); d) any new technology, wherever possible, integrates with and supports existing technologies; 2. Communication methods and tools are developed and maintained; 3. The 24/7/365 demands of Service Delivery are appreciated and supported, using priorities based on risk management; 4. The outcome-based needs of the customers (i.e. operational and non-operational users, citizens, Elected Members, Directors, Managers) are identified, articulated, understood, delivered and monitored in a way that is flexible, future proof, and in line with Corporate and ICT strategies and business plans; 5. The right balance is struck between usability and control of ICT systems, in which necessary controls are in place and ICT users understand their responsibilities to use the systems effectively, and to value the ICT service and systems (e.g. ICT system specification, use, security, data protection, and freedom of information); 6. Operational risk information is always current, of high quality and available whilst responding to incidents, and management information more generally enables timely and sound decisions by managers;
People	<ol style="list-style-type: none"> 1. The ICT service is robustly supported by senior management, who help to develop solutions with the assistance of super users; 2. The ICT service has the right organisational structure, and is well-managed, motivated, recognised and rewarded, with high calibre leadership and management as well as high calibre and flexible technologists; 3. ICT access is appropriate to managerial responsibility and/or role requirements; 4. The ICT service is appropriately resourced, professional in its experience, credible in the eyes of its customers, and with the capacity to provide all necessary support and development; 5. The ICT service provides a check and balance mechanism, by examining any proposed ICT solutions for compliance with the ICT Strategy and advising accordingly; 6. The ICT service takes responsibility for the organisation being able to do its work, and provides solutions;

	7. The ICT service challenges and offers potential solutions where it believes that the organisation is not maximising its potential;
	8. The ICT service is routinely up-skilled as requirements change and new technologies are identified;
	9. The ICT service is customer-centric, supportive, approachable, engaging, enabling, and “can do”;
Processes	1. Activities and contracts not aligned with the Strategic Business Requirements are stopped;
	2. The Service has a reliable, robust and integrated solution for disaster recovery and business continuity;
	3. A clear process is developed and maintained for articulating the business needs and business processes in a form that can be translated into agreed and endorsed ICT developments;
	4. ICT systems and processes are so good that they are invisible, joined-up as appropriate, and support the needs of the organisation in a user-friendly, fast, reliable, and interactive manner;
	5. Contracts are proactively managed to ensure that what is agreed, is delivered;
	6. Project, programme and portfolio management are established and robust;
	7. All procurements of ICT products and services are driven by organisational needs, achieve value for money in terms of whole life costs, and meet business priorities;
Technology	1. Architectures are developed, documented and maintained for information, systems, networks, processes, data and applications to record the ICT environment, and guide its ongoing development;
	2. Real time access to operational information is available in all endorsed modes, including desktops, laptops, pagers, mobile phones, and vehicle mobile data terminals;
	3. The ICT service is proactive in providing technology to take away the low value activities, and in doing so delivers better value for money;
	4. The Service has a reliable and robust infrastructure;

	<p>5. Re-keying of information is eliminated by automated processes and interfacing ICT systems, ensuring that data are accurate, reliable, consistent and current, and enabling the provision of timely reports and performance information;</p>
	<p>6. ICT systems and configurations interface electronically in a seamless manner, enabling the organisation to be joined up and standardised;</p>
	<p>7. Access (as evaluated by customers) to all ICT applications within the organisation and between agencies is fast, simple, intuitive, reliable, responsive and secure;</p>
	<p>8. A high level of performance is available at all locations and patchy coverage is eliminated.</p>

Appendix D: Map of SBRs onto Outcomes

D1. Introduction

D1.1 This appendix supports Section 6, and maps the Strategic Business Requirements onto Outcomes that will be necessary to deliver the Strategic Business Requirements.

S1	There is a clear direction for KIS based on clear policy from the SMT, and an up-to-date, comprehensive, coherent KIS Strategy for the organisation.	S1a S1b	Clear policy and direction for KIS from SMT An up-to-date, comprehensive, coherent KIS Strategy is in place	Service policy S1a
S2	KIS governance is effective, in the best interests of the Service, and at a level that is unrestrictive to the business, whilst ensuring compliance and preventing malpractice.	S2	KIS governance is simple, effective & unrestrictive, whilst ensuring compliance	SBRs S2 and C1 merged
S3	The Knowledge and Information service has a constructive “voice at the table” at the appropriate level of seniority.	S3	KIS is represented at the right managerial level	
S4	The Knowledge and Information service integrates with corporate priorities on value for money and continuous improvement.	S4	KIS integrates with corporate priorities on VFM & continuous improvement.	Corporate priorities
S5	The business needs of the organisation are supported in a proactive and positive manner, with business and KIS managers taking the Corporate Plans, and interpreting what they mean for KIS.	S5a S5b	The Corporate Plans are interpreted by KIS Business needs are proactively supported	S1b S1b, C4a
S6	The Knowledge and Information service is provided through the most economic, efficient and effective sourcing routes, with a clear position on insourcing, outsourcing and shared services, as well as specific technologies.	S6	The KIS is provided through the most economic, efficient & effective sourcing routes	
S7	The Knowledge and Information service is the centre of excellence that translates the strategy and policy into an action plan and helps to deliver it.	S7	KIS is established as a centre of excellence	All preceding outcomes
S8	All necessary functionality is provided simply, speedily, and with mobility fully supported, thus enabling a flexible work force.	S8	KIS functionality is provided simply, speedily, with mobility fully supported	All preceding outcomes

C1	KIS governance is simple and effective, e.g. the organisation does not invest in new technology until a conscious decision is made that: a) the Service needs it; b) the Service does not currently have it; c) there is a sound business and financial case to support it; d) the organisation has the resources to implement it; e) any new technology, wherever possible, integrates with and supports existing technologies.	C1	KIS governance is simple, effective & unrestrictive, whilst ensuring compliance & preventing mal practice	SBRs S2 and C1 merged
C2	Communication methods and tools are developed and maintained.	C2	Communication methods & tools are developed & maintained	
C3	The 24/7/365 demands of Service Delivery are appreciated and supported, using priorities based on risk management.	C3	KIS appreciates & supports the 24/7/365 demands of Service Delivery	What are these 24/7/365 demands?
C4	The outcome-based needs of the customers are identified, articulated, understood, delivered and monitored in a way that is flexible, future proof, and in line with the Corporate and KIS Strategies and Business Plans.	C4a	The outcome-based customer needs are identified, understood articulated & planned	S5 and C3
		C4b	The outcome-based customer needs are being delivered & monitored	C4a
C5	The right balance is struck between usability and control of Knowledge and Information systems, in which necessary controls are in place and KIS users understand their responsibilities to use the systems effectively and to value the Knowledge and Information service and systems (e.g. ICT system usage, security, data protection, and freedom of information).	C5a	Right balance is established between KIS usability and control - protocols.	S1a, S1b, S2/C1. Need rules of the game. Need for training.
		C5b	Right balance is established between KIS usability and control - technology	C5a
C6	Operational risk information is current, of high quality and available whilst responding to incidents and management information more generally enables timely and sound decisions by managers.	C6a	Operational risk information is current & available	Depends on where NFRS is now.
		C6b	Information enables timely & sound decisions	S1b, S5b, C4a, C4b, C6a, Pr3, T1, T2

P1	The Knowledge and Information service is robustly supported by senior management, who help to develop solutions with the assistance of super users.	P1	KIS is robustly supported by senior management	S1a, S2/C1
P2	The Knowledge and Information service has the right organisational structure, and is well-managed, motivated, recognised, and rewarded, with high calibre leadership and management, as well as high calibre and flexible technologists.	P2a P2b P2c P2d P2e	KIS has right structure (interim) New Head of KIS is in place KIS is well-managed, motivated & recognised KIS has high-calibre leadership, management & technologists KIS has right structure (long term)	S1b, S2/C1, P2b P2a, P2b S2/C1, P2a, P2b S2/C1, P1a, P1b S1b, S2/C1, P2a-d
P3	KIS access is appropriate to managerial responsibility and/or role requirements.	P3	KIS access is appropriate to responsibilities/roles	C5a
P4	The Knowledge and Information service is appropriately resourced, professional in its experience, credible in the eyes of its customers, and with the capacity to provide all necessary support and development.	P4a P4b	KIS is appropriately resourced KIS is professional & credible	P2a, P2b
P5	The Knowledge and Information service provides a check and balance mechanism, by examining any proposed KIS solutions for compliance with the KIS Strategy and advising accordingly.	P5	KIS scrutinises proposed solutions for strategic fit	S1b, C4b, T1
P6	The Knowledge and Information service takes responsibility for the Service being able to do its work, and provides solutions.	P6	KIS takes responsibility for Service being able to do its work	S1b, S2/C1, P2d
P7	The Knowledge and Information service challenges and offers potential solutions where it believes that the organisation is not maximising its potential.	P7	KIS challenges & offers solutions to managers	S1b, S5b, C4b, T1
P8	The Knowledge and Information service is routinely up-skilled as requirements change and new technologies are identified.	P8	KIS routinely up-skilled with changes to requirements & technology	P2, P4
P9	The Knowledge and Information service is customer-centric, supportive, approachable, engaging, enabling, and “can do”.	P9	KIS is customer-centric, enabling, & “can do”	P1-8

Pr1	Activities & contracts not aligned to SBRs are stopped	Pr1	Activities & contracts not aligned to SBRs are stopped	
Pr2	The Service has a reliable, robust and integrated solution for disaster recovery and business continuity.	Pr2	Service has a robust & integrated solution for disaster recovery & business continuity	
Pr3	A clear process is developed and maintained for articulating the business needs and business processes in a form that can be translated into agreed and endorsed KIS developments.	Pr3	Clear process is in place for articulating business needs & translating them into KIS developments	S2/C1, P1
Pr4	Business systems and processes are so good that they are invisible, joined-up as appropriate, and support the needs of the organisation in a user-friendly, fast, reliable, and interactive manner.	Pr4a Pr4b Pc4c	Business processes are defined Business processes & systems are joined-up as appropriate Business processes & systems are user-friendly, fast, & reliable	S1b, T1 S1b, T1 S1b, T1
Pr5	Contracts are proactively managed to ensure that what is agreed, is delivered.	Pr5	KIS contracts are proactively managed	Could be < 6mth.
Pr6	Project, programme and portfolio management are established and robust	Pr6	Project, programme and portfolio management are established & robust	S2
Pr7	All procurements of KIS products and services are driven by organisational needs, achieve value for money in terms of whole-life-costs, and meet business priorities.	Pr7	KIS procurements are driven by VFM and whole-life-costs	S1b, C4b, P5

T1	Architectures are developed, documented and maintained for information, systems, networks, processes, data and applications, to record the KIS environment, and guide its ongoing development.	T1	Architectures are developed, documented & maintained for the KIS environment	S1b, C4a
T2	Real time access to operational information is available in all endorsed modes, including desktops, laptops, pagers, mobile phones, and mobile data terminals.	T2	Access to operational information is available in all endorsed modes	S1b, C6a
T3	The Knowledge and Information service is proactive in providing technology to take away the low value activities, and in doing so delivers better value for money.	T3	KIS provides technology to take over low value activities	S1b, S5b, C4a
T4	The Service has a reliable and robust Information and IT infrastructure.	T4	Information and IT infrastructure is reliable & robust	
T5	Re-keying of information is eliminated by automated processes and interfacing business systems, ensuring that data are accurate, reliable, consistent and current, and enabling the provision of timely reports and performance information.	T5	Information re-keying is eliminated	S1b, T1, T4
T6	Knowledge and Information systems and configurations interface electronically in a seamless manner, enabling the organisation to be joined up and standardised.	T6	Knowledge and Information systems interface electronically	S1b, T1, T4
T7	Access (as evaluated by customers) to all business systems within the organisation and between agencies is fast, simple, intuitive, reliable, responsive and secure.	T7	Business system access is fast, simple, intuitive, reliable, responsive, secure & appropriate to role	S1b, C4a, T1-6
T8	A high level of performance is available at all locations and patchy coverage is eliminated.	T8	High level of business system performance is available at all locations	S1b, C4a, T1-6