Business and Systems Integration

Detailed Business Case

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Reference Documents:

Document	Date
Buckinghamshire Fire and Rescue Service 4 year KIS Strategy V1.0	August 2014
Business and Systems Integration Programme Structure	September 2014
Business and Systems Integration High Level Business Case	October 2014
Business and Systems Terms of Reference Final Draft	November 2014
Corporate Information System Requirements Document	December 2013
Current Systems Architecture	November 2014
FireWatch Report (by David Tate)	October 2013

Contents

1. Executive Summary

Introduction

This business case was commissioned by Buckinghamshire & Milton Keynes Fire & Rescue Service (BMKFRS) during a systems review to inform the decision on whether to proceed with its preferred option of an ERP solution. The following were taken into account during the process of compiling this document: the needs and goals of the business; its future vision and strategy; the user requirements; the availability of suitable software in the marketplace; options for hosting; options for implementation; indicative costs and potential benefits. The recommendations, costs and benefits, and suggested next steps are summarised below.

Recommendations

Software: the final solution should include two enterprise level systems, ERP and Finance.

Currently there is no ERP solution available that would meet all the unique requirements of the fire service and cover all functions of the organisation. There is one provider which has a large share of the fire service ERP market but their products do not extend to the financial functions. Nonetheless, it is still possible to achieve a good level of enterprise integration using two modular systems. Potential software and vendors have been identified in Section 5.

Implementation: a four phase cutover is recommended.

Four distinct phases are recommended as follows:

- Phase 1: HR Systems (Core HR, IPDS etc.), the Finance System and the Prevention, Protection & Risk databases;
- Phase 2: Payroll and the Financial Planning System;
- Phase 3: Availability and Rostering System;
- Phase 4: Asset and Fleet Management Systems.

Phasing the implementation in this way enables the highest risk and highest cost systems to be replaced at the earliest opportunity, and lowers the risks associated with replacing too many critical systems at the same time. Section 6 explains the phasing in more detail.

Timeline: two years is the minimum achievable, three years would be more manageable.

Several alternative timelines were plotted using different implementation methods which demonstrated that two years is the minimum realistic target for completion. However, a two year plan would require singular focus and there would be a greater need to use external consultants with very high levels of experience, so the Service may wish to deploy over three years in order to synchronise this project with other programmes of work, and to utilise internal resources to a greater extent. Section 6 and Appendix C contain details of the resource requirements for both timelines.

The following table illustrates the difference between the two timelines and how each would impact the proposed phasing of the project:

Functional Area	2 year timeline	3 year timeline
Phase 1: HR Systems, Finance and the Prevention, Protection & Risk databases	8 months	10 months
Phase 2: Payroll and the Financial Planning System	13 months	19 months
Phase 3: Availability and Rostering System	18 months	27 months
Phase 4: Asset and Fleet Management Systems	24 months	36 months

Section 6 and Appendix C expand this illustration of the proposed timelines.

Cost and Benefits

Investment: estimated £976k (for a two year project using external resources).

The investment required to complete this project would vary depending on the target timeline and how the project is staffed; estimated costs for the options that were evaluated ranged from £673k to £976k. Based on indicative costs and estimated savings, and given that some of the savings to be enabled by this initiative have already been committed in anticipation; the payback point varies depending on the implementation option chosen. In the recommended option (2 years) payback occurs during year 4/5. It should therefore be viewed as a cost neutral project. Section 6 and Appendix D explain how the costs and savings were calculated.

Benefits.

Although cost neutral, one of the major benefits of progressing with this project is that it would pave the way for future shared service arrangements or partnerships where direct cash savings could be made. It would also simplify the implementation of any shared arrangement in the future by streamlining existing partnerships. It also has many valuable indirect benefits, the most significant being the potential for time savings for both operations and back office support staff. This will enable effort to be shifted from low value administrative activities to higher value activities across much of the organisation, for example to enable a larger contribution to the co-responder scheme by firefighters. See Sections 10 and 11 for more information on benefits.

Recommended Next Steps

If the decision is taken to proceed with this project, the suggested next steps would be:

1. Make a decision on the timeline to be followed, based on the need either for a faster implementation or for lower costs (a high quality solution is assumed to be required);
2. Establish a budget;
3. Appoint the project board;
4. Appoint a dedicated Project Manager and Business Systems Analyst;
5. Create a User Group with nominated stakeholders and key users.

2. Introduction & Scope

In 2014 a feasibility study was commissioned to undertake a high level review of BMKFRS's corporate information systems and architecture. The Service had reached a pivotal point in its business systems development and was looking to decide whether to continue sourcing best-in-class software, or whether to move to an enterprise level ERP solution. Best-in-class solutions can often provide a better match to requirements, but tend to be more expensive. They require a high level of integration, with multiple failure points, but perhaps the biggest disadvantage is that it is harder to achieve an enterprise level view without additional business intelligence software.

The decision was therefore taken at Gateway 1 that the preferred approach was an ERP solution and this detailed business case was commissioned to further investigate the feasibility of this option.

> *According to a Computing magazine survey of 150 UK business users (April 2011), organisations that had recently implemented an ERP solution reported the following benefits:*
> - *less duplication and time wasting across the board*
> - *better aligned cross-departmental processes*
> - *optimised IT spend due to less integration of multiple software packages*
> - *reduced storage costs*
> - *improved cross-departmental communication*
> - *greater flexibility of processes*

The purpose of this business case is to provide enough information to inform a stop/go decision at Gateway 2 regarding whether to proceed with the preferred approach of an ERP solution. The following activities were undertaken in the course of compiling this business case.

a) Review of the current business requirements to ensure that these are complete and aligned with the current 4 Year KIS Strategy, including the strategic business requirements.

b) Reference to the risk assessment of current systems which was included with the Current Systems Architecture diagram; consideration of the implications of this risk assessment for the future systems architecture structure and sequencing of required work.

c) Creation of vendor request for proposal (RFP) documentation.

d) Identification of potential systems that fit the architecture, and that can be purchased using existing framework agreements.

e) Consideration of sharing platforms, systems or services with neighbouring and other FRS's.

The following general business goals have been specified for the ERP solution, as detailed in the High Level Business Case document. These goals were referenced when researching the market for suitable solutions and have been expanded in the Objectives section below.

- Information processing efficiency – doing more, requiring less staff time to do it.
- Information accuracy and currency – removing duplication, automated validating and updating of information.
- Information immediacy – more predefined information updated and available in real-time.

In addition to these goals, the following guiding principles were stated in the High Level Business Case. Any new solution should:

- Have a track record of operating successfully within a Fire & Rescue environment;
- Integrate well with other related processes/systems.

Several other Fire Services were consulted to add to the information already gathered; Royal Berkshire, Oxfordshire, Hampshire, Wiltshire and West Sussex. The lessons learned by those Fire Services were considered while compiling this business case.

3. Business Need

There are several business drivers behind this desire for change. Firstly, there is a need throughout the organisation to reduce the low value administrative activities, to automate wherever possible, and to introduce more agile ways of working, utilising mobile technology where possible. This requirement is clearly defined in the KIS Corporate Strategy Future State Vision:

> *"People don't talk about IT or information issues anymore. […] 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."*

Secondly, some existing systems are, or are becoming, less "fit for purpose" over time in terms of supporting the business, and modifications to these systems are either not technically desirable or not possible (the HR system, and the Prevention and Protection databases fall into this category) or not deemed to be economically viable (the current SAP solutions fall into this category but next generation SAP systems may be worthy of consideration).

Thirdly, there is a need to improve, advance and standardise the technology deployed at BMKFRS in order to create options for sharing of services, systems or technology platforms with third parties or other Fire Service organisations in the future.

4. Objectives

The business goals and guiding principles introduced above have been developed into a set of objectives to enable categorisation of the business requirements and to provide a method to impartially measure the vendor solutions. Additional technical objectives have also been added. It should be noted that not all of the business goals will be met by the ERP solution alone, some relate to internal process improvements which may or may not be driven by the chosen solution. These are highlighted in italics below.

1. Information Processing Efficiency
   a. *The number of manual processes should be reduced*
   b. *Duplication should be eliminated*
   c. Automated integration between systems and system modules
   d. Complete tasks via self-service or mobile devices where possible
2. Information Accuracy and Currency
   a. Sector specific standard functionality must be provided
   b. Replace manual processes with automation
   c. A single source of master data should be maintained
   d. *Master data should be propagated to slave systems regularly and automatically*
   e. Security and data control mechanisms must be robust
3. Information Immediacy
   a. Information must be easy to search, query and output
   b. *Information must be accessible on tablets / mobile devices where possible (see objective 4b below)*
   c. Information must progress automatically through scheduling or workflow

       d.   Alerts automatically generated when information flow is blocked
  4. <u>Technical Requirements</u>
       a.   Flexible support packages should be available with out-of-hours available if needed
       b.   Potential vendors should be cognisant with Fire Service requirements
       c.   Software should be delivered on a modern architecture (e.g. multi-tiered, web-based)
       d.   Integration with mobile technologies should be available (i.e. not just through full Windows OS, but via Windows Mobile, iOS or Android)
       e.   Flexible hosting options should be available (in-house or external)
       f.   External hosting arrangements must comply with ISO27001 and any additional BMKFRS information security requirements

These objectives were referenced during the high level vendor evaluations, and will form the basis for the vendor scoring mechanism which can be incorporated into the RFP process.

5. Potential Software and Systems

Vendor evaluation and systems selection are outside the terms of reference for this business case, but it was necessary to perform some evaluation of both, which was undertaken with reference to the Corporate Information System Requirements Document. The system requirements recorded in that document have been validated, extracted and incorporated into a Vendor Scoring matrix which can form part of the RFP documentation and be used to assist with systems selection.

Data were compiled on the software utilised within the Fire & Rescue Services sector (gathered from BMKFRS staff, software vendors, and other FRS's across the UK). The following information was ascertained from the forty-four FRS's reviewed:

Core HR:	18 are using FireWatch 5 are using iTrent 4 are using SAP 3 are using ResourceLink Others: PharOS, Workforce, bespoke solutions
Payroll:	8 are using SAP 7 are using ResourceLink 4 are using iTrent 4 have outsourced Others: Agresso, Prism
Financials:	8 are using SAP 7 are using Agresso 5 are using Oracle 3 are using Integra Others; Dream, Aptos, Sage, eFinancials, MS Dynamics, Samis, Technology One
Rostering & Availability:	17 are using FireWatch 14 are using Gartan

Further research confirmed, as suggested in the High Level Business Case, that there is no solution available that fulfils all of the ERP requirements in a single system. However, it is still possible to achieve enterprise level integration using a combination of solutions.

It is therefore proposed that BMKFRS progresses with an ERP solution tailored to the unique resourcing requirements of a fire service, supplemented by a good financial package.

<u>Fire & Rescue Service tailored ERP Solutions</u>

There are two vendors offering ERP solutions to the UK Fire & Rescue Services. Both vendors have supplied the market for 20+ years.

1. **Infographics** are the dominant software vendor within this market. Their FireWatch product is being used by at least eighteen UK Fire & Rescue Services. It is a modular product comprising the following modules:
   - Core HR
   - IPDS and Training
   - Occupational Health & Health and Safety
   - Web Self Service for the above modules
   - Availability
   - Mobile Self Service (for Availability bookings)
   - Asset Management
   - Fleet management
   - FloSuite, business process workflow module to manage:
     i. Firefighter Safety / Risk Database
     ii. Prevention Activities
     iii. Protection Activities

   The product has been reviewed on several occasions by BMKFRS staff over the last year and mostly positive feedback was received by those who have actually seen the software in action. Mixed reviews were provided by the other FRS's that are using the software, but when challenged, it appears that the experience of implementing the software rather than the efficacy of the software itself is behind the negativity. These experiences are captured in the Lessons Learned section below.

   From the high level evaluations undertaken it is clear that the FireWatch product is still maturing, and some of the modules have evolved further than others. For example, the Asset and Fleet Management modules are not yet well developed. This suggests that implementation of those modules should be deferred until a later time (and points to a phased implementation), to allow the functionality to reach the same level of maturity as existing systems deployed within the Service (e.g. RedKite, Tranman).

2. **Sophtlogic** appear to be the only other vendor with a presence in the market, with their PharOs with WAND product covering the same functional areas as FireWatch with FloSuite:
   - Personnel and Establishment
   - Training
   - Retained and Whole-time Availability
   - Community/Preventative Fire Safety
   - Workplace/Protective Fire Safety
   - Fleet, Equipment and Asset Management
   - Command and Control & Crewing Office
   - Hydrant Management
   - Property Directory
   - WAND (business process workflow module)

   Other systems may come to light as part of any procurement process and it is recommended that a review is undertaken before making a final selection.

Financial Packages

The financial requirements of BMKFRS are not complex which makes the selection of a finance and payroll package more straightforward. Staff in BMKFRS are already familiar with the software that has been deployed within other FRS's and Local Authorities.

1. **Technology One's** eponymous software package was reviewed by Finance last year. The modules that are currently available are:
   - Financials
   - Procurement
   - Budgeting
   - Asset Management
   - Inventory Management

   The feedback from the demonstration was very good, the only concern is that they have not yet developed their Payroll solution for the UK market (they are an Australian company). They have targeted April 2016 for this module to be available here in the UK. However, their Asset and Inventory Management modules makes this solution an attractive proposition as it could offer an alternative to the FireWatch or PharOs offerings.

2. **Unit 4**'s Agresso package is used in neighbouring Local Authorities, and offers the following modules:
   - Financials
   - Payroll
   - Purchasing
   - Budgeting
   - Income Manager
   - Reporting & Analytics

   The experience of BMKFRS staff who have used or implemented the product elsewhere is mixed. Some found it user friendly whereas others say it was not intuitive and took a long time to bed in. Wiltshire FRS are using a reasonably current version of the software and are very happy with the way it performs and the support they receive from the vendor. It is worth a closer look as it is widely used in the UK FRS sector.

3. **Capita**'s Integra offers the following modules:
   - Financials
   - Payroll
   - Purchasing
   - Budgets & Forecasts

   This product is not well known to BMKFRS staff but it is being used by several fire services so it is worth evaluating.

4. **ABS** provides a budgeting module which is already used by BMKFRS (Collaborative Planning). Their eFinancials package offers the following modules:
   - Financials
   - Payroll
   - Purchasing
   - Budgets & Forecasts

Wycombe Local Authority is using eFinancials and it has been seen in action by BMKFRS staff who recommend a further evaluation of the product.

Other finance software options may come to light as part of any procurement process and may be worth reviewing. Our current provider SAP have developed new products which also may be worth viewing.

Hosting Options

The options for hosting off-site were explored. The benefit of procuring solutions that are hosted externally is to avoid large capital expenditure on hardware installations. Also, vendors with cloud based software offer consumption based pricing where the organisation pays for what is used (on a per user per month basis) rather than having to buy user licences in advance for what might be needed.

ERP Solution

The options available for the ERP solutions are as follows:
- Infographics does not provide a hosting solution for FireWatch.
- Sophtlogic would be willing to provide a cost for hosting PharOS but it is not offered as standard. It also appears to be more of a private cloud arrangement, which would require hardware investment.

If BMKFRS wishes to pursue a private cloud arrangement it would be better to evaluate this independently of this project. This proposal is therefore based upon an in-house ERP solution.

Financial Solution

All of the financial packages mentioned above can be procured as cloud based solutions, and all are now available via the G-cloud framework. From the limited information offered at this stage by the vendors, the pricing is based on as per user, per month basis, with a standard hosting management charge. The decision to go cloud or in-house will depend upon overall pricing, but a cloud based solution would be more easily scalable should the Service enter into a shared services arrangement in the future.

See Appendix A for a proposed Systems Architecture diagram.

Software Assumptions

1. Software vendors invited to submit a proposal will already be contracted to a public sector Procurement Framework agreement.
2. Software vendor claims will be verified during the selection process.
3. The chosen solution(s) will be used out-of-the-box and bespoke modifications will be kept to a minimum.
4. Cloud based solutions will be checked for compliance to ISO27001 plus any other BMKFRS security requirements.

Opportunities for Collaboration

In choosing the desired ERPs it should be born in mind that the systems should not close off avenues for collaborating with other services (fire or otherwise). Opportunities should be sought to jointly procure software with other services who may be in a position to progress alongside us.

Dialogue with other surrounding FRS are active to seek out opportunities.

The procurement of the fire based ERP is likely to be a system common to other FRSs as there are so few on the market. While there is a reduced opportunity for joint procurement currently, there is significant scope for collaboration and shared services in the development and ongoing management. There is specific dialogue with RBFRS in relation to a potential system ongoing. This will particularly be the case if remote or joint hosting can be pursued.

The finance ERPs available are less fire orientated and are more generically designed for a more open market place. This could lead to opportunities for collaboration and shared services outside of FRSs as well as inside. Remote or joint hosting could assist this.

BMKFRS will endeavour to do its upmost to acquire systems that do not prove to be a barrier to shared services or collaboration in the short and medium term.

6. The Recommended Option: An Integrated ERP Solution with a Phased Cutover Approach

After consideration of the organisation's goals and strategy, requirements, its current state, and the software available on the market, the recommendation is to implement an integrated ERP solution, comprised of three main systems:

- A modular Resource Management system to manage all the HCM functions;
- A Financial package which includes payroll and possibly an Asset Management solution in addition to the standard financial functions;
- A workflow management package with a dedicated back-end database to manage all CFS and risk-based functions.

A phased transition over four phases is recommended, utilising an agile approach to implementation. This will help to lower the risk of disruption to the organisation, and will enable the high risk systems to be replaced as soon as possible. Also, the benefits from the early phases can start to be realised in parallel with work on the later phases.

Potential Systems Implementation Approach (Option 4 – Phased) **					Feb-15
Community Fire Safety	**Asset Management**	**HR**	**Resource Management**	**Payroll**	**Finance & Planning**
Current State HFRC SSRA SAFIRE SOM SSI Fireplan	RedKite Tranman Hydra	**SAP HR**	Gartan	SAP Payroll	**SAP Financials** Planning
Phase I FloSuite * SSI FirePlan	RedKite Tranman Hydra	**FireWatch ***	Gartan	**SAP Payroll**	eFinancials * **Planning**
Phase II FloSuite SSI FirePlan	RedKite Tranman Hydra	FireWatch	**Gartan**	**eFinancials**	
Phase III FloSuite SSI FirePlan	**RedKite** **Tranman** **Hydra**	**FireWatch**		eFinancials	
Phase IV FloSuite SSI FirePlan		**FireWatch**		eFinancials	

* Potential system; actual systems selection will be via BFRS procurement process.

** For simplicity, interfaces are not shown.

Key: Cutover to new system ⟶

Rag: Red = Critical Risk   Amber = High Dev Cost   Green = Low Risk

Timeline

A detailed systems implementation project plan is outside the terms of reference for this business case, however, a soft plan was collated in order to explore the optimum timeline for implementation, and to provide an indication of resource requirements and costs. This takes

into account feedback from other FRSs, the previous experience of the author with similar software implementations, and information from vendors.

Several timeline options were explored as part of this business case to evaluate how quickly the expected benefits could be realised, and the level of investment required. The results indicated that two years was the minimum period needed and would deliver the benefits fastest. It would also require the highest level of investment, but the payback point would come earliest (see Cost/Benefit Summary below). The two year target would be challenging and would likely only be accomplished by using dedicated staff with a high level of experience of similar projects, and good overall knowledge of e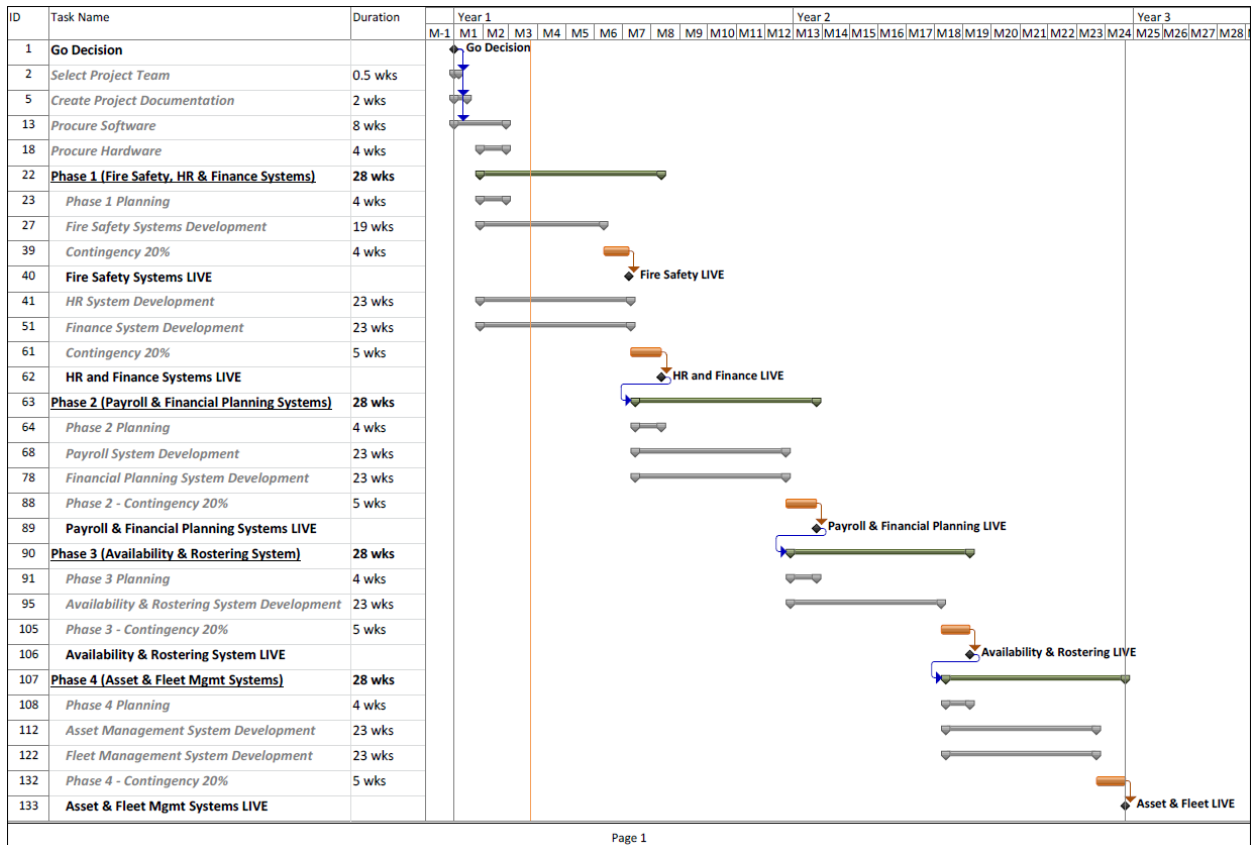ach of the functional areas.   It is recommended that external resources are used to manage and coordinate the project if the two year timeline is preferred.

Also, as the two year timeline takes no account of other projects within the corporate plan, it should be treated as illustrative of what could be achieved. The Service may wish to adopt a slower pace either by following the two year plan and pausing between phases, or by following a three year continuous implementation plan that assumes greater use of internal resources (see Appendix C for an illustration of such a three year plan).

ID	Task Name	Duration
1	**Go Decision**	
2	*Select Project Team*	0.5 wks
5	*Create Project Documentation*	2 wks
13	*Procure Software*	8 wks
18	*Procure Hardware*	4 wks
22	**Phase 1 (Fire Safety, HR & Finance Systems)**	**28 wks**
23	*Phase 1 Planning*	4 wks
27	*Fire Safety Systems Development*	19 wks
39	*Contingency 20%*	4 wks
40	**Fire Safety Systems LIVE**	
41	*HR System Development*	23 wks
51	*Finance System Development*	23 wks
61	*Contingency 20%*	5 wks
62	**HR and Finance Systems LIVE**	
63	**Phase 2 (Payroll & Financial Planning Systems)**	**28 wks**
64	*Phase 2 Planning*	4 wks
68	*Payroll System Development*	23 wks
78	*Financial Planning System Development*	23 wks
88	*Phase 2 - Contingency 20%*	5 wks
89	**Payroll & Financial Planning Systems LIVE**	
90	**Phase 3 (Availability & Rostering System)**	**28 wks**
91	*Phase 3 Planning*	4 wks
95	*Availability & Rostering System Development*	23 wks
105	*Phase 3 - Contingency 20%*	5 wks
106	**Availability & Rostering System LIVE**	
107	**Phase 4 (Asset & Fleet Mgmt Systems)**	**28 wks**
108	*Phase 4 Planning*	4 wks
112	*Asset Management System Development*	23 wks
122	*Fleet Management System Development*	23 wks
132	*Phase 4 - Contingency 20%*	5 wks
133	**Asset & Fleet Mgmt Systems LIVE**	

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Planning Assumptions (two year timeline)
1. Experienced, external resources will be recruited for the duration of the project to fill the Project Management and Business Systems Analyst roles (see Appendix E for an example job description for these roles).
2. 20% contingency is added to each phase of the project.

Resourcing Profile (two year timeline)

The two year soft plan was extrapolated to a high level resource plan to give an indication of the manpower required for the project and the possible impact upon internal teams. This analysis resulted in the following estimated resource requirements (see Appendix C for the three year plan equivalent):

FTE	Internal	Duration
0.7	KIS Resource	24 months
0.6	CFS & Admin Resource	6 months
0.6	HR Resource	12 months
0.5	Payroll Resource	9 months
0.7	Finance Resource	12 months
0.4	'Rostering' Resource	6 months
0.4	Asset Resource	6 months
0.4	Fleet Resource	6 months
4.3	**Total**	

FTE	External	Duration
1.0	Project Manager	24 months
1.0	Business Systems Analyst	24 months
1.2	Consultants	12 months
3.2	**Total**	

Cost/Benefit Summary (two year timeline)

The costs were calculated from indicative quotes for hardware, software and support from vendors, the average cost of external resources from the website itjobswatch.co.uk, and on-costs values provided by the Finance department for internal staff. The estimated investment required for a two year implementation is in the region of £976k. The cost savings would start to take effect in year 1 and would be fully realised during years 4/5. These savings are made through reduced headcount, some small savings from the replacement of paper processes and the Access databases currently running the CFS systems.

2 year Implementation	Year 0	Year 1	Year 2	Year 3	Year 9	Total
ERP Software Licences (Infographics)	27,820	37,064	37,064	37,064	37,064	361,400
Hardware Costs (incl. Implementation)	38,500	0	0	0	0	38,500
Hardware/Software Licences	*66,320*	*37,064*	*37,064*	*37,064*	*37,064*	*399,900*
External Services	307,133	194,500	0	0	0	501,633
Internal Resource Costs	49,315	25,332	0	0	0	74,646
Total Investment	**422,767**	**256,896**	**37,064**	**37,064**	**37,064**	**976,179**
ERP Annual Support (Infographics)	55,640	72,280	72,280	72,280	72,280	706,160
Finance Subscription (Agresso)	57,884	62,639	62,639	62,639	62,639	621,634
Hardware Support	4,500	4,500	4,500	4,500	4,500	45,000
Support Costs	**118,024**	**139,419**	**139,419**	**139,419**	**139,419**	**1,372,794**
Expected Savings	0	-208,272	-246,690	-246,690	-246,690	-2,181,788
SAP Support	0	-57,614	-76,819	-76,819	-76,819	-672,166
ABS Support	0	-6,000	-6,000	-6,000	-6,000	-54,000
Gartan Support	0	0	-55,750	-55,750	-55,750	-446,000
RedKite / Tranman / Hydra Support	0	0	-18,436	-18,436	-18,436	-147,489
Total Estimated Savings	**0**	**-271,886**	**-403,695**	**-403,695**	**-403,695**	**-3,501,444**
TOTAL	**540,791**	**124,429**	**-227,212**	**-227,212**	**-227,212**	**-1,152,471**
Payback Period	540,791	665,221	438,009	210,798	-1,152,471	

Note: See Appendix B for the expanded copy of this table and Appendix D for a breakdown of expected savings.

Costing assumptions

1. The costs presented throughout this document are based on information received so far and are a reasonable indication of the likely costs.

2. Headcount savings are estimated and subject to further verification.
3. No uplift for inflation is included.
4. It is assumed that the costs of purchasing the required modules can be spread without penalty if the implementation is phased (if not the modules may need to be purchased up front).
5. It is assumed that software costs can be refined during the procurement process, so the costs presented in this business case represent the worst case.
6. There may be additional costs for interface development depending upon the degree of automation required.
7. A sufficient number of mobile devices (tablets, smartphones) have already been purchased.
8. Costs are included for third party development of an SQL database to replace the Access databases.
9. Costs for external resources are based on market rates, however it may be possible to buy-off time of experienced staff from other FRS's at a lower rate (discussions are ongoing with RBFRS).
10. If internal staff are used to resource the project (as far as possible) it will take the same effort as if external staff are used.
11. Internal staff will be backfilled while they are working on the project.
12. Provision is not made for the permanent recruitment of a Business Systems Analyst to support the systems during the project and in the future, but this is highly recommended. Having in-house knowledge would reduce the dependence upon suppliers and minimise the future costs of consultancy.

Pros/Cons Analysis

Pros: A phased implementation is lower risk for the organisation as this project represents a huge amount of change.
Breaks down into sub-projects of a similar size, easier to manage.
Costs can be spread across financial years, and phasing can be extended to ease costs if required.
Enables a pause and review at the end of each phase to ensure expected benefits are being realised.
Allows the available software products to mature further.

Cons: There would be greater reliance on fewer vendors with an ERP solution.
Interfaces will need to be implemented during some phases (to avoid duplicating data entry) that will need to be reworked or even discarded in later phases.

7. Option 2: An Integrated ERP Solution with a Big Bang Cutover Approach

This is essentially the same as Option 1 but proposes a 'big bang' cutover to an ERP solution, achieved in one step.   This option was discounted for several reasons.

- The project could not be delivered any faster as this level of change could not be easily absorbed by the organisation and would still follow a 2 year timeline (even flooding the project with external resource would not achieve it).
- There would be a longer payback period as no benefits would start to be realised until the end of year 2.
- The software products on the market need to mature in some respects and are not ready.
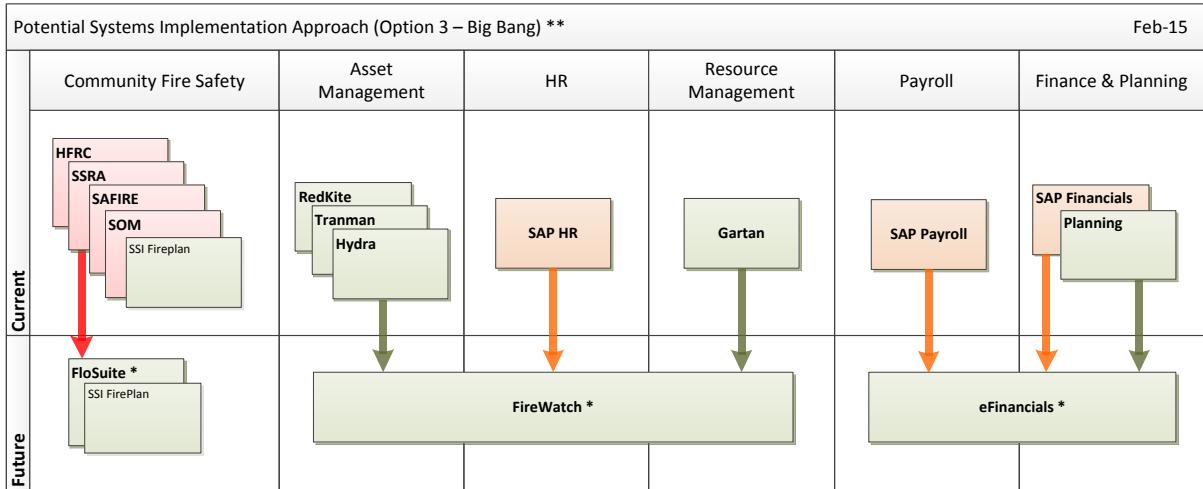
Potential Systems Implementation Approach (Option 3 – Big Bang) **   Feb-15

* Potential system; actual systems selection will be via BFRS procurement process.

** For simplicity, interfaces are not shown.

Key: Cutover to new system

Rag: Red = Critical Risk   Amber = High Dev Cost   Green = Low Risk

Cost/Benefit Summary

This option shows the same level of investment (£976k) but a longer payback period than the recommended option, because none of the benefits can be realised early (i.e. before the finish date) and as discussed above, the timeline would be roughly the same.

Big Bang Implementation							
	Year 0	Year 1	Year 2	Year 3	Year 4	Year 9	Total
ERP Software Licences (Infographics)	36,140	36,140	36,140	36,140		36,140	361,400
Hardware Costs (incl. Implementation)	38,500	0	0	0		0	38,500
Hardware/Software Licences	*74,640*	*36,140*	*36,140*	*36,140*		*36,140*	*399,900*
External Services	250,816	250,816	0	0		0	501,633
Internal Resource Costs	37,323	37,323	0	0		0	74,646
Total Investment	*362,779*	*324,279*	*36,140*	*36,140*		*36,140*	*976,179*
ERP Annual Support (Infographics)	72,280	72,280	72,280	72,280		72,280	722,800
Finance Subscription (Agresso)	62,639	62,639	62,639	62,639		62,639	626,388
Hardware Support	4,500	4,500	4,500	4,500		4,500	45,000
Support Costs	*139,419*	*139,419*	*139,419*	*139,419*		*139,419*	*1,394,188*
Expected Savings	0	0	-246,690	-246,690		-246,690	-1,973,517
SAP Support	0	0	-57,614	-76,819		-76,819	-595,347
ABS Support	0	0	-6,000	-6,000		-6,000	-48,000
Gartan Support	0	0	-55,750	-55,750		-55,750	-446,000
RedKite / Tranman / Hydra Support	0	0	-18,436	-18,436		-18,436	-147,489
Total Estimated Savings	*0*	*0*	*-384,490*	*-403,695*		*-403,695*	*-3,210,353*
TOTAL	*502,198*	*463,698*	*-208,931*	*-228,136*		*-228,136*	*-839,986*
Payback Period	*502,198*	*965,897*	*756,965*	*528,829*		*-839,986*	

Pros: High organisational focus.

Cons: The high level of change introduces more risk.

Pressure on staff: subject specialists and project participants may have too many conflicting demands.

The ERP solutions on offer for this sector are maturing so not all functionality is available yet (but is either being developed, or is likely to be in future).

8. Option 3: Do Nothing

This option has already effectively been discounted, but an analysis of the pros and cons is included here as good practice.

Pros/Cons Analysis

Pros: No immediate impact on costs or staff.

Cons: Incurs increasing costs to develop and maintain legacy databases and systems.

Some of the systems in use are no longer fully supportable, and in the event of a catastrophic failure, may not be recoverable.

9. Option 4: Do the Minimum

Doing the minimum would equate to completing the early phases of the recommended option to address the problems caused by the high risk and high cost systems and then stopping.

Potential Systems Implementation Approach (Option 5 - Minimum) **   Feb-15

* Potential system; actual systems selection will be via BFRS procurement process.

** For simplicity, interfaces are not shown.

Key: Cutover to new system

Rag: Red = Critical Risk Amber = High Dev Cost Green = Low Risk
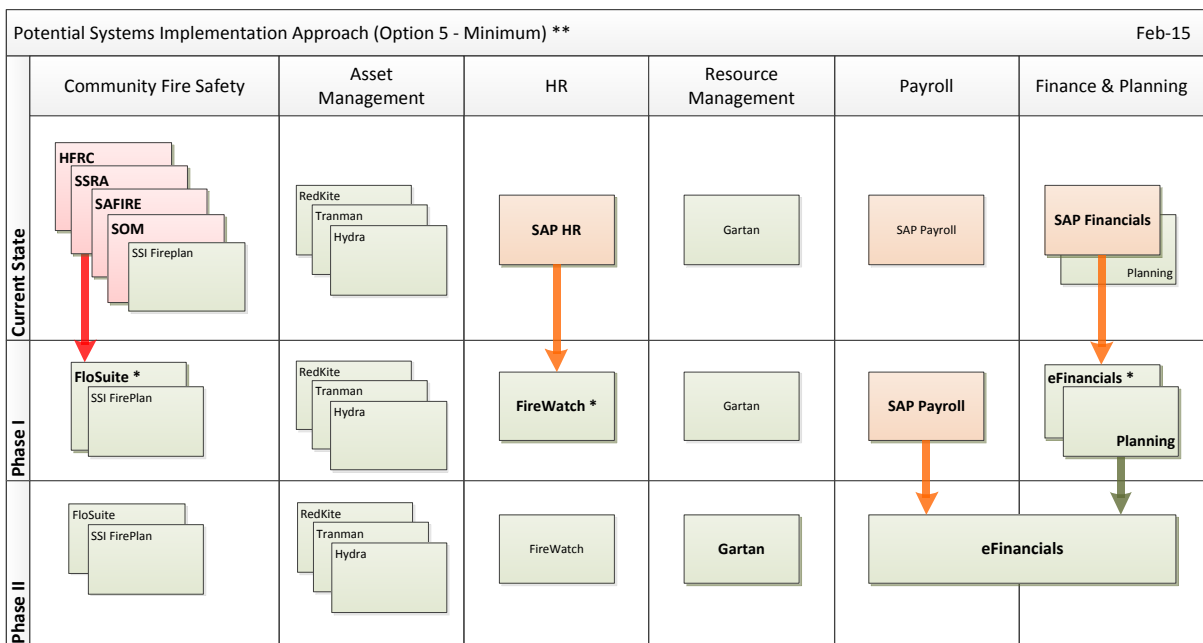
Cost/Benefit Summary

This option shows a marginally shorter payback period than Option 1 (2 and 3 year timelines), as the level of investment is lower (£673k). The aggregated support costs for the best-in-class systems replaced in the latter part of the project are quite high whereas the cost to replace them

is relatively low (because the modules are part of the ERP solution). This option may still be considered if the chosen ERP solution has not matured enough when the latter two phases of the project are reached.

Do Minimum Implementation						
	Year 0	Year 1	Year 2	Year 3	Year 9	Total
ERP Software Licences (Infographics)	27,820	27,820	27,820	27,820	27,820	278,200
Hardware Costs (incl. Implementation)	38,500	0	0	0	0	38,500
Hardware/Software Licences	*66,320*	*27,820*	*27,820*	*27,820*	*27,820*	*316,700*
Implementation Services	307,133	0	0	0	0	307,133
Internal Resource Costs	49,315	0	0	0	0	49,315
Total Investment	*422,767*	*27,820*	*27,820*	*27,820*	*27,820*	*673,147*
ERP Annual Support (Infographics)	55,640	55,640	55,640	55,640	55,640	556,400
Finance Subscription (Agresso)	57,884	62,639	62,639	62,639	62,639	621,634
Hardware Support	4,500	4,500	4,500	4,500	4,500	45,000
Support Costs	*118,024*	*122,779*	*122,779*	*122,779*	*122,779*	*1,223,034*
	0	-208,272	-246,690	-246,690	-246,690	-2,181,788
SAP Support	0	-57,614	-76,819	-76,819	-76,819	-672,166
ABS Support	0	-6,000	-6,000	-6,000	-6,000	-54,000
Expected Savings	*0*	*-271,886*	*-329,509*	*-329,509*	*-329,509*	*-2,907,955*
TOTAL	*540,791*	*-121,287*	*-178,910*	*-178,910*	*-178,910*	*-1,011,774*
Payback Period	540,791	419,504	240,595	61,685	-1,011,774	

Pros/Cons Analysis

Pros: The project would require less investment if halted early.

Still return on investment even if the later phases of the project are deferred.

Allows time for the less mature modules to be developed.

Cons: Maximum potential benefit would not be achieved.

Maximum potential systems integration would not be achieved.

10.   Benefits

Following the options review, the recommendation is to move to an integrated ERP solution, comprising two main systems, with a phased implementation approach. This means that the primary organisational goals of information efficiency, accuracy, currency and immediacy, plus options for sharing of services will be achieved on an increasing scale with each phase of the project.

The expected tangible benefits of the recommended solution are:
1. Direct cost savings
   a. Staffing reductions made possible with more efficient administration functions (greater automation, devolved administration).
   b. Lower system support costs.
   c. Reduced paper consumption.
   d. Future savings potential through shared services and streamlined partnerships.
2. Indirect cost savings
   a. Time saved by improved system response times.
   b. Time saved by streamlined, automated processes.

      c.   Time saved by removing duplication of effort.

      d.   Ability to configure financial information according to fire service needs without non-fire service restrictions.

The expected intangible benefits of the recommended solution are:

1. Improved service quality through a real-time integrated view of the activities of the organisation.
2. Improved customer relations through on-line accessibility and a modern perception of the organisation.
3. Better employee experience and more agile working opportunities through remote access and self-service applications.
4. Greater control through greater awareness of work status, risks, issues, trends etc.
5. Improved staff development via greater visibility of development paths and training needs.
6. Enhanced Establishment control and workforce planning.
7. Greater interdepartmental collaboration driven by a common view of information.
8. Support staff will be able to spend time supporting service delivery and development rather than inputting data. Fits with the vision of smaller but more highly skilled support service teams.
9. Potential to decentralise some smaller expenditure to station level e.g. use of purchasing cards.

11.   Dis-benefits

A dis-benefit is a change perceived as negative by a stakeholder or affected person on the project. The dis-benefits for this project include:

- Individual loss of control – some individuals rely on paper systems together with their own knowledge and may see the move to automation as negative.
- Adopting new processes and systems may impact the speed of completing day-to-day tasks during the early stages of the project; this potential disruption will need to be monitored and managed.
- If the phased proposal is adopted, the complexity of the interfaces between existing systems is not improved until the later stages of the project, and may actually increase in the earlier stages.
- Similarly, until the final end state is achieved there may need to be some manual duplication of data across systems. As far as possible, this should be automated or semi-automated via a suitable interface mechanism.

12.   Assumptions

A summary of all the assumptions that have been made during the compilation of this business case follows.

Software assumptions

1. Software vendors invited to submit a proposal will already be contracted to a public sector Procurement Framework agreement.
2. Software vendor claims will be verified during the selection process.
3. The chosen solution(s) will be used out-of-the-box and bespoke modifications will be kept to a minimum.
4. Cloud based solutions will be checked for compliance to ISO27001 plus any other BMKFRS security requirements.

Planning assumptions

1. Experienced, external Resources will be recruited for the Project Management and Business Systems Analyst role to ensure the fastest completion of the project.
2. 20% contingency is added to each phase of the project.

Costing assumptions:

1. The costs presented throughout this document are based on information received so far and are a reasonable indication of the likely costs.
2. Headcount savings are estimated and subject to further verification.
3. No uplift for inflation is included.
4. It is assumed that the costs of purchasing the required modules can be spread without penalty if the implementation is phased (if not the modules may need to be purchased up front).
5. It is assumed that discounts can be negotiated during the procurement process, so the software costs presented in this business case represent the worst case.
6. There may be additional costs for interface development depending upon the degree of automation required.
7. A sufficient number of mobile devices (tablets, smartphones) have already been purchased.
8. Costs are included for third party development of an SQL database to replace the Access databases.
9. Costs for external resources are based on market rates, however it may be possible to second experienced staff to assist from other FRS's at a lower rate (discussions are ongoing with RBFRS).
10. If internal staff are used to resource the project (as far as possible) it will take the same effort as if external staff are used.
11. Internal staff will be backfilled while they are working on the project.
12. Provision is not made for the permanent recruitment of a Business Systems Analyst to support the systems during the project and in the future, but this is highly recommended.

13.   Major Risks

The following risks have been identified so far, with suggested mitigations. If the project progresses, these items should be transferred to a project risk register and actively mitigated. See also critical success factors in section 13 below.

Risk	Suggested Mitigation
Significant levels of change across the organisation may be disruptive	• Use change management techniques to assist in the transition (early engagement, frequent communications, consultation, involvement)
The forthcoming election may see a change of policy resulting in a move towards top-down mergers	• Delaying the start of the project would clarify the policies of the next government, and phasing the project reduces the up-front investment • Selecting solutions in use by other FRS's increases the probability of having common systems in the event of mergers or mandatory collaboration
The expected benefits are not realised	• The project must be managed within set targets for time, quality and costs • Scope creep and change must be closely managed • Benefits realisation should be tracked

Risk	Suggested Mitigation
Additional project responsibilities will need to be given to staff who are already stretched	• Recruit additional resources to backfill
External dependencies on supplier availability	• Engage suppliers in planning process at the earliest opportunity • Obtain fixed price quotation for consultancy services to increase motivation to deliver early

14. Lessons Learned and Critical Success Factors

The biggest message from other FRS's who have implemented ERP solutions is to make sure that project teams are adequately manned, and to release project staff from their day jobs by recruiting temporary replacements as needed. A selection of feedback is included here.

Feedback from Colin Sutherland (FireWatch System Manager) at Hampshire Fire & Rescue Service, extracted from their Basic Lessons Learned log.
- Set realistic timescales and include financial and time contingency.
- Include implementation costs in project costing whether using internal or external resources.
- Don't assume that an off-the-shelf product will not require any development.
- Obtain answers on 'how' requested functionality will be delivered at the outset during the procurement process rather than accepting on face value that requested functionality 'is possible'.
- Process mapping was extremely useful.
- It was helpful for the Implementation Team to have the final say in the go/no go decision for go live, as they were able to delay until the product was fit for purpose.
- Ensure the 'people' (end user) communications interface is working as well as the 'technical' interface; target specific audiences and don't overwhelm people.
- Ensure that support processes are fully documented and rehearsed (e.g. communications in the event of server failure).
- Ensure that critical success factors are captured in the project documentation.
- Organise and control meetings to focus on important areas like actions, risk and issues.
- Capture change requests formally.
- All stakeholders from Project Board down should recognise responsibilities.
- Stakeholders need to feel engaged so there needs to be an official forum for their feedback.
- Plan training early to fit in around other commitments.
- Allow training practice on dedicated hardware - demonstration followed by practice worked well.

Feedback from Matt Pinto (Business Analyst) and Jackie Manning (HR Manager) at Royal Berkshire Fire & Rescue Service.
- Ensure the user group is well trained and understand what the system is capable of before undertaking the data setup.
- Recruit additional resources to back fill the day jobs of any critical project staff.
- Allow user access to test areas to develop their own reports and try out new functions.

Feedback from Paul Evans (Senior Systems Administrator) at West Sussex Fire & Rescue Service
- Back it at a high level down.
- Resource the team.
- Anticipate the effects of changes across the whole system (it all interacts).
- Roll out at a high level down – only rolling out Maintenance of Competence to WM down will not get your WM's competent. Everyone needs to have an involvement.
- You need to accept bugs sometimes or else you may never progress – weigh up what is critical.

Feedback from Debbie Barber (Project Lead) at Wiltshire Fire & Rescue Service.
- Engage the workforce early.
- Communicate frequently.
- Plan each stage of the project properly.
- Resist pressure to implement before the team feels ready.
- Utilise the in-house knowledge and select super users to work on the project.
- Don't underestimate the resources that will be required from Operations and Support.

Drawing partly on the lessons learned, the following table suggests specific steps that can be taken to ensure project success.

Success Feature	Recommendation
Buy in across the organisation, top down	• SMB sign-off • Regular briefings to management teams for dissemination to staff • Engage knowledgeable stakeholders from across the organisation • Create a User Group of nominated key users (or super users) and empower them to make decisions
Have a single agenda	• Reinforce corporate goals throughout the project • Terms of Reference and success criteria agreed by Project Board • Identify and incorporate silo projects
Employ good project governance	• Establish Project Steering Board • Set the project budget • Select a dedicated, empowered Project Manager • Designate decision makers and track decision points • Focused progress, risk and issue tracking and reporting (minimise meetings!) • Enforce change control • Agree measurable outputs and measure them
Be agile in approach	• If possible, have a dedicated project space or room to remove people from daily tasks and distractions • Ensure bugs and issues are reviewed and prioritised • Avoid perfectionism and aim for fit-for-purpose
There will be significant change so change management must be part of the project	• Consider a dedicated change manager • Undertake impact assessments • Develop targeted communication plans • Ensure PM manages business readiness (not just

Success Feature	Recommendation
	technical readiness)
Be clear about functional requirements	• Document requirements and cross check them against the functionality offered • Obtain clarification on how requirements will be met from suppliers
Don't underestimate human resource requirements	• Develop realistic implementation plans that include the costs of internal and external staff • Have clear roles and responsibilities • Assess the impact on existing internal staff and backfill their role
Acquire technical competence in the team	• Ensure training and up-skilling of internal staff is part of the arrangement with vendors
Ensure staff know how to use the systems	• Plan training schedules early • Utilise different training methods • Ensure a dedicated training space is provided for practice and familiarisation

15. Appendix A – Proposed Systems Architecture Diagram

BFRS Proposed Systems Architecture

KEY: Map Data · Incident Data · Performance Data · Resources Data · Finance Data · Fire Risk Data · Remote Access

Internet Space

External Inputs

Map Info
NLPG
OS

TVC Mobilising System
VISION 4
Hosted by RBFRS

External Outputs

FB Forms

DCLG
Data Feed

DCLG
Reports

Members
Reports

CiPFA
Reports

HMRC
Data Feed

BACS
Data Feed

BFRS Networks

MDTs

Tablets

BFRS Cloud Hosted

IRS
Incident Response

FIRE SAFETY DATABASE
Prevention (HFRC);
Protection (SOM);
Risk Data (SSRA);
Corporate Data

SSI
FirePlan

LEARNING POOL
eLearning Portal

GMS
Currently GGP/eGGP

BOSS
Vision Data

Remote Access / Self Service

GIS
Arc GIS

VIPER
Performance Data

ERP SOLUTION
Core HR & Establishment; IPDS;
Learning & Development;
Occupational Health; Health & Safety;
Availability & Rostering;
Asset & Hydrant Management;
Fleet Management

FINANCE SOLUTION
Payroll; Financials;
Ledgers (GL/AP/AR);
Purchasing;
Forward Planning;

MODELLING
FSEC (Risk)
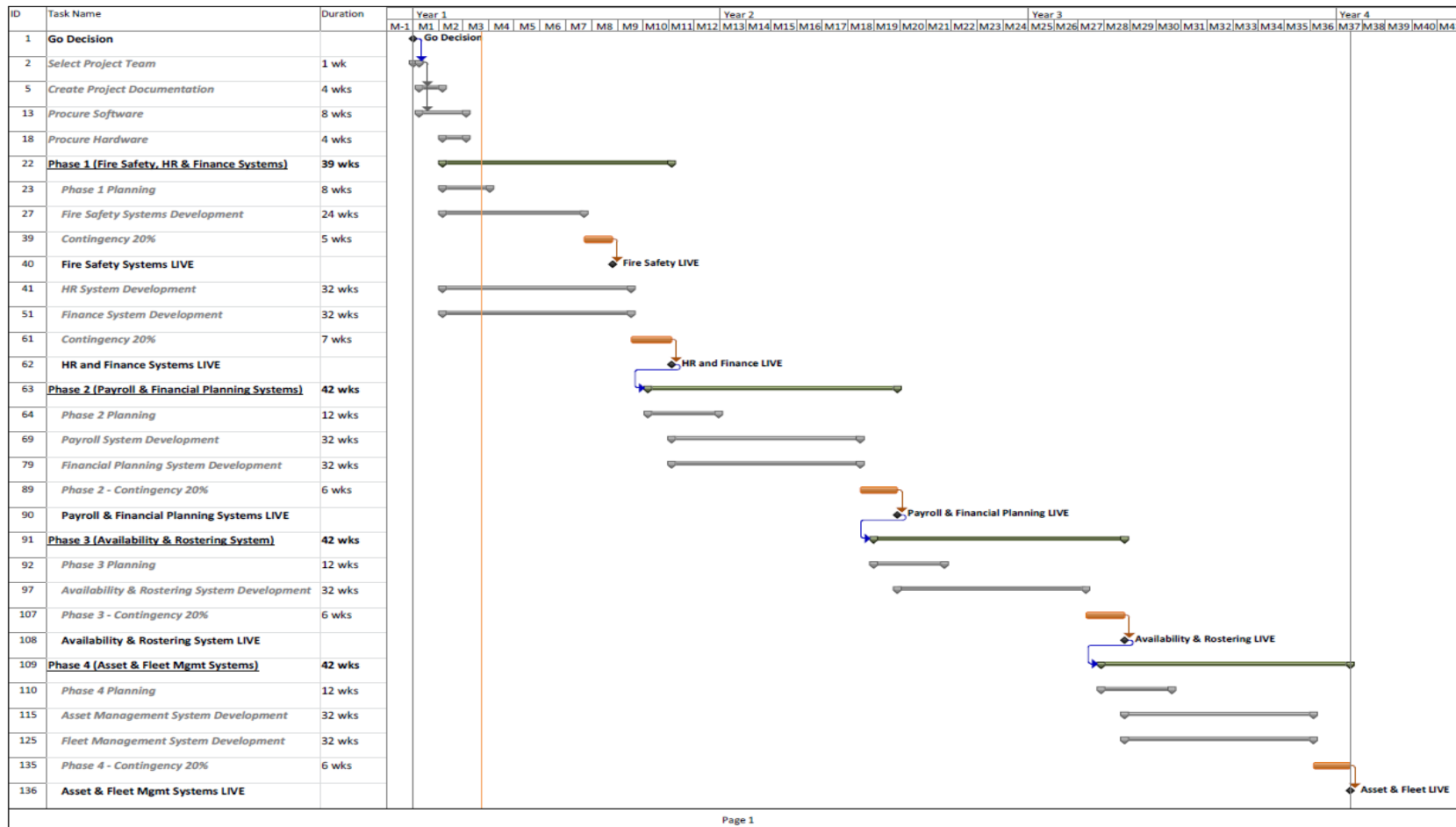CadCorp (Resource)

Viva Desk
Service Desk

16. Appendix B – Two Year Timeline – Costs/Benefit Summary

2 year Implementation	* Cash payment for licences in years 0 and 1 are spread over future years to show when benefits are realised										
	Year 0	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6	Year 7	Year 8	Year 9	Total
ERP Software Licences (Infographics)	27,820	37,064	37,064	37,064	37,064	37,064	37,064	37,064	37,064	37,064	361,400
Hardware Costs (incl. Implementation)	38,500	0	0	0	0	0	0	0	0	0	38,500
Hardware/Software Licences	*66,320*	*37,064*	*37,064*	*37,064*	*37,064*	*37,064*	*37,064*	*37,064*	*37,064*	*37,064*	*399,900*
External Services	307,133	194,500	0	0	0	0	0	0	0	0	501,633
Internal Resource Costs	49,315	25,332	0	0	0	0	0	0	0	0	74,646
Total Investment	*422,767*	*256,896*	*37,064*	*37,064*	*37,064*	*37,064*	*37,064*	*37,064*	*37,064*	*37,064*	*976,179*
ERP Annual Support (Infographics)	55,640	72,280	72,280	72,280	72,280	72,280	72,280	72,280	72,280	72,280	706,160
Finance Subscription (Agresso)	57,884	62,639	62,639	62,639	62,639	62,639	62,639	62,639	62,639	62,639	621,634
Hardware Support	4,500	4,500	4,500	4,500	4,500	4,500	4,500	4,500	4,500	4,500	45,000
Support Costs	*118,024*	*139,419*	*139,419*	*139,419*	*139,419*	*139,419*	*139,419*	*139,419*	*139,419*	*139,419*	*1,372,794*
Expected Savings	0	-208,272	-246,690	-246,690	-246,690	-246,690	-246,690	-246,690	-246,690	-246,690	-2,181,788
SAP Support	0	-57,614	-76,819	-76,819	-76,819	-76,819	-76,819	-76,819	-76,819	-76,819	-672,166
ABS Support	0	-6,000	-6,000	-6,000	-6,000	-6,000	-6,000	-6,000	-6,000	-6,000	-54,000
Gartan Support	0	0	-55,750	-55,750	-55,750	-55,750	-55,750	-55,750	-55,750	-55,750	-446,000
RedKite / Tranman / Hydra Support	0	0	-18,436	-18,436	-18,436	-18,436	-18,436	-18,436	-18,436	-18,436	-147,489
Total Estimated Savings	*0*	*-271,886*	*-403,695*	*-403,695*	*-403,695*	*-403,695*	*-403,695*	*-403,695*	*-403,695*	*-403,695*	*-3,501,444*
TOTAL	*540,791*	*124,429*	*-227,212*	*-227,212*	*-227,212*	*-227,212*	*-227,212*	*-227,212*	*-227,212*	*-227,212*	*-1,152,471*
Payback Period	*540,791*	*665,221*	*438,009*	*210,798*	*-16,414*	*-243,625*	*-470,837*	*-698,048*	*-925,260*	*-1,152,471*	

17. Appendix C – Three Year Timeline

Here is a three year timeline for the phased option with the associated cost/benefit analysis. This would utilise internal staff to a greater degree and would be a slower paced implementation.

ID	Task Name	Duration
1	Go Decision	
2	Select Project Team	1 wk
5	Create Project Documentation	4 wks
13	Procure Software	8 wks
18	Procure Hardware	4 wks
22	Phase 1 (Fire Safety, HR & Finance Systems)	39 wks
23	Phase 1 Planning	8 wks
27	Fire Safety Systems Development	24 wks
39	Contingency 20%	5 wks
40	Fire Safety Systems LIVE	
41	HR System Development	32 wks
51	Finance System Development	32 wks
61	Contingency 20%	7 wks
62	HR and Finance Systems LIVE	
63	Phase 2 (Payroll & Financial Planning Systems)	42 wks
64	Phase 2 Planning	12 wks
69	Payroll System Development	32 wks
79	Financial Planning System Development	32 wks
89	Phase 2 - Contingency 20%	6 wks
90	Payroll & Financial Planning Systems LIVE	
91	Phase 3 (Availability & Rostering System)	42 wks
92	Phase 3 Planning	12 wks
97	Availability & Rostering System Development	32 wks
107	Phase 3 - Contingency 20%	6 wks
108	Availability & Rostering System LIVE	
109	Phase 4 (Asset & Fleet Mgmt Systems)	42 wks
110	Phase 4 Planning	12 wks
115	Asset Management System Development	32 wks
125	Fleet Management System Development	32 wks
135	Phase 4 - Contingency 20%	6 wks
136	Asset & Fleet Mgmt Systems LIVE	

Timeline (Gantt chart): Year 1 (M-1, M1–M12), Year 2 (M13–M24), Year 3 (M25–M36), Year 4 (M37–M41+)

Milestones: Go Decision, Fire Safety LIVE, HR and Finance LIVE, Payroll & Financial Planning LIVE, Availability & Rostering LIVE, Asset & Fleet LIVE

Page 1

Cost/Benefit Summary (three year timeline)

Here is the cost/benefit analysis for the three year timeline. The investment required would be around £862k, lower than the two year timeline (£976k), but the return on investment would not be achieved much earlier than the two year implementation.

3 year Implementation	* Cash payment for licences in years 0,1 and 2 are spread over future years to show when benefits are realised										
	Year 0	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6	Year 7	Year 8	Year 9	Total
ERP Software Licences (Infographics)	27,820	32,442	37,642	37,642	37,642	37,642	37,642	37,642	37,642	37,642	361,400
Hardware Costs (incl. Implementation)	38,500	0	0	0	0	0	0	0	0	0	38,500
Hardware/Software Licences	*66,320*	*32,442*	*37,642*	*37,642*	*37,642*	*37,642*	*37,642*	*37,642*	*37,642*	*37,642*	*399,900*
External Services	142,015	12,000	12,000	0	0	0	0	0	0	0	166,015
Internal Resource Costs	180,595	49,889	65,644	0	0	0	0	0	0	0	296,127
Total Investment	*388,930*	*94,331*	*115,286*	*37,642*	*37,642*	*37,642*	*37,642*	*37,642*	*37,642*	*37,642*	*862,042*
ERP Annual Support (Infographics)	55,640	63,960	72,280	72,280	72,280	72,280	72,280	72,280	72,280	72,280	697,840
Finance Subscription (Agresso)	57,884	62,639	62,639	62,639	62,639	62,639	62,639	62,639	62,639	62,639	621,634
Hardware Support	4,500	4,500	4,500	4,500	4,500	4,500	4,500	4,500	4,500	4,500	45,000
Support Costs	*118,024*	*131,099*	*139,419*	*139,419*	*139,419*	*139,419*	*139,419*	*139,419*	*139,419*	*139,419*	*1,364,474*
Expected Savings	0	-178,191	-208,272	-246,690	-246,690	-246,690	-246,690	-246,690	-246,690	-246,690	-2,113,289
SAP Support	0	-30,728	-57,614	-76,819	-76,819	-76,819	-76,819	-76,819	-76,819	-76,819	-626,075
ABS Support	0	0	-6,000	-6,000	-6,000	-6,000	-6,000	-6,000	-6,000	-6,000	-48,000
Gartan Support	0	0	0	-55,750	-55,750	-55,750	-55,750	-55,750	-55,750	-55,750	-390,250
RedKite / Tranman / Hydra Support	0	0	0	-18,436	-18,436	-18,436	-18,436	-18,436	-18,436	-18,436	-129,053
Total Estimated Savings	*0*	*-208,918*	*-271,886*	*-403,695*	*-403,695*	*-403,695*	*-403,695*	*-403,695*	*-403,695*	*-403,695*	*-3,306,667*
TOTAL	*506,954*	*16,512*	*-17,181*	*-226,634*	*-226,634*	*-226,634*	*-226,634*	*-226,634*	*-226,634*	*-226,634*	*-1,080,152*
Payback Period	506,954	523,465	506,285	279,651	53,017	-173,617	-400,250	-626,884	-853,518	-1,080,152	

Resourcing Profile (three year timeline)

Manpower estimates based upon the three year soft plan above:

FTE	Internal	Duration		FTE	External	Duration
1.1	Project Manager	36 months		1.1	Consultants	36 months
0.7	KIS Resource	36 months				
0.6	CFS & Admin Resource	9 months				
0.9	HR Resource	18 months				
1.0	Payroll Resource	12 months				
1.3	Finance Resource	18 months				
0.7	'Rostering' Resource	9 months				
0.7	Asset Resource	9 months				
0.7	Fleet Resource	9 months				
7.7	**Total**			**1.1**	**Total**	

18. Appendix D – Expected Savings

Expected Savings

	Area	Type of Expense	Annual Cost	Saved Qty, FTE	Direct Annual Savings	Indirect Annual Savings
PHASE 1	Reduced headcount (reduced admin from CFS Systems)	Band G Administrator (top of scale)	Scale G	2	£60,162	
	Reduced Operational hours (from CFS Systems, HFRC, 6000 checks)	1 hour per shift to open database = 700 hrs 1 hour to upload a completed HFRC = 6000 hrs	Firefighter, Comp	2.5		£94,426
	Reduced Operational hours (from CFS Systems, SAFIRE, 90 cases)	90 hours Operational administration 90 hours Administrator support	Scale G	0.1		£3,008
	Reduced Operational hours (from CFS Systems, SSRA, 200 3/4 cases)	220 hours Inspecting Officer administration 800 hours Administrator support	Scale H	0.5		£16,595
	HFRC - Automated processes	A4 Paper 6000 sheets (forms)	£516	6000 sheets	Negligible	
	HFRC - Automated processes	A4 Paper 4000 sheets (job cards)	£175	4000 sheets	Negligible	
	Access Database Maintenance	Costs avoided	£4,000	10 days		£4,000
					£60,162	£118,029
PHASE 2	Reduced headcount (reduced admin from HR / Payroll Systems)	Band G Administrator (top of scale)	Scale G	1	£30,081	
					£30,081	£0
PHASE 3	Reduced headcount (from admin from Finance Systems)	Band I Officer	Scale I	1	£38,418	
					£38,418	£0
				TOTALS	£128,661	£118,029

Note: Headcount savings are estimated and subject to further verification.

19. Appendix E – Project Manager and Business Systems Analyst Roles

Sample job descriptions:

The Project Manager Role

1. **To manage the governance of projects**
   a. Ensure that project goals remained aligned to Fire Service strategy
   b. Serve as the communications interface between senior management, the project boards and the project team
   c. Prepare regular project reports and present them to the project boards
   d. Prepare project plans and track progress, and manage out blockages or slippages
   e. Track the financial spend of projects against budget and prepare financial reports
   f. Issue regular project communications to affected persons across the Service
   g. Identify and manage risks and issues, or escalate to the project boards if required

2. **To manage the functional and operational aspects of projects**
   a. Track the success of the project against goals and objectives
   b. Ensure that internal technical staff are adequately represented from an early stage to ensure the design specification is suitable
   c. Manage the specific requirements and ensure they are documented and regularly reviewed with their functional system owners
   d. Ensure that project deliverables are subject to thorough testing regimes to confirm that they meet the required standard, and function according to specification.
   e. Manage the development of project documentation such as user guides, training manuals, FAQ's, process workflows, etc.
   f. Devise robust training strategies to prepare operational staff for process or technology changes

3. **Assemble and lead project teams for the duration of projects**
   a. Lead the recruitment of project team participants
   b. Ensure that key users of the proposed products, software and services are selected to participate from an early stage
   c. Manage the work of the project teams and ensure project team members are aware of their deliverables
   d. Chair regular project review meetings with the team(s) and ensure project reporting is documented and formalised
   e. Give advice and direction to project team members as needed

4. **To manage vendors, suppliers and third parties involved in the delivery of the project**
   a. Serve as the liaison point for vendors, suppliers and third parties that are contracted to deliver products, software or services
   b. Manage the delivery schedules of vendors, suppliers and third parties and ensure they are aligned to Fire Service project schedules
   c. Ensure relationships are established where required with the appropriate Fire Service staff to enable a smooth post-project handover

5. **To drive business change from within the project**
   a. Make sure the organisation is in a state of readiness to adopt change as required
   b. Manage the re-engineering of internal business processes and the training of staff in the new processes as required
   c. Ensure a smooth transition from projects and programmes to Business As Usual
   d. Instigate a mechanism for post-go live reviews of the products, software or services

6. **To assist in the tendering and procurement of products, software and services to meet the needs of the Fire Service in line with Strategy**
   a. Work with the users of the proposed products, software or services to ensure that detailed requirements are captured and documented
   b. Compile tender documentation as required by existing Fire Service procurement processes
   c. Participate in workshops and demonstrations of the proposed products, software and services, and evaluate their suitability for the Fire Service
   d. Prepare business cases, cost/benefit analyses and recommendations for senior management to assist in the decision making process

The Business Systems Analyst Role

1. **To lead and coordinate the acquisition and development of new business systems and databases**
   a. Liaise with users at all levels of the Fire Service to assess ongoing business needs for systems
   b. Collaborate with consultants, developers, ICT and subject matter experts as needed to establish and develop potential technical designs for solutions; keep up to date with technical and industry developments
   c. Analyse problems with existing systems and business models, identify solutions and assess their technical and business feasibility and suitability
   d. Prepare proposals and business cases for presentation to senior management

2. **To collect and analyse systems and data requirements**
   a. Gather user requirements using a variety of methods (e.g. interviews, document analysis, requirements workshops, surveys, site visits, scenarios, etc.)
   b. Conduct requirements analysis and critically evaluate information gathered; challenge user assumptions, resolve conflicts and distinguish user requests from underlying true needs
   c. Interpret user requirements and translate them into operational and technical design documents, using non-technical language where necessary
   d. Ensure all relevant documentation is compiled as needed (e.g. solution design documents, business requirements, use cases, data flows, interface maps, etc.)

3. **To participate in the development, testing and training of new or upgraded systems and solutions**
   a. Participate in the development of new solutions and undertake SQL based/Javascript configuration, and maintenance of automated business rules as required
   b. Ensure technical specifications are developed and maintained

  c. Map and document data models, data flows and interfaces between legacy and new systems
  d. Create and maintain automated reports using available reporting tools
  e. Develop and maintain, in conjunction with Learning and Development, user guides and manuals to conform to Fire Service standards
  f. Work closely with users, consultants, and technical staff on the testing of new and upgraded solutions to ensure technical compatibility and user satisfaction
  g. Ensure a robust change management process with documented version control is used to manage all change to live systems

4. To provide expert support for the Fire Service's business systems and databases

  a. Acquire good working knowledge of Fire Service business systems and business processes and identify opportunities for improvements and better performance
  b. Provide second line technical support, assistance and advice to end users of business systems via the IT Service Desk
  c. Provide support and guidance to users on business process development, change management and system related updates (usually via projects or upgrades)
  d. Liaise with 3rd party suppliers to ensure optimum use of the products supplied.
  e. Work in conjunction with other FRS's in choosing and using common solutions while ensuring BMKFRS requirements are properly represented
  f. Undertake system administration where required
  g. Ensure regular communications and updates are issued to end users

5. To undertake reviews and audits to ensure quality and security of data capture and reporting

  a. Stay informed about public sector and Fire Service security requirements and ensure these are applied to all solutions deployed by the Fire Service
  b. Ensure all data and applications are included in a secure backup process and recovery procedures are tested at least annually
  c. Make sure all systems documentation (including training and user guides) and technical specifications are subject to change control and are kept current
  d. Schedule regular site visits to review suitability of processes to operations
  e. Report audit results to management, advise on corrective actions where required (e.g. training, communications or development) and follow-up on implementation of the recommended actions