

ICT STRATEGY

2019-2024





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STRATEGIC POLICY STATEMENT

People and Information are the two key resources available to RBFRS.

The ICT function exists to provide technology that enhances, amplifies and accelerates the capabilities of the organisation, and to make access to information secure, fast, simple and intuitive.

The purpose of the RBFRS ICT Strategy therefore is to support Royal Berkshire Fire and Rescue staff to become the best public servants they can be, providing tools that enable an efficient and effective service on behalf of the Fire Authority, to manage all foreseeable fire and rescue related risks that could affect the people of Berkshire.

This strategy will be delivered across the five-year period between 2019-2024.





»»CONTEXT

It has been nearly four years since the Fire Authority reset its strategic commitments to the people of Berkshire and three years since RBFRS published its last ICT Strategy; while the Service has travelled a significant distance on the journey of change and improvement, it is timely to review and reset.

The new ICT Strategy will replace the 2016-19 strategy and action plan. This strategy has been created within the context of a number of both internal and external influencing factors, and is designed to align to other RBFRS strategies including the IRMP and People Strategies. It is acknowledged that the external environment is very fluid at this time, but the Strategy is relevant at the time of writing and subject to annual review. The key influencing factors are outlined below:

Overview of Significant Internal Influencing Factors

Strategic Commitments and Three Core Themes

The Fire Authority's Strategic Commitments are reviewed each year, but continue to provide the overarching direction for RBFRS. They are:

1. We will provide education on how to prevent fires and other emergencies.
2. We will ensure a swift and effective response when called to emergencies.
3. We will provide advice, consultation and enforcement in relation to fire safety standards in buildings.
4. We will seek opportunities to contribute to a broader safety, health and wellbeing agenda, while delivering our core functions.
5. We will ensure that Royal Berkshire Fire and Rescue Service provides good value for money.
6. We will work with Central Government and key stakeholders in the interests of the people of Royal Berkshire.

There are three core themes identified in the RBFRS Corporate Plan:

- a) Fire Stations at the Heart of our Communities.
- b) Service Support – Capacity, Capability and Resilience.



c) Culture – One Team Working collaboratively for the People we serve.

It is important that these are maintained going forward and the ICT Strategy must support their achievement.

RBFRS Organisational Change

RBFRS continues its major change programme to support the delivery of its new Corporate Plan and commitments to the people of Royal Berkshire. The effective use of ICT will play a key part in achieving the vision and is a key component in supporting the effective and sustained delivery of service improvement and new ways of working, as well as facilitating the development of major change programmes in support of enhanced learning, EDI (Equality, Diversity and Inclusion), and leadership development.

Further efficiencies in the execution of RBFRS ways of working will be largely met through digitisation and automation of existing manual, paper based processes, and an increased requirement to deliver information flexibly, quickly and securely to the right recipients.

These changes to ways of working will require an increased focus and reliance on electronic information exchange both internally and with key partner organisations, which must be carried out in a secure and auditable manner to prevent data breaches and subsequent reputational and financial impacts. Information Governance capacity and capability will therefore need to expand to meet this need.

RDS and Service demand

Recent organisational changes and major projects have placed a significant demand on ICT resources. It is unlikely that this demand will reduce over the lifetime of this strategy, rather it is likely to increase significantly with greater organisational engagement and the drive toward digitisation of processes. RBFRS desire to enhance the tools and capabilities available to RDS staff will require the strategy to allow flexible deployment of services, and across a large number of differing platforms and services, potentially including “Bring Your Own Device” (BYOD) capabilities in the future.

BIS Skills, Capabilities and Capacity

The Business Information and Systems team comprises three primary component organisations, Information Communication Technology; Business Applications; and Information Governance. The combined team is comprised of a combination of 23 permanent and temporary positions, disposed to provide optimal capability across the three disciplines in a traditional ICT service model, aligned with ITIL best practice.

Specific skills requirements are generally filled via temporary positions, utilising high cost individuals or companies. In some cases these temporary positions have been occupied for a number of years as the original requirement for engagement has grown or morphed into other projects and activities. In general, skills transfer from temporary to permanent



resources is challenging due to ongoing workload, as is internal cross-pollination of skills between resources to remove single points of failure. Royal Berkshire's employment rates and cost of living also contribute to challenges in attracting key talent. Overall, recruiting specialist candidates is challenging due to funding constraints. This is somewhat offset by the organisation's reputation but temporary roles are particularly challenging to fill as they attract fewer organisational benefits and lack ongoing job security. Temporary specialist resources are the most expensive to recruit, retain and reward and this places an increased administrative and financial burden on the service to ensure resourcing is focussed in the most impactful areas.

The overall resourcing disposition currently is mostly sufficient to manage normal day-to-day workloads, but leaves little additional capacity to absorb unforeseen service needs or to lead or participate in major transformational project activities, leading to delays and in some cases, failure to deliver enhancements to the service.

The ICT team continue to provide a core service between 09:00-17:00, Monday to Friday, with out of hours coverage handled via an on-call duty rota comprising 4 technicians with support from 2 senior technicians. This on-call service is utilised frequently by the service, as well as Thames Valley Fire Control Service. TVFCS is working with the ICT team to develop a standard support model and methodologies for improving long term sustainability of resource provision over and above agreed service deliverables, although this is yet to be completed.

Increased demands on the Information Governance team, coupled with internal staff turnover, mean that demand often outstrips ability to supply. Efforts to recruit additional capacity are ongoing but remain challenging.

Much progress has been made in increasing awareness of Information Governance and lifecycle management during the life of the previous ICT strategy. In addition, the entire Information Management policy set has been reviewed and updated to reflect legislative changes that have come into force in recent years. A service-wide project designed to ensure readiness and compliance with the updated UK Data Protection Act 2018, which incorporates the EU GDPR (2016), was successfully executed during 2017 and 2018. Data Ownership, at least for personal data, is now understood and efforts are ongoing to refine this and also improve retention compliance. Data classification management is now an emerging priority and Information Governance is now beginning to build project scope and deliverables to ensure greater standardisation of information lifecycle management using key learnings from our GPDR journey.

Day-to-day Information management tasks, including responding to information requests under multiple legislative frameworks, preparing reports, notifying data owners of document review deadlines and managing compliance to policies are almost wholly manual in nature and require significant effort to complete. They are also subject to both individual interpretation of legislative requirements and human error. Ongoing challenges with RBFRS document repository mean that a significant proportion of RBFRS primary record store requires review and potentially updating. The introduction of an expert system to



assist with information search, data classification, ownership assignment, review and update workflow, permissions and authentication assignment and information lifecycle management will be required within the window of this strategy in order to ensure a step-change improvement in overall information management within RBFPS is accomplished.

The Business Applications team is comprised of a Business Applications Manager, two Business Systems Analysts, a Systems Business Partner, an Applications Support Officer and a C# Developer. These roles are currently filled with a mixture of permanent, temporary and contract roles. The Business Partner Role in particular focusses on providing the interface between critical systems and the user base, translating requirements into feature requests, carrying out vendor liaison and management, devising testing and training programmes, and 3rd level support capabilities. Engagement with ICT is currently somewhat ad-hoc and although strong progress has been made with elements such as a standardised help desk system, project based engagement is still too often insufficiently early to ensure that appropriate resources can be assigned to complete dependant work. This effect is especially pronounced in the applications development space as enhancements to software systems, whether designed in-house, or bought in as packages from 3rd party vendors, typically take months of development, testing and training prior to release. Therefore it is imperative that strategically, BIS positions itself to improve the way that the business can access expertise in a structured and timely fashion, without placing unnecessary or avoidable pressure on constrained resources.

Standardisation

Progress has been made in the adoption of ITIL best practices, with additional focus and discipline introduced to Incident, Problem and Change management. This has resulted in fewer instances of unplanned outages or repeat occurrences of issues and has allowed the team to improve overall service desk performance. Coupled with the introduction of the Service desk system and service catalogue, overall engagement between the ICT function and the rest of the service has improved and become more standardised, although more work in this area is needed.

The RBFPS suite of business applications is large and complex, although typical for a fire and rescue service in the UK. The introduction of software asset management tools has revealed over 1000 separate instances of differing software applications and tools, in addition to numerous point solutions developed in-house using tools like Microsoft Access and SQL for reporting. This complexity is not sustainable in the long term with ICT Staff levels and budget available to RBFPS.

Progress has been made in standardising primary productivity software to Microsoft Office 2016, client operating systems to Windows 10, server operating systems to Windows Server 2012, and mobile devices to Android Smartphones, but variability still exists in specific licensing models and versioning across the estate meaning day-to-day management is not as simple as it could be. This is in part generated by a somewhat ad hoc approach to hardware purchasing, some of which is supplied fully licensed and some



which is not. More progress on client and server standardisation is required to reduce the overall support and admin burden.

There is scope for improving control of application and licensing complexity, and to reduce amount of application overlap and duplication currently present within RBFRS. In some cases this may result business process change to accommodate “best fit” rather than “perfect fit” application suites.

The approach to client device specification has been partially successful in creating low variation in device types. However, there is still scope for improvement in this area, with currently at least 5 distinct client hardware platforms in operation. A significant success was achieved in standardising all Service mobile phones to a single hardware instance android device with one software build managed in-house via a mobile device management platform. This has significantly reduced issues associated with mobile phones and is a good example of the real benefit to the organisation of strict adherence to standards.

Infrastructure

RBFRS invested heavily in major infrastructure projects throughout the period covered by the outgoing strategy. This investment has provided a sound foundation for further development and opened the door to additional opportunities in the evolving ICT arena. Much progress has been made in providing robust and resilient solutions for RBFRS server infrastructure and networks, as well as ensuring that Vehicle mounted ICT and communications equipment has been stabilised and updated. This programme of work, driven by the 2016-19 ICT strategy action plan, has delivered on its promise. There are demonstrably fewer technical ICT issues impacting RBFRS staff and system availability is much higher than in 2016. There is still much work to be done to build upon these foundations and move from a goal of stabilisation to one of adding real value to the service.

In 2018, a 15 year forward looking Strategic Asset Investment Forecast (SAIF) was created in order to highlight the direction of travel for BIS systems and services, as well as other elements of RBFRS with significant capital spending requirements. The ICT element of the SAIF has identified approximately £7.5m of investment opportunity during the fifteen year period. The SAIF for ICT was designed with three core principles in mind:

- Simplification
- Collaboration
- Virtualisation

These principles will similarly form the core of the ICT strategy. As the ICT strategy is designed to last to the end of the first tritile of the current SAIF, additional strategic flexibility will be introduced by the creation of a hierarchy of strategies, focusing on the principles noted above. The SAIF will support the accomplishment of our strategic goals through investment in Hardware, Software, Services, Network infrastructure and Security



and Resilience. The SAIF and ICT strategy must be closely aligned to prevent any significant investment in non-strategic systems.

Overview of Significant External Influencing Factors

There have been a number of external reviews of the fire and rescue sector and external factors which impact on the ICT Strategy. These are discussed in brief below.

Funding Volatility

Long term planning for investment in ICT infrastructure and services must be viewed against the backdrop of significantly increased volatility in available funds across the service. This volatility is driven by a combination of factors, all largely without the control of RBFRS or RBFA, any of which can significantly impact the service's ability to execute against longer term investment strategies. The ICT strategy therefore must also accommodate the overall need for direct cost reduction of ICT equipment and services as well as to provide viable "invest to save" opportunities for the rest of RBFRS. The strategy must be established in such a way as to deliver value early and avoid costly multi-year projects with back-loaded benefits delivery.

For these reasons, it is to be expected that the Strategy will spawn a large number of small, cost-neutral projects that build towards an ultimate goal, but which can each be individually accelerated, slowed, deferred or discontinued without jeopardising overall benefits realisation and minimising the need to front load major investment.

Legislation

Information Governance in particular is bound by a legal duty to process and respond to certain request types within strict timeframes. In some cases failure to meet these timeframes or provide the necessary quality of response can result in negative public perception, further investigation or financial penalties.

Some of these processes, most notably the Subject Access Request (SAR) changed under the newly passed Data Protection Act (2018), and based on EU GDPR legislation, are extremely onerous and today are fulfilled by largely manual search processes. Our organisational ability to continue to respond flexibly to potentially increasing numbers of such requests will be dependent on the implementation of specialist tools and systems designed to assist in information search and lifecycle management activities.

The National Fire Chief Council's (NFCC) ICT strategy

The NFCC was established in April 2017, and has been designed to provide the professional voice for public fire and rescue services. A draft NFCC Digital and Data strategy is in development and RBFRS must take an active role in its development. Within



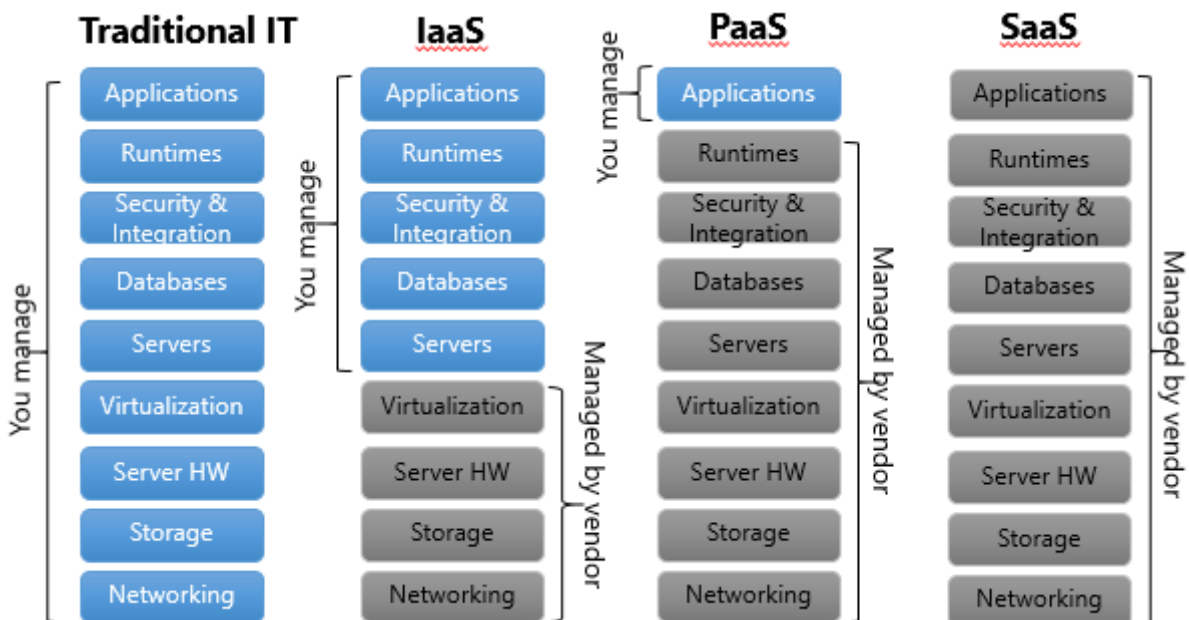
the draft document, data and its management is equally important as technological enablement of new ways of working and the technical solutions required to support business process improvement. It is clear, therefore, that the collection, processing and collective sharing of service information will form a central element of the NFCC’s ICT strategy and RBFRS’ strategy must therefore remain flexible enough to support this.

National Changes to ways of working

Throughout the UK Fire sector there is widespread support for the movement towards operational standardisation through NOG/NOL. This movement will necessitate disparate ICT systems to work in an ever more integrated manner, and will therefore need to expose standard interfaces, systems and data constructs to centralised systems, as well the need to maintain maximum flexibility to support changes to ways of working moving forward.

Industry shift to service based provision

Industry trends in infrastructure provision are inexorably moving away from on premise based physical servers and software to virtualisation across the entire stack. This means that within the lifetime of this strategy almost all elements of ICT Infrastructure provision will become ubiquitously available as a 3rd party service. Terms such as “Software as a Service (SaaS)”, “Platform as a Service (PaaS)”, and “Infrastructure as a Service (IaaS)” are already prevalent when discussing contractual ICT Provision.



The transition to cloud based services places additional planning constraints and obligations on lower level infrastructure components, specifically in terms of networks capacity and resilience. Increased focus is also required in terms of data flows, security



compartmentalisation and data residency. Vendors will begin to withdraw from premise-based solutions within the lifecycle of this strategy and so it is important that RBFRS is suitably prepared. The strategy must remain flexible enough to support on premise, cloud and hybrid solutions, with seamless transition paths between them.

Mobility

The second major trend in ICT service provision is the shift to location, device and connectivity agnostic applications. The so-called Generation Y (Millennial) and Generation Z (iGeneration) age groups have grown up expecting to be able to interact with their social network always on, regardless of location, and in a way that is seamless regardless of whether they are in front of a traditional computer, a tablet or (more likely) a smartphone. This trend is extending into other domains (often referred to as the Internet of Things, or IoT) such as:

- Vehicles (Apple Carplay, Android Auto, Always-on 4g connectivity, built-in Wi-Fi hotspots, Navigation integration with internet search, etc.)
- Smart Home Systems (Amazon Alexa, Google Assistant, Hive, Nest, Tado, Zigbee, smart appliances, Video surveillance/Security systems & alarms, etc.)
- Entertainment solutions (Smart TVs, Sonos, Bose, etc.)

Already the major players in some sectors have produced seamless and ubiquitous access to their services (key example: Spotify) and there is no reason to believe that this direction of travel will remain contained to the consumer market in the medium term.

In a world where any given application or service can be accessed on any device and at any location, the user experience is key. This is true across all user demographics, but is particularly critical for the workforce of the future. The RBFRS ICT strategy should adopt a “mobile first” approach to applications and services that focusses on providing a role-tailored, simple and intuitive, high quality user experience regardless of physical location or access method.

Flexible Working

The third major industry trend, closely associated with mobility capabilities, is the enablement of flexible working options. Physical space is a premium commodity within any organisation and therefore maximising the efficiency in the use of this space can be an effective way to reduce cost, or at least avoid additional cost in the future. Trends include:

- Home working (specifically working mainly from the employee’s home)
- Flexible working (specifically the ability to work from multiple locations – home, alternative offices or stations, or 3rd party facilities using public Wi-Fi)
- Hot-desking (specifically the use of a pool of non-allocated desk locations within a physical building, often with a greater than 1:1 ratio of employees to desks)



Evidence from other organisations who have successfully enabled a flexible working ethos suggest that the key to unlocking flexibility is to provide technical solutions that replace or augment the ability to communicate, interact and collaborate with colleagues, peers and teams. Ideally, there should be no material difference in either the methods used, nor the richness of the collaboration experience, whether the participant is at HQ, at a station, at home, or even when mobile in a vehicle.

RBFRS ICT strategy must be able to underpin organisations requirements in terms of working flexibly, without wholesale replacement of infrastructure outside of normal refresh cycles.

Emergency Services Network

It is currently assumed that the Emergency Service Mobile Communications Project (ESMCP) will deliver a replacement Emergency Services Network (ESN) based on 4g mobile communications technology to replace the existing Airwave network, probably within a two-year window ending at the end of 2022. The replacement programme is comprehensive in nature, meaning it encompasses not only the network bearer protocols, but also the physical network deployment type, all devices whether hand-held, vehicle mounted or static in nature, and the application that will operate on these devices to allow Emergency Services feature such as push-to-talk, prioritisation and pre-emption. The existing Airwave network is current scheduled to be decommissioned by December 2022.

There is no detail yet available on key aspects of the project, such as network coverage assurance, finalised device configurations, mechanisms for key Emergency Services features and functionality, the arrangements for graceful transition from Airwave to ESN, or costs.

RBFRS operational ways of working have been optimised over many years around a primarily voice based technical provision, with a low capacity and speed data bearer. ESN in contrast has the potential to provide up to 1GB/s connection speeds to appliances and 100MB/s to individual Officers and firefighters. The ICT Strategy must encompass and allow for the complexity of planning for implementation of ESN (and decommissioning of Airwave) in the same time window as TVFCS mobilisation system refresh, RBFRS MDT refresh, and the need for exceptionally close collaboration between the Service Delivery and ICT organisations. This to ensure that there is no disruption through this period and RBFRS is still able to take advantage of key technological capabilities to radically change ways of working to enable greater effectiveness and efficiency in the operational arena.



Duty to Collaborate

RBFRS does not operate in a vacuum. Alongside our established collaborative relationships with Oxfordshire and Buckinghamshire & Milton Keynes Fire and Rescue Services through the Thames Valley Fire Control Service and joint vehicle procurement processes, RBFRS actively engages with other national Fire and Rescue services through the NFCC and other specific fora. For the future, RBFRS must establish simple, intuitive and effective methods for joint collaborative working that removes barriers to use rather than creating them.

Use of common, standard applications and tools across partners will help with frictionless communication, and effective methods of joint content development should feature strongly in any strategic collaboration execution. Moreover, it will be important to ensure that neither internal nor external partner users are forced to choose or switch between collaboration and communication applications based on the receiving participant's systems.

Reducing the organisational friction caused by inefficient and complex communication and collaboration tools will improve the flow and management of information, ensuring that the right information is delivered to the right resources at the right time, leading to greater efficiency in use of time, speedier decision-making and overall increase in organisational agility. In addition, effective and efficient communications solutions will support flexibility in resource deployment, provide greater efficiency in space utilisation and drive a reduction in the cost associated with travel and subsistence to support intra and inter-organisational dialogue.

TVFCS

RBFRS provides ICT support for TVFCS' mobilisation system and associated infrastructure. Based on contractual arrangements and product roadmaps, it is to be expected that significant effort, in terms of either system updates and upgrades, or system replacement, will be necessary within the lifetime of this new strategy. There are significant dependencies between TVFCS mobilising systems and the new Emergency Services Network deployment, which, as already stated, will occur within the lifecycle of this strategy. Currently, little clarity regarding the details of either initiative is available. Therefore, it is imperative for the ongoing stability and performance of both critical systems that the strategy includes provision for flexibility of all other major projects and initiative in order to avoid introducing artificial constraints on the successful delivery of both.



»STRATEGY

The ICT Strategy provides direction for RBFRS for the next five years and takes into account the internal and external influencing summarised in previous sections.

This aim of this ICT Strategy is to improve the Service we provide to the communities of Royal Berkshire by striving for:

- **SIMPLIFICATION** of the systems our staff use in carrying out their day-to-day business, making it easier to find, update and expose critical service data to the right people at the right time. Improving the flexibility, efficiency and reducing the cost of ICT systems will be accomplished by strict focus on User eXperience (UX), a “mobile-first” mind set, standardisation of hardware, software and policy, and a continuous improvement ethos across all elements of the BIS organisation.
- Enhancing the **COLLABORATION** capabilities of RBFRS, both internally and also with external partners, which will reduce constraints of location, device or connectivity in enabling effective and flexible communication.
- Evolving RBFRS’ use of **VIRTUALISATION** in infrastructure and services, looking at cloud based provision and moving to a “zero infrastructure” environment, coupled with enhancements in network resilience, security, and capacity.

The three principles of Simplification, Collaboration and Virtualisation will provide direction at each tactical decision point over the lifetime of the strategy. Every project, system update, hardware specification, service requirements specification and software function will be subjected to three key questions:

1. Does the proposal improve the user experience, speed up a process, or reduce steps to complete an action?
2. Does the proposal increase opportunity for effective sharing or communication of information, reduce duplication of effort, or improve decision-making speed?
3. Can the proposal be provided by adoption of a cloud based service rather than on premise infrastructure, or does the proposal prepare for cloud provision?

In this way, at every change trigger, RBFRS will be best positioned to adopt the most strategically aligned option available.



»»ACTION PLAN

The following action plan will be delivered over 5 years, and will be monitored through a combination of the Programme board, Strategic Performance Board, Audit and Governance Committee and Service Plan monitoring using existing reporting methodologies. The Strategy action plan will be reviewed annually as part of RBFRS' Service planning process.

We will execute a number of programmes, projects and tasks during the lifecycle of this strategy, aligned with the three strategic pillars as follows:

SIMPLIFICATION	COLLABORATION	VIRTUALISATION
<ol style="list-style-type: none"> 1. Carry out a Wide Area Network redesign exercise 2. Carry out a Wi-Fi network redesign exercise 3. Reduce the total number of applications in use by 75% 4. Ensure that no more than 3 clicks are required to open and use any application 5. Carry out a further redesign of the vFire fault logging system 6. Reduce the total number of ICT and Information Governance polices by 75% 7. Carry out a feasibility study and pilot of Information Lifecycle Management tools, processes and procedures 	<ol style="list-style-type: none"> 1. Create a complimentary collaboration sub-strategy looking forward 5 years 2. Evaluate and recommend standard peripheral collaboration equipment for clients 3. Introduce a standard remote working equipment kit 4. Develop a flexible working package to allow staff mobility and aid in Business Continuity planning 5. Fully implement Workplace Collaborative suite of products 6. Evaluate and trial Microsoft Office 365 Services and functionality 7. Develop and introduce a standard meeting room technology provision 	<ol style="list-style-type: none"> 1. Create a complimentary Virtualisation sub-strategy looking forward 5 years 2. Evaluate and recommend key potential Cloud Service providers for specific uses and functions within RBFRS 3. Dependant on Cloud Service evaluation, migrate nominated functions and services or applications to the cloud 4. Investigate, develop and introduce a technical provision that allows direct deployment of client equipment with no ICT intervention (Zero touch deployment) 5. Strive towards a "Zero Infrastructure" model for ICT systems with all centralised resources virtualised within cloud service providers environments



<p>8. Introduce a comprehensive Data Classification Framework, templates, processes, procedures and guidance notes</p> <p>9. Ensure compliance to the new Data Classification Framework across the organisation</p> <p>10. Conduct a comprehensive organisational review to align resources to key service priorities for the lifetime of this strategy</p> <p>11. Introduce a single standard for client hardware and replace all old equipment over 3 years</p> <p>12. Introduce a single standard for client software and migrate to this over three years</p> <p>13. Optimise RBFRS software licensing arrangements and ongoing management</p> <p>14. Reduce overall client hardware/software costs by 50% on average over three years</p> <p>15. Move to a single standard server platform build</p>	<p>8. Develop and introduce technology provision to facilitate shared learning opportunities</p> <p>9. Implement, when prudent, ESN capabilities within RBFRS, in line with national programme product availability</p>	<p>6. Ensure all key service applications are available on mobile platforms (smartphones and tablets) as well as traditional computing devices</p> <p>7. Establish a programme of work to replace the existing Vision system for TVFCS to meet the needs of TVFCS, B&MKFRS, and OFRS, in alignment with RBFRS ICT strategy as far as possible</p>
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»»APPROVAL

Approved at RBFRS Senior Leadership Team meeting held at Newsham Court

Date: 28th May 2019



»CONTACT US

IN AN EMERGENCY

In an emergency, dial 999 and ask for the fire service.

If you are inside a building when a fire starts, remember to get out, stay out and call us out.

Never try and put out a fire unless you have received sufficient training.

CONTACTING US WHEN IT'S NOT AN EMERGENCY



Visit our website: www.rbfrs.co.uk



Email us at: reception@rbfrs.co.uk

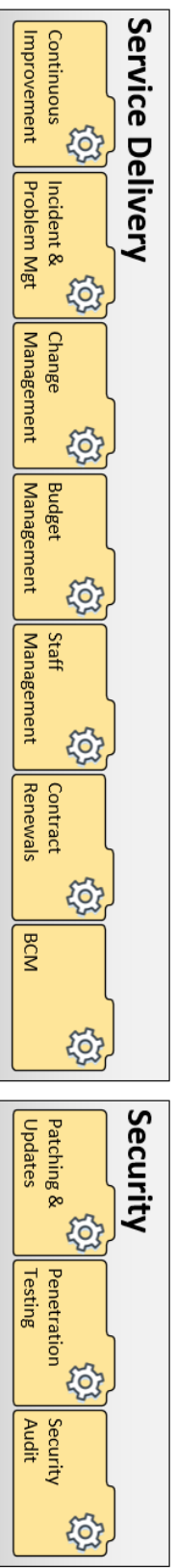


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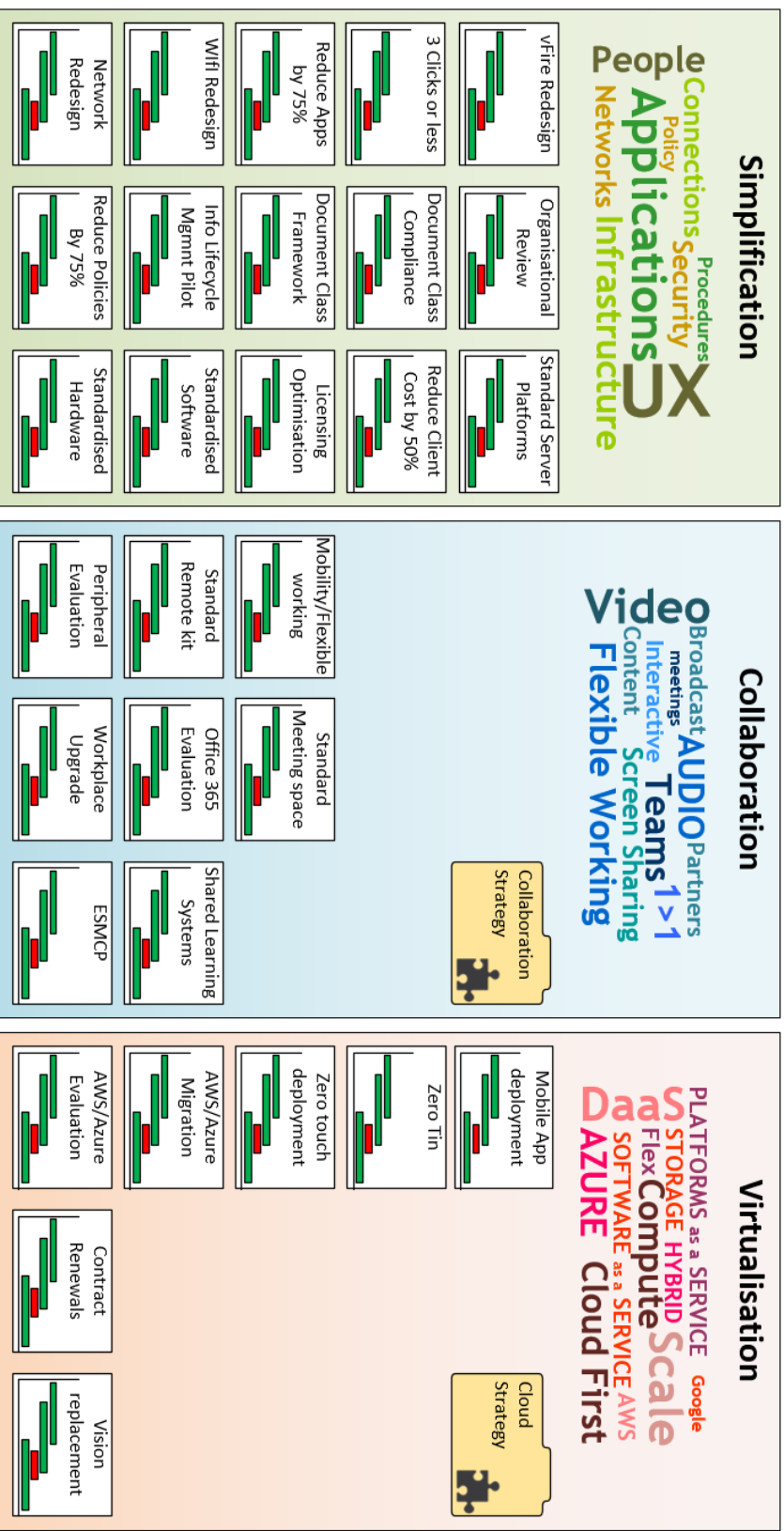


Write to us at: Newsham Court, Pincents Kiln, Calcot, Reading, Berkshire, RG31 7SD

Overarching Tasks

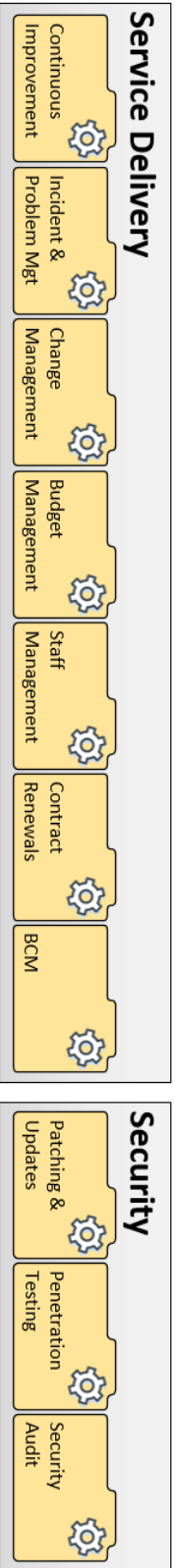


Strategic Pillars



Appendix B – Strategic Pillar Sequencing

Overarching Tasks



	Year 1	Year 2	Year 3	Year 4	Year 5
SIMPLIFICATION	Cloud Strategy vFire Redesign Wifi Redesign Document Class Framework Info Lifecycle Mgmt Pilot	Collaboration Strategy Organisational Review Standard Desktop SW Standard Client Hardware	Licensing Optimisation Standard Server Platforms Reduce Client Cost by 50%	Reduce Apps by 75% Standard Vehicle Standard Station Tech Standard Station Tech	3 Clicks or less Reduce Policies By 75%
COLLABORATION	Workplace Upgrade Peripheral Evaluation	Office 365 Evaluation Standard Remote kit Standard Meeting space Shared Learning Systems ESMCP	Standard Vehicle Standard Station Tech Standard Station Tech Mobility/Flexible working		
VIRTUALISATION	Vision replacement	Vision replacement	Vision replacement AWS/Azure Evaluation	Mobile App deployment AWS/Azure Migration	Zero Tin Zero touch deployment

Appendix C – Action Plan Detail

Pillar: Simplification	WAN Redesign
<p>Actions:</p> <ul style="list-style-type: none"> • Optimise WAN topology, ensuring maximum resilience, sufficient capacity, and efficient traffic management • Assess and implement requirement for associated edge routing infrastructure (e.g. Firewalls, load balancers, webwashers, proxies, DMZ, WAN distribution layer etc...) • Assess and implement QoS/CoS/Multicast options to optimise application performance • Evaluate potential replacement edge routing equipment, tender and implement to new model <p>Desired Outcomes:</p> <ul style="list-style-type: none"> • Standardised, Scalable, robust and efficient WAN topology ready to support migration to cloud based services, enhanced internal collaboration capability (audio & video transmission) and external collaboration opportunities (Thames Valley partners and beyond) • Standardised methodology for connection of alien networks (e.g. TVFCS) in a repeatable and secure fashion • Cost containment within strategic funding envelope • Improved performance at all locations for key applications (Firewatch, IBIS, Siren and Email) • Support for efficient transport of rich media content (Video meetings, Broadcasts, streaming etc.) 	
Pillar: Simplification	WIFI Redesign
<p>Actions:</p> <ul style="list-style-type: none"> • Full wireless surveys at all RBFRS locations, to include office space, watch rooms, kitchens, stores, appliance bays, kit facilities, training areas, public facilities and outside spaces • Assess marketplace for suitable technical solutions, looking for opportunities to integrate with WAN redesign outcomes and/or LAN refresh programmes. • Look for opportunities to deploy lower cost AP infrastructure and cloud based wireless control solutions • Ensure any final design fully supports enhanced use of multimedia & collaborative applications from a performance perspective. • Assess, design and implement a standard, repeatable, modular and scalable wireless model to all RBFRS facilities, to include post implementation survey for confirmation of coverage and performance. <p>Desired Outcomes:</p> <ul style="list-style-type: none"> • Ubiquitous, fast wireless access across RBFRS estate • Zero interruption to rich media consumption/participation when roaming between Aps • Low impact roaming capability between RBFRS Wi-Fi and public 4g/5g networks • Improved performance to take into account advancements in both wireless standards (AC/AX) and management solutions • Provision of a seamless, zero touch guest Wi-Fi solution (Hotel/Starbucks Model) • Reduction in number of Corporate SSIDs being advertised • Ability to enrol all RBFRS ICT devices with wireless capabilities onto primary corporate SSID • Cost containment within strategic funding envelope 	

Pillar: Simplification	Reduce Apps by 75%
<p>Actions:</p> <ul style="list-style-type: none"> • Create a pipeline of App development/decommissioning projects across the strategic review period • Software project governance step introduced to create challenge to new implementations • Hard requirement on project teams to retire one or more apps for every new one implemented • Decommissioning tasks baked into project plans for application development <p>Desired Outcomes:</p> <ul style="list-style-type: none"> • The overall number of installed applications (including version variations) on the 31st March 2023 is 75% lower than the identified number of applications and variations as measured on April 1 2019. • The measure will be the total aggregate application count at each measurement point, to include new applications introduced to the organisation • Monthly reports to track progress against target • No new application will be introduced to the organisation unless the application or applications supporting the old business process are retired. • Zero overlap/zero gap application landscape • Minimal User confusion regarding app purpose • Lower overall ICT training costs 	
Pillar: Simplification	3 Clicks or Less
<p>Actions:</p> <ul style="list-style-type: none"> • User Experience (UX) is at the heart of all project scope, support activities and decisions • Projects for specific UX optimisation commissioned • All new projects challenged for UX optimisation elements <p>Desired Outcomes:</p> <ul style="list-style-type: none"> • User experience is that it takes no more than three clicks to be productive in an application by end of 2024 • Elimination of Intra-RBFRS password challenges when shifting between applications as soon as possible 	
Pillar: Simplification	vFire Redesign
<p>Actions:</p> <ul style="list-style-type: none"> • Top ten requests visibly surfaced • Automation of common workflows where feasible • Integration to supporting systems for key business processes <p>Desired Outcomes:</p> <ul style="list-style-type: none"> • Simple, Intuitive self-service interface for both incident management and service catalogue. • Zero tickets in the “miscellaneous” category • Portal experience tailored by specific user 	

Pillar: Simplification	Reduce Policies by 75%
<p>Actions:</p> <ul style="list-style-type: none"> • Create a pipeline of Policy development/decommissioning projects across the strategic review period • Policy governance step introduced to create challenge to new policies • Hard requirement on organisational teams to retire one or more policy for every new one implemented, except where the new policy supports a novel business process • Policy retirement tasks baked into all projects <p>Desired Outcomes:</p> <ul style="list-style-type: none"> • The overall number of published policies on the 31st March 2023 is 75% lower than the identified number of policies as measured on April 1 2019. • The measure will be the total aggregate policy count at each measurement point, to include new policies introduced to the organisation • Monthly reports to track progress against target • No new policy will be introduced to the organisation unless the policy or policies supporting the old business process are retired. • Zero overlap/zero gap policy landscape • Minimal User confusion regarding policy purpose 	
Pillar: Simplification	Information Lifecycle Management Pilot
<p>Actions:</p> <ul style="list-style-type: none"> • Research, demonstrate and introduce a pilot system capable of managing the information lifecycle for RBFRS data repositories • Simulate accelerated lifecycle management actions • Review and create/update changes to policies processes and procedures to reflect system capabilities <p>Desired Outcomes:</p> <ul style="list-style-type: none"> • Proof of concept of Information management system and tools completed • Policies reflect actual capabilities of available solutions • Sufficient data gathered to formulate a full business case for solution purchase if warranted 	
Pillar: Simplification	Document Classification Framework
<p>Actions:</p> <ul style="list-style-type: none"> • Create a full data classification framework schema to include: Strategy, Policy, Process, Procedure, Guidelines, Forms and reports • Create and publish standard templates for all record types within the schema • Proactively examine and eradicate where possible use of paper based record types <p>Desired Outcomes:</p> <ul style="list-style-type: none"> • Agreed record hierarchy and relationships • Standardised, electronic templates for all primary records within the framework • Capability to automate, in conjunction with any Information Lifecycle Management tools, the creation, reference allocation, storage, sharing, updating, search, retention and destruction of primary records within the framework. 	

Pillar: Simplification	Document Classification Compliance
<p>Actions:</p> <ul style="list-style-type: none"> • Business Process Evaluation of existing records and activities • Business Process Improvement to maximise efficiency, and migrate to electronic records wherever possible. <p>Desired Outcomes:</p> <ul style="list-style-type: none"> • All Primary Business Processes (PBPs) identified • All PBPs evaluated • All PBPs optimised • All optimised PBPs documented • PBP hierarchy and relationships documented • Standardised set of records associated with PBPs • Standardised and potentially automated lifecycle management of primary records associated with in-scope PBPs 	
Pillar: Simplification	Organisational review
<p>Actions:</p> <ul style="list-style-type: none"> • Examine Processes, tasks, activities, demand and capacity to supply across BIS • Align organisational structure to best respond to Business demand and ICT strategic direction • Evaluate and update appropriate job profiles, in line with structural principles • Submit for grading all revised job profiles • Comply with all legislative requirements associated with organisational change <p>Desired Outcomes:</p> <ul style="list-style-type: none"> • Flexible, efficient and effective BIS organisation in place • Service catalogue refined and updated • Resource mapping complete • Skills analysis and development plans in place • Built-in development pathways and enhanced opportunities for all staff • Job profiles and grades reflect reality 	

Pillar: Simplification	Standard Client Hardware
<p>Actions:</p> <ul style="list-style-type: none"> • Evaluate client device marketplace • Evaluate use-cases for RBFRS roles • Create role-based standard client kit list for deployment • Establish strategic relationship with preferred OEMs/Suppliers • Negotiate options for direct supply/configuration of client devices by device suppliers • Investigate and put in place supplier relationships and/or systems to automate asset tagging, build, imaging, packaging and updating of deployment information within RBFRS systems for standard client devices • Investigate and put in place relationships and/or systems to automate client device lifecycle management (tech refresh etc.) • Investigate and put in place relationships and/or systems to automate disposal, wiping, and resale of old equipment <p>Desired Outcomes:</p> <ul style="list-style-type: none"> • Over three years, reduce the number of client device variations in each class to 1 (i.e. 1 type of : primary laptop; tablet; mobile phone; monitor; keyboard; mouse; docking station; power supply; bag/case) • Replace tranche 1 of RBFRS laptops with preferred HW solution 	
Pillar: Simplification	Standard Client Software
<p>Actions:</p> <ul style="list-style-type: none"> • Create desktop software schedule per role type <p>Desired Outcomes:</p> <ul style="list-style-type: none"> • Single Gold image per platform • Zero exceptions or “one-offs” • Process for new application suggestion and evaluation • Elimination of partial licensing situations • 30 minute RTO for all client issues 	
Pillar: Simplification	Licensing Optimisation
<p>Actions:</p> <ul style="list-style-type: none"> • Actively manage, on an ongoing basis, RBFRS server, client and mobile application licensing environment <p>Desired Outcomes:</p> <ul style="list-style-type: none"> • Minimisation of unused or excess licensing and associated cost • Reduction on under licensed products to zero • Introduce license recycling capability for high value products • Develop just-in-time licensing provisioning model for new licensing requirements 	

Pillar: Simplification	Reduce client cost by 50%
<p>Actions:</p> <ul style="list-style-type: none"> • Take advantage of framework and/or collaborative projects to drive equivalent cost of client equipment down • Improve vendor negotiation and management skills to find additional savings • Establish total cost of ownership model based on acquisition and support costs • Select equipment specifications on facts and data associated with TCO model <p>Desired Outcomes:</p> <ul style="list-style-type: none"> • Over three years, reduce cost of spares inventory by 75% based on 2018 inventory cost • Over three years, reduce the cost to equip staff with client devices by 50% based on 2018 client equipment cost • Over three years, reduce the cost of client software licensing by 25% whilst maintaining 100% licensing compliance based on 2018 client software licensing cost 	
Pillar: Simplification	Standard Server Platforms
<p>Actions:</p> <ul style="list-style-type: none"> • Actively decommission or update legacy applications to remove reliance on out of support server platforms (either hardware or software). • Put in place a programme of work to update/upgrade all servers to a single deployment model, using a single operating system specification, and single versions of supporting services (SQL, IIS, etc.) <p>Desired Outcomes:</p> <ul style="list-style-type: none"> • Established standard server deployment model, based on application profiles • All servers running within a structured framework of standard deployment models based on application requirements • All server operating systems using a maximum of two different operating system versions (Current, Current -1) 	

Collaboration	Collaboration Strategy
<p>Actions:</p> <ul style="list-style-type: none"> • Create a 5 year strategy focussing upon Collaborative tools and communications systems <p>Desired Outcomes:</p> <ul style="list-style-type: none"> • Clear, well-defined 5 year plan for RBFRS ICT Collaboration journey, for both internal and external collaboration opportunities • A location and device agnostic 5 year action plan that covers all elements of collaborative tools and systems, including: <ul style="list-style-type: none"> ○ Platforms, services and vendors ○ Instant messaging ○ 1-1 audio & video communications ○ 1 – many audio & video communications ○ Remote screen sharing ○ Digital Meeting Spaces ○ Forums, groups and Communities of interest ○ Process workflow automation ○ Group document development and sharing ○ Group document repositories ○ Business focussed social media ○ Intranet & Website provision ○ Remote/Flexible working solutions • Establishment of a business process automation framework and capabilities to allow secure 3rd party system connection to RBFRS quickly and simply within a standardised methodology 	
Collaboration	Peripheral Evaluation
<p>Actions:</p> <ul style="list-style-type: none"> • Examine the market and test collaboratively focussed peripherals • Build, document and deploy standard collaboration kits based on role, process, and/or physical requirements <p>Desired Outcomes:</p> <ul style="list-style-type: none"> • Standard, low cost collaboration kit for standard issue to all clients (Headset/Speakerphone/Webcam), deployable across all working environments 	
Collaboration	Standard Remote kit
<p>Actions:</p> <ul style="list-style-type: none"> • Examine the market and test standard remote worker kit, to include all equipment required for connectivity to either an Ethernet port provided by a broadband Internet connection, or a 4/5g mobile data service, for <ul style="list-style-type: none"> ○ Home use ○ DR location use ○ Small sites with no permanent network connectivity ○ Temporary locations (conferences, shows, community events etc.) • Build, document and deploy standard remote kits based on role, process, and/or physical requirements <p>Desired Outcomes:</p> <p>Standard, low cost remote access kit for standard issue to all clients, deployable across all working environments</p>	

Collaboration	Mobility/Flexible working
<p>Actions:</p> <ul style="list-style-type: none"> • Develop, agree and implement, in conjunction with HR, a technology provision to support future requirements for remote connectivity to RBFRS systems, either on a temporary or permanent basis <p>Desired Outcomes:</p> <ul style="list-style-type: none"> • Policy driven technology, processes, procedures and supporting systems and services for deploying and managing simple remote access for employees and potentially affiliates partners (e.g. Fire Authority Members, 3rd party FRS, Volunteers, Chaplains, consultants, auditors, retained firefighters etc. • Remove reliance on RBFRS supplied equipment to provide appropriate access from any location, and any device. 	
Collaboration	Workplace Upgrade
<p>Actions:</p> <ul style="list-style-type: none"> • Negotiate upgrade of Workplace by Facebook to premium account status • Reduce or eliminate costs associated with Workplace usage • Establish single centralised periodic billing arrangements • Establish secure connection to active directory for SSO • Establish processes, procedures, knowledge base, how-to and training material, as well as a roll-out plan <p>Desired Outcomes:</p> <ul style="list-style-type: none"> • Workplace embedded as primary group collaboration tool for NFCC collaboration • Workplace embedded as primary internal Communities of interest platform for collaboration • Workplace established as a channel for delivery of global messaging to all users • Workplace established as an effective tool for the collection and sharing of specific business process data 	
Collaboration	Office 365 Evaluation
<p>Actions:</p> <ul style="list-style-type: none"> • Investigate and establish the options for O365 deployment within RBFRS • Establish proof of concept environment to cover: <ul style="list-style-type: none"> ○ Set-up and governance ○ Acquisition ○ Installation ○ Data migration ○ Standard components ○ Hybrid deployment models ○ Backup and disaster recovery ○ Commercials ○ Ongoing support needs ○ Future applications and roadmap <p>Desired Outcomes:</p> <ul style="list-style-type: none"> • Decision regarding the deployment options for O365 within RBFRS – to include: <ul style="list-style-type: none"> ○ Go/no-go ○ Scope – O365 component uptake ○ Scope – role types for deployment 	

Collaboration	Standard Meeting space
<p>Actions:</p> <ul style="list-style-type: none"> • Deploy standard collaboration kit for meeting spaces to all RBFRS locations as appropriate • Conduct training, familiarisation and guidance activities to embed the use of these tools across the organisation <p>Desired Outcomes:</p> <ul style="list-style-type: none"> • All RBFRS meeting rooms and spaces at both HQ and station locations equipped with technology to allow interactive remote meetings to take place using standard client devices 	
Collaboration	Shared Learning Systems
<p>Actions:</p> <ul style="list-style-type: none"> • Expand internal social media platform capabilities to include learning/experience sharing capabilities • Enable ubiquitous access to LMS capabilities <p>Desired Outcomes:</p> <ul style="list-style-type: none"> • Content for shared learning is self-captured at low/no cost and may be propagated to all, regardless of location, network capability or device • Content propagation to upstream services and/or external trusted partners is low effort or automated 	
Collaboration	ESMCP
<p>Actions:</p> <ul style="list-style-type: none"> • Maintain ESMCP involvement • Form detailed plan around programme hard points as they emerge. • Maintain maximum flexibility to accommodate hard point slippage or reprogramming. <p>Desired Outcomes:</p> <ul style="list-style-type: none"> • RBFRS transitions to ESN in alignment with TVFCS, B&MKFRS and OFRS with zero operational disruption • Transition project is completed within the safe window as defined as the period between ESN Prime availability and Airwave Shutdown • Opportunities for enhanced ways of working are presented to Service Delivery as appropriate 	

Virtualisation	Cloud Strategy
<p>Actions:</p> <ul style="list-style-type: none"> • Create a 5 year strategy focussing upon Virtualisation and cloud based services • Instil a “cloud first” mind-set in the sourcing and design of infrastructure and ICT services within RBFRS. <p>Desired Outcomes:</p> <ul style="list-style-type: none"> • Clear, well-defined 5 year plan for RBFRS ICT Virtualisation journey, for all elements of the ICT service provision • A 5 year action plan that covers all elements of virtualisation and cloud based systems and services, including: <ul style="list-style-type: none"> ○ Platforms, services and vendors ○ Compute resources ○ Primary Storage, backup and archival ○ Identity Management ○ Code development & tools ○ Database Services ○ Analytics ○ AI/Machine learning • Increased efficiency, agility and flexibility in the deployment of ICT tools and services. 	
Virtualisation	AWS/Azure evaluation
<p>Actions:</p> <ul style="list-style-type: none"> • Identify a low criticality requirement and establish Cloud based services to meet the need in both Azure and AWS environments on a trial basis • Manage and monitor performance and effort required to maintain the test environment • Establish real-world cost estimates based on test usage • Build commercial and technical model for future potential deployments <p>Desired Outcomes:</p> <ul style="list-style-type: none"> • Decisions reached on cloud deployment criteria and costings • Decisions reached on Azure, AWS or hybrid platform approach to cloud service adoption 	
Virtualisation	AWS/Azure Migration (Dependant on Evaluation activity)
<p>Actions:</p> <ul style="list-style-type: none"> • Identify candidate applications and services for cloud deployment • Establish standard deployment mechanism for cloud-ready applications and services • Create and manage plan for cloud migration of existing applications and services where applicable <p>Desired Outcomes:</p> <ul style="list-style-type: none"> • Migration plan • Standard processes and procedures for deployment • Standard processes and procedures for migration • Overall reduction in ongoing costs associated with platform management during strategy lifecycle 	

Virtualisation	Zero Touch Deployment
<p>Actions:</p> <ul style="list-style-type: none"> • Establish role/user base taxonomy to enable standard user creation • Establish standard application requirements matrix to enable standard server creation • Establish rulesets for application of components to specific requirements within the defined framework • Explore development and deployment tools and services from cloud service providers <p>Desired Outcomes:</p> <ul style="list-style-type: none"> • New client devices are drop-shipped direct to recipient with zero ICT team intervention • Client devices either fully built at source or utilise user-led initial setup over the network for configuration • Compute resources are automatically provisioned based on demand • ICT focus shifts from individual device build to gold image enhancement/maintenance 	
Virtualisation	Zero Tin
<p>Actions:</p> <ul style="list-style-type: none"> • Identification of infrastructure migration candidates – servers, storage, applications & services • Definition of to-be ideal future state of the identified candidates • Migration plan for each candidate based on ideal future state (public cloud, private cloud, hybrid, on premise, vendor cloud) • Preparation of supporting network and security infrastructure for enhanced resilience, high availability, high speed and right-sized capacity <p>Desired Outcomes:</p> <ul style="list-style-type: none"> • Defined criteria and requirements set for cloud migration of Infrastructure, retaining only that necessary for critical application security, resilience and availability assurance. • Minimisation of physical infrastructure components on RBFRS premises. • Reduction in acquisition, maintenance and running costs associated with physical infrastructure • High Availability Network architecture • High Security Network architecture 	
Virtualisation	Mobile App deployment
<p>Actions:</p> <ul style="list-style-type: none"> • Supplier relationship management to drive mobile service provision for core ERP services • Mobile Application development/integration for key business processes (Protection, Prevention, Response) • Business Process analysis & improvement to include digitisation where appropriate <p>Desired Outcomes:</p> <ul style="list-style-type: none"> • All core services deliverable to mobile devices • Mobile delivery is core design outcome of all systems, applications and services • Removal of need for laptops for some roles 	

Virtualisation**Vision Replacement****Actions:**

- Capture/revalidate tripartite long term requirements of the control environment
- Establish strategic path and desired to-be Control architecture and functionality
- Establish functional requirements and match to commercially available options
- Conduct market research and issue RFI to establish viable partners
- Conduct tendering process to select future partner
- Establish programme of works for replacement of Vision/ICCS in line with other major projects within contractual constraints
- Execute programme

Desired Outcomes:

- Minimise the number of steps between as-is and to-be architecture
- Align Control architecture to ICT strategic pillars where possible and appropriate (Simplified user experience, Collaborative capabilities, Virtualised environment)
- Rectify architecture and functional flaws as part of the migration programme
- Reduce ongoing system administrative workload where possible
- Position for adoption of new ways of working & ESN
- Migrate to new architecture with zero downtime and minimal disruption

Royal Berkshire Fire and Rescue Service
Newsham Court, Pincents Kiln, Calcot, Reading, Berkshire, RG31 7SD
rbfrs.co.uk