AGENDA ITEM 12

FALKIRK COUNCIL

Subject: **MOBILE WORKING**
Meeting: **EXECUTIVE COMMITTEE**
Date: **2 DECEMBER 2014**
Author: **DIRECTOR OF CORPORATE & NEIGHBOURHOOD SERVICES**

1. INTRODUCTION

1.1 The Executive will be familiar with the Council's agreed approach to mobile and flexible working from the recently approved technology strategy and from the tablet devices pilot work conducted in conjunction with CMT and Senior Members.

1.2 The tablet devices proof of concept is a small but key element of the larger ongoing mobile and flexible development work and helps position the pilot within the overall context of the mobile and flexible project. The report provides an introduction, sets out elements of the project, including the pilots and an estimated cost and timescale for the roll-out of the project.

2. BACKGROUND

What is Mobile and Flexible Working

2.1 Mobile and flexible working allows us to consider work as an activity, not a place. It allows for work to be multi-dimensional i.e. not just about doing the same work, in the same way at a different time or place but will allow for the opportunity to work smarter. It is not about fixed business hours, but about ensuring we adapt our service delivery approach to a time, place and approach that suits our customers. It provides the opportunity to free service delivery from a desk in a central workplace to deliver the service direct to where it is needed, providing the tools to transform our services to gain savings in efficiency, property costs and productivity and allow for greater flexibility across the workforce.

2.2 In practical terms benefits for the Council include:

- Delivering our business securely and within a PSN compliant environment;
- Freeing staff from desks. Providing flexibility for Service teams to work directly from an appropriate working location which better meets the needs of their customer;
- Reducing current fixed and allocated workstations throughout the Council estate, providing the opportunity to review the Council property portfolio;
- Providing opportunities for services to review current working practices to improve service costs and efficiency;
- Supporting the technology transition to a modern working solution;
- Share efficient working practices across services;
- Ultimately, changing the way we work as a Council.

2.3 In addition to the practical benefits noted above the implementation of mobile and flexible working will deliver financial benefits in four key areas:

Desktop PCs

2.4 The provision of a virtual desktop infrastructure moves the reliance from individual desktop boxes to servers. This means we won't require to replace PCs as often thus saving the Council substantial annual expenditure.

Management and Maintenance

2.5 With the centralisation of IT through servers, IT Engineers will be able to resolve more issues without travelling across the Council which will reduce costs considerably. This will also improve service delivery as updates to software will be rolled-out centrally and remotely.

Software Procurement & Licencing

2.6 With centralised control and management of software and end user applications there is a potential to further manage the procurement of software and application licencing, thus reducing the costs and maintenance of licence costs.

Service Delivery & Process Costs

2.7 Mobile and flexible working allows the Council to take services directly to the customer. This will allow us to review our processes and considerably reduce back office overhead costs.

Asset Management

2.8 The flexibility to work from many locations the mobile solution provides, will ultimately reduce the number of people who are desk bound to one location. This gives us opportunities to review our assets and their use, again with savings resulting from the review.

2.9 Clearly not all savings can be quantified within the short term following the implementation of the project however, the opportunities for substantial savings are significant and will contribute greatly to the development of a more cost effective and agile organisation.

3. MOBILE WORKING

Overall Project

3.1 The Technology Strategy approved by the Executive in March 2014 detailed the need for the Council to provide a secure approach to mobile and flexible working, to enhance our customers' experience of dealing with the Council and provide improved service delivery capabilities for Services. In addition to the approach detailed in the strategy, the need to ensure a secure solution is critical in our PSN re-accreditation.

3.2 The project's objectives are to consider and test a technology which would enable the Council to implement a mobile and flexible solution to achieve the strategic outcome of flexible and collaborative working.

Outline Specification

3.3 To achieve this, the solution required to consider three distinct but related elements of work, which would be implemented in the same three phased approach. These are:

- **Mobile Device Management (MDM)** – to secure, control, deliver applications to, locate and remote wipe mobile devices including phones and tablets.
- **Virtual Private Network (VPN)** – a PSN compliant replacement solution for remote and home working.

- **Virtual Desktop Interface (VDI)** – A solution which provides the fundamental technology solution to enable smarter working, allowing for a reduction in the number of desktop pcs and providing a solution which allows users to work from different locations.

3.4 Key to understanding an appropriate solution which would meet the needs of the Council was the development of a solution proof of concept. This would allow the Council to evaluate the product, understand how it would work with existing networks and applications and consider the benefits it could provide in the short, medium and long terms. Although this appeared relatively straightforward, due to the abundance of suppliers in this technology area, an approach was developed which would allow the products to be compared against each other. The metrics identified two key products which would address our immediate needs; one which would provide a partial solution and one which would deliver a complete solution. Both suppliers were invited to demonstrate their products to representatives from a number of Services. After consideration, it was agreed that the supplier that could provide a whole system solution would be asked to provide a proof of concept for the product based on the three areas of work detailed above.

Proof of Concept – Mobile Device Management

3.5 The initial proof of concept (POC) for tablet and phone devices began in April 2014 with the first element concentrating on access to emails, calendars, contacts, access to committee papers, specific applications and individual work folders for a test group of senior staff and Members. The POC has progressed from the initial stage to confirming our approach with the Council's CLAS consultant with a view to implementing a business approach which can ultimately be rolled out across the Council. This stage of the work was completed in October 2014.

3.6 The domestic nature of tablet hardware and application design is such that almost all functions and applications cannot be relied upon to be secure. It therefore follows that tablets used to access our PSN connected network to the secure level required, will require a standard implementation approach, including:

- Strict control of access to application stores e.g. no access to iTunes or Amazon
- Disable independent browser access
- Software audit enabled
- Whole device encryption
- Strong passwords
- Removal of all pre-installed software
- In the case of iPads, no personal Apple id could be associated with the tablet. This would be restricted to the corporate account and strictly managed by PT&I.

3.7 The second element of the POC was conducted within the Building Maintenance Division of Corporate and Neighbourhood Services to deliver a secure workflow application for tradesmen working in customers' homes. Initial set-up difficulties to link the application securely with the Council's network were overcome and results from the trial and discussions with the CLAS Consultant have confirmed the approach is suitable to be delivered within BMD. The planned implementation of this work will be dependent on approval for the solution and implementation of the virtual private network below.

3.8 The final element was to test a schools solution for the curriculum element of Education Services. This started in September when schools returned from the summer break and will provide access to class lessons and information using applications developed for the school environment. Further work requires to be carried out to the existing schools network to further separate curriculum provision from administrative requirements. This will be considered during the solution design stage.

3.9 As expected, a number of issues arose from testing and meeting the necessary security arrangements of the network has been challenging but not unsurmountable. Initial results from the POC have confirmed the tested system will provide a secure MDM corporate solution.

Virtual Private Network (VPN)

3.10 During the set-up of the solution for the Building Maintenance Division application, it was evident that the work being undertaken to provide a secure connection between a mobile device, the application and the Council's network could be replicated as a corporate VPN solution for home working. Members will be aware that the existing homeworking product (Whale) is no longer fit for purpose and requires to be replaced to ensure PSN compliance. To confirm this pilot installation of the VPN hardware is currently being initiated to ensure rigorous testing is undertaken.

Virtual Desktop Interface (VDI)

3.11 During September/October 2014, work is being undertaken to set up a pilot virtual desktop environment. Virtualisation of the desktop simply means that you access all of your usual applications e.g. Microsoft Office from a server rather than direct from your PC. This may initially sound like there is very little difference to current practices but in reality it is a major deviation which will offer many benefits that are not currently available. In addition to the benefits noted above, the VDI solution provides the following benefits:

- Secure information management and management of sensitive data;
- Centralising applications and data to ensure that information is controlled but is readily available to appropriate users;
- Sharing computer workstations; "Hot Desking";
- A managed and supported business continuity solution;
- Reduced support requirements and costs, allowing updates to be provided from a central location and minimising potential service downtime;
- Potential to re-evaluate the Council's current asset portfolio;
- Reduced hardware costs for IT after initial spend to save as pc replacements are ultimately minimised and server virtualisation is progressed.

3.12 VDI is key to the delivery of a mobile and flexible solution. Without the adoption of this solution Services will be unable to achieve a 'hot-desk' approach which is fundamental to the potential transition from the existing Municipal Buildings, Abbotsford House and Calendar Square to a new office. Using this technology, staff can be deployed across the Council area negating the requirement to set-up temporary offices which may require expensive re-cabling to provide necessary IT requirements as well as configuring pcs. In effect, careful development and implementation of the solution is likely to contribute to project cost reductions by negating the need for temporary solutions.

3.13 While the technology is relatively new it has been proven to work for many large organisations, saving a great deal of money and staff resources after the initial set-up costs.

However it is dependent on changes in processes and working practices being implemented as the technology is rolled out.

3.14 We have worked with the software providers to complete a readiness review which considered the complexity of implementing the system within the Councils existing application and infrastructure environment. The report provided a number of recommendations required to ensure the system can be deployed across all areas of the Council. This remedial work has been costed and will take place as part of the overall project plan.

PSN Compliance

3.15 There is a need to ensure that a secure mobile solution is deployed throughout the Council that addresses the exacting requirements of PSN compliance. Discussion is therefore on-going with the CLAS consultant to initially establish the validity of the solution proposed and to agree the required set-up arrangements to meet future PSN accreditation

4. COSTS

4.1 Estimated capital costs have been identified and the following information provides a summary of the costs for an initial 4,500 corporate users (including teachers and education administration staff). As previously stated, further costs associated with curriculum provision will be subject to a later report:

Software Procurement

This will provide licences for 4,500 users for mobile device management, desktop solution and virtual desktops plus access to files and maintenance for 1 year. The cost is based on achieving an anticipated substantial discount. In addition, specific licences will be required to support the VDI solution.

Indicative cost - £650,000

Annual Support & Maintenance Agreement

The cost of extending support and maintenance of the software solution noted above for a 5 year period.

Indicative cost - £560,000

Support Roll-Out Fees

Work with Policy, Technology and Improvement to implement the system to meet the Council's specific needs.

Approximate costs - £80,000

Hardware & Supporting Software (Servers, Netscalers)

Procurement of the server set-up is estimated at a full scale implementation for the 4,500 users, complete with the required storage facilities. This will require further work to confirm the final demand and will be implemented on a phased basis. Estimated costs will therefore be spread over a defined timescale.

Indicative costs - £450,000

Power and Air Conditioning Upgrades

Changes to the existing server room arrangements to accommodate additional servers

Indicative costs - £30,000

Total estimated cost - £1,770,000

4.2 To enable us to progress this work, arrangements have been made to consolidate all IT capital budgets, bring forward some spend from future years in order to facilitate the procurement of this solution.

4.3 In addition to the capital costs noted above, the readiness survey suggests additional recommended but not essential work to our network. This includes network upgrades, replacement switches and controllers and implementing an enterprise storage solution. The estimated cost of the work is £250,000. This will be carried out in a phased approach after fundamental work has been completed to provide the mobile and flexible solution.

4.4 No allowance has been made in the estimate for the procurement of additional mobile devices i.e. mobile phones, tablets or additional licencing and set-up costs (which are unforeseen at this stage of the project development). Costs for monitors used with the solution will be funded from the existing pc replacement programme, with the displaced pcs used elsewhere within the Council's IT estate.

Project Management

4.5 The costs noted above are based on rolling out the total solution over a 2/3 year period. While there are certain tasks that happen sequentially, the roll out time could be reduced if the Council commits additional resources to achieve this. This may involve bringing in assistance to deliver this, rather than using a skills transference approach using existing staff. Costs for both will be considered depending on the approach to be undertaken.

4.6 A number of different options for implementing the solution have been considered and costed. Based on ensuring a rapid deployment of the solution, managing appropriate upskilling of staff to support the solution and accounting for maintaining business as usual for the Council, a blended approach has been considered most appropriate. This will require 7 additional resources for a period of 2 years, together with external support at an estimated cost of £575,000. To allow the implementation to progress funding of the revenue costs will be achieved using existing budgets and underspends along with deferring some proposed savings until 2017/18.

4.7 While it is appreciated that implementation costs represent a considerable upfront investment for the Council the 'spend to save' opportunities of the project initially from the discounted licencing model are not insignificant. This level of investment will continue to provide future returns for the Council in subsequent years as a result of changes to PC replacement and server programmes, reduced running costs, reduced maintenance and management of the solution. In addition to the tangible savings described, the availability of an agile solution has been a staple request from Services for a considerable period of time. As Services change their service delivery model to maximise the benefit of mobile and flexible working there is an expectation that financial savings will be realised in all service areas. As part of the project management, financial savings and service improvements will be recorded and lessons shared across the Council thus the savings this new way of working allows will be clearly identified and achieved.

4.8 Discussion on the funding proposal is underway with colleagues from Finance Services to agree the best capital and revenue spending approach to deliver this solution – though it is anticipated that the existing capital IT allocation will be used with some money brought forward from next year to facilitate this.

5. NEXT STEPS

5.1 In order to finalise the assessment of products and come to a conclusion on the most effective way of delivering our mobile and flexible working aspirations, the following steps are anticipated.

- Progress the appropriate procurement route;
- Address the recommendations within the readiness check, identify any issues and determine remedial actions for applications where they are potential issues re VDI/MDM;
- Identify cost for any remedial actions that would fall out with the total cost of the project;
- Confirm the MDM PSN compliant set-up;
- Take the product out on a roadshow to services to build an understanding of the substantial benefits of the VDI/MDM solution and to start identifying future potential and priorities for mobile and flexible working across services and then across the Council in December including discuss mobilisation of work applications with services, benefits of accessing back office directly to enable mobile and flexible working;
- Market the VDI/MDM solution to all future users and roll out;
- Finalise the project plan including hardware, software, VDI etc;
- Agree solution architecture with the CLAS consultant to ensure PSN compliance;
- In consultation with Services, prioritise the implementation plan to ensure maximum benefits are obtained from the solution for staff displaced by office changes. This will begin with an initial phase for Development Services, Finance Services and staff located within the Municipal Buildings.

6. PROCUREMENT

6.1 Procurement will be in accordance with Contract Standing Orders and shall ensure the project can progress within the timescales outlined. The timescales detailed below are indicative and will be dependent on procurement, deploying the back end hardware set up and upskilling of staff to support the technical delivery of the solution.

6.2 Roll-out delivery start dates for key elements of the solution are as follows:

- Solution hardware set-up – January/February 2015
- Set-up of homeworking solution – February 2015
- Roll-out of MDM solution for mobile devices – February 2015
- Set-up of BMD mobile working solution & implementation – February/March 2015
- Registration and set-up of tablet devices for Members – April/May 2015
- Start date for priority roll-out of VDI solution - June/July 2015

7. RISKS

7.1 Implementing the solution is a major change to the Council's current approach to delivering technology. It is required to address the needs of service redesign and property changes however it is not without risk.

7.2 Clearly with a project such as this there are risks both in undertaking this and not undertaking this. A significant to the Council is security. By deploying this solution we hope to not only ensure PSN compliance in the short term but also to future proof our systems moving forward.

7.3 To mitigate the risk, as far as possible, pilot projects and considerable testing has been and continues to be undertaken. Discussion with colleagues form other public bodies has been undertaken to understand the approach, issues and successes they have experienced. The solution will require a fast deployment to ensure it is operated as a 'business as usual approach' should Service location moves progress within the discussed timescale.

7.4 This will require a dedicated technology project management team to undertake the work in a phased basis which will be carried out over a two – three year period. The team will consider each stage, assessing risks throughout the implementation before and as they arise. This is in addition to existing pressures, ongoing maintenance and development as well as a significant increase in reliance on technology generally.

8. RECOMMENDATIONS

It is recommended that the Executive:

8.1 **Note the content of the report; and**

8.2 **Agree that the Director of Corporate and Neighbourhood Services takes forward the project in accordance with the proposed works detailed in paragraph 4 and notes that any contracts awarded will be in full compliance with contract standing orders.**

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DIRECTOR OF CORPORATE & NEIGHBOURHOOD SERVICES

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