
Manchester City Council Report for Information

Report to: Audit Committee – 22 September 2014
Subject: ICT Disaster Recovery/Resilience Activity
Report of: Karen Johnson – Head of ICT

1.0 Background

In June 2014 Audit Committee requested an update on ongoing activity to increase the Disaster Recovery (DR) capabilities of the Council's ICT arrangements. The purpose of this paper is to confirm the current position and timescales for further improvements to ICT resilience and disaster recovery.

A key concern raised by Audit Committee related to delays in the planned timescales to move from the current, outdated data centre environment at Daisy Mill to a new and modern facility at The Sharp Project. This has had an impact in ensuring resilience and improved DR. The reason for the slippage to the original due date for the move has been a combination of:

- the scale of work required to upgrade an outdated and highly complex infrastructure;
- the discovery of complexity of infrastructure not known at the outset of the project;
- changes in priorities arising from demands to support transformation projects required to meet the challenging budgetary targets for the organisation.

The detail below provides an update on the progress that has been made; the impact this has had and further planned activity.

2.0 Current and Completed Activity

Internet – ICT have designed and started to implement a model of more resilient internet. This has been successfully tested at Central Library and the Town Hall Extension and will be rolled out across further major sites. This work is currently in the planning phase which means the sites to be addressed and delivery dates are not yet confirmed. The revised approach reflects the increased business demand for the internet and separates public and corporate internet traffic so that if one is overloaded with traffic, it does not impact the other. It also provides the opportunity to utilise each of the separated systems as “failover” if needed in case of emergency.

Telephony - The telephony project will deliver a more resilient solution, and will help protect the Council against telephony failures. The current solution has two switches but both are reliant on the same power source which means it is not a resilient solution. This will change with the new solution with it being split across both The Sharp Project and Salford by November.

Networks – A current project is reconfiguring network links for the key sites that will have both Dark Fibre network links and the BT Wide Area Network (WAN). This will allow all data transfers over the network to be resilient by November 2014, facilitating the move from Daisy Mill and future stability. In house monitoring of the network is also being strengthened to ensure that early warning is in place to identify any element of the network that becomes likely to fail and to prevent it before it happens.

Firewall resilience – A dual resilient firewall is now in place. This means having two firewalls in place so if one breaks the other one takes over. This strengthens resilience, protects against intrusions and viruses and allows us to better monitor inbound and outbound network traffic.

SAP – The upgraded SAP application (finance and HR system) has been installed in both data centre sites at The Sharp Project and Salford. If a failure at one site were to occur, it would be possible to transfer to the other with a minimal, and acceptable, level of data loss and time. Other key business applications are being addressed within current activity as detailed in section 5.0 below.

Link between The Sharp Project and Salford – A strong, resilient network connection has been installed between The Sharp Project and Salford data centres to ensure that communication and traffic between the two sites is safe and available at all times. This means that we have two connections so that if one fails, there is still another that is usable.

Service Business Continuity Plan – A new and updated BCP has been written and will be finalised by the end of September. This plan is due to be tested in October and will be supported by colleagues in the Risk and Resilience team.

Exit of Daisy Mill – The exit of Daisy Mill will be completed by February 2015. Moving existing hardware to a newer and more stable facility will improve availability and reliability but has taken longer than originally anticipated because of the discovery of additional complexities that were not identified when target completion dates were originally set including:

- the volume of changes that have taken place in the infrastructure over the last three years.
- centralisation of ICT identifying complexities that were previously only known to services.
- property rationalisation resulting in multiple scope changes for existing ICT projects.
- the scope of the Data Centre Project itself changing from a “resilience only” project to a complete “data centre move plus resilience” project.

Maintenance & Refresh - ICT has secured revenue funding specifically allocated for the maintenance and refresh of infrastructure and hardware. This will help to enable applications and hardware to be upgraded and replaced in a planned way to prevent instability before it arises. It should be noted, however, that the volume of infrastructure that we have in place means that this funding will always need to be allocated on a “most urgent” basis rather than being in a position to fund all desired upgrades.

4.0 Impact of changes

Whilst ICT infrastructure resilience and disaster recovery arrangements are not yet where they need to be, they have been greatly improved and there are further actions underway that will get us to where we need to be. Investment and actions to date have had a positive impact as highlighted by the monthly performance reporting which has shown significant improvement over the last 24 months. Detailed performance indicators for 2012/13 and 2013/14 were reported to Finance Scrutiny in August 2014 and of these the key ones relating to resilience are a 9% reduction in reported ICT incidents and a substantial reduction in the time taken to resolve major incidents. There has been significant progress in reducing the disruption experienced by customers with less outages of critical ICT services.

5.0 Next Steps and Timescales

Whilst there have been improvements in the Council's ICT resilience there is a need for a sustained focus on activity in this area. The work planned to further enhance capabilities includes:

Email – The move from the current Lotus Notes email to the cloud based Outlook solution (Office 365) will enhance resilience and stability through utilising the infrastructure of a major organisation (Microsoft) with proven stability and firm SLA's. This will be completed during quarter two 2015.

Improvements in SAP resilience – While SAP is currently spread over both data centres, there will be further improvements planned after April 2015 to improve the ability to "fail over" between the sites, enhancing the speed of disaster recovery and reducing potential data loss.

Key Business Applications – Key business applications including the revenues and benefits, social Care and Education systems will be spread across both data centres by April 2015 providing fail over resilience for these business critical systems.

Data Storage – This is currently being implemented across both The Sharp Project and Salford. Once implemented by December 2014 this will allow us to fail over between sites if one were to fail which protects the data we are storing from being lost.

Internet Capacity – There is a current project which will increase the internet capacity and provide resilience for key sites by providing a secondary internet line by April 2015. This builds on the model already implemented at Central Library and the Town Hall Extension.

Network Completion – The completion of the WAN project, and the implementation of the PSN "walled garden" infrastructure by April 2015 will ensure that the network is not only secure and resilient but utilises the most up to date and reliable hardware.

Telephony Completion – Once the telephony solution is fully implemented it will be installed at both Sharp and Salford (by November) meaning there is a fail over capability.

6.0 Conclusion

The above improvements form elements of the two key change programmes in ICT: Digital Workplace Strategy and the Core Infrastructure Programme. All of the above are scheduled for completion by April 2015 with the exception of the PSN Network which will be implemented by April but built upon and expanded gradually over the next 18 months as hardware for the whole infrastructure is renewed. This means that by April 2015 the organisation will be in a satisfactory position in terms of resilience. This position, however, will need to be continually built upon as it would be fair to say that there will always be improvements and changes that could or should be made in order to maintain and improve upon this resilient position.