

29 September 2016		ITEM: 11
Standards and Audit Committee		
Disaster Recovery Update		
Wards and communities affected: All	Key Decision: Non-key	
Report of: Murray James, Operational Service Lead - ICT		
Accountable Head of Service: Murray James, Operational Service Lead - ICT		
Accountable Director: Sean Clark, Director of Finance and IT		
This report is public.		

Executive Summary

The Council is currently in the process of implementing an interim Disaster Recovery (DR) solution based in the Southend on Sea Borough Council data centre which will provide access to key Council systems for a minimum of 100 concurrent users with a Recovery Time Objective (RTO) of 24 hours.

This approach will provide a minimal degree of cover allowing the Council to meet its statutory obligations whilst a strategic infrastructure solution is developed as part of the Council's refreshed Digital and ICT Strategy.

1. Recommendation(s)

1.1 That the committee notes the Council's progress in implementing an interim disaster recovery capability to provide minimal cover in the event of a sustained loss of service in the Council's main server room.

1.2 That officers report progress to the first 2017 meeting of the Standards and Audit committee on the strategic disaster recovery solution.

2. Introduction and Background

2.1 This report follows previous reports to the Standards and Audit committee in February and September 2015.

2.2 Thurrock Council currently host a number of mission critical systems in an onsite server room in Civic Offices. The infrastructure is largely virtualised and running on supported hardware that is within serviceable age ranges. This provides a high degree of resilience against individual component level failure

e.g. if a single server is lost the affected system(s) will automatically failover to another server without impacting service.

- 2.3 Following the closure of the Culver Centre there is no offsite failover facility. This leaves the Council exposed in the event that the main server room is lost, a situation which may arise in a number of scenarios circumstances ranging from a local power failure, to full scale destruction of the building. The building's proximity to a major port and railway lines makes it a high risk location for hosting critical applications without resilience.
- 2.4 In the event of a full scale ICT outage, access to all major internal systems, including email and telephony, would be lost.
- 2.5 Members requested that a comprehensive DR plan be developed and that this be tested in conjunction with the Council's Business Continuity Planning (BCP) capability.

3. Issues, Options and Analysis of Options

- 3.1 ICT have embarked on delivering an interim DR solution whilst the Council designs, procures and implements a "high availability" infrastructure, which aligns with the Council's strategic objectives.
- 3.2 Options considered and discarded were:
 - Do nothing – Leaving the current situation means there is no additional cost for the Council, but leaves the Council fully exposed in the event of a major infrastructure failure.
 - Cloud provisioned "Recovery as a Service" – initial market testing with a leading DR provider was carried out. This would provide a scalable model, but ongoing subscription costs of the services were high, and we would need to allow a 3 day period from invocation to having the facility available. It was therefore ruled out as a practical short term solution, but Cloud services will be reconsidered as part of the strategic solution.
- 3.2 The proposed interim solution will see elements of the existing Thurrock infrastructure relocated to Southend Borough Council's data centre, and supporting network infrastructure deployed.
- 3.3 The solution is aimed at providing minimal cover, ensuring that the Council can continue to meet its statutory obligations.
- 3.5 An initial maximum of 100 officers will have access to use the DR infrastructure. Individual directorates will nominate the individual officers, and the capacity will be reviewed during the project and subsequent testing to ensure as many officers as possible can be provisioned.

- 3.6 Individual applications have been prioritised by directorates as part of the BCP review:
- Remote VDI access
 - Email Access (including Good external email access)
 - Telephony
 - J Drive\Objective data
 - Liquid Logic LCS\IAS
 - Oracle
 - Paris
 - Saffron\Housing
 - Benefits Payment
- 3.6 The solution will be able to be invoked and fully operational within 24 hours of the loss of the Thurrock Civic Offices server room.
- 3.7 The solution allows some flexibility that can be managed within the incident, so for example if an outage occurred during school enrolment periods, the pupil management system could be prioritised.
- 3.7 The DR infrastructure will be accessible via internet connections that will allow the designated officer's to work from anywhere via the Council's VDI infrastructure.
- 3.8 A full test of the DR capability is scheduled as part of the deployment project.

4. Reasons for Recommendation

- 4.1 This interim solution will allow vital services to be delivered to a limited number of officers in the event of a DR invocation, allowing the Council to meet its minimum statutory obligations
- 4.2 The solution provides the quickest possible route to remediating the current lack of DR, and is also the most cost effective short term option available.
- 4.3 It is proposed to utilise the data centre in Southend Civic Offices. Southend has been proposed for the following reasons.
- The data centre is newly built and of a higher quality than is normal for a local authority. It is highly resilient, having dual power feeds and capacity to run on UPS for 7 hours in the unlikely event of dual power feed failure
 - There is a significant amount of vacant space in the data centre.
 - Thurrock have agreed in principle, a "quid pro quo" approach with Southend whereby we share space in each other's data centres for DR purposes – therefore there are no associated hosting costs for either party.

- Thurrock Council ICT are exploring other strategic opportunities with Southend – particularly sharing their contact centre telephony. Therefore there is potential to leverage any assets that we deploy there.
- The location is easily accessible for Thurrock ICT staff, and there is suitable space for them to work from if necessary.

4.4 Deploying the interim solution will mean that the strategic infrastructure strategy can be built on the full digital and operational needs of the Council, and not be overly influenced by the need to provide a DR capability, although resilience will be a major theme of the solution.

5. Consultation (including Overview and Scrutiny, if applicable)

- 5.1 Approval to proceed with the Interim solution has been granted at Directors' Board
- 5.2 This paper has been reviewed by ICT/Digital board prior to submission.

6. Impact on corporate policies, priorities, performance and community impact

- 6.1 If the Council does not have robust, integrated and tested business continuity and ICT disaster recovery plans, it may be unable to deliver its statutory functions and customer facing services in the event of a major incident affecting the Civic Centre.

7. Implications

7.1 Financial

Implications verified by: **Laura Last**
Senior Finance Officer – Management Accounts

- The upfront costs to set up the interim solution will total £107k (including £21k internal resource, and £20k contingency); however there will be no ongoing hosting fees as we have agreed with Southend to host their DR equipment on a reciprocal basis in return for them hosting the Thurrock equipment.
- There is already provision in the capital plan (through the Strategic Infrastructure Project) to fund this project.

- There will be a small ongoing annual revenue requirement of £1500 to cover additional licensing and support – this can be accommodated within existing budgets.
- The solution will allow the Council to avoid short term upgrades to its back-up capability, and will also remove the need to pay for off-site tape storage, which together yield a saving/avoidance of £25k (£20k up front and £5k annual ongoing).
- Failure to deliver a workable disaster recovery capability means the Council will incur avoidable costs relating to lost working hours and days in the event of a major incident.

7.2 Legal

Implications verified by: **David Lawson**
Deputy Head of Law & Governance

The report is to note progress - with the options outlined in the body of the report appearing essential to maintain a core service in certain critical scenarios and therefore contribute to appropriate risk management and good governance

7.3 Diversity and Equality

Implications verified by: **Natalie Warren**
Community Development and Equalities Manager

Service delivery to Thurrock's most vulnerable residents will be adversely affected without robust and comprehensive business continuity and disaster recovery plans.

7.4 Other implications (where significant) – i.e. Staff, Health, Sustainability, Crime and Disorder)

None

8. Background papers used in preparing the report (including their location on the Council's website or identification whether any are exempt or protected by copyright):

- None

9. Appendices to the report

- None

Report Author:

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Information and Communications Technology