

Ward: [All]

## Adur & Worthing Councils Disaster Recovery Arrangements - CenSus ICT Status Report

### Report by the Head of Census ICT

#### 1.0 Summary

- 1.1 This report has been drawn up in response to the request made in Minute JGC/15-16/018 of Adur & Worthing Joint Governance Committee of 29<sup>th</sup> September 2015 regarding the status of ICT Disaster Recovery at Adur and Worthing Councils.
- 1.2 The Councils' ICT function is consolidated in the Data Centre in Worthing Town Hall. All server, network and CenSus and other 3rd party links are concentrated at this location in a secure, protected and supported environment. Back-ups of data are now performed at least daily (in some cases, every 4 hours) with new software allowing the retention of data on other CenSus sites with accelerated recovery timescales in comparison to tapes.
- 1.3 Further details of risk mitigation already in place for ICT provision are given later in this report.
- 1.4 There are elements of risk owned by Adur Worthing in respect of ICT provisioning that, although already resolved or treated, some remain to be further considered by Adur Worthing to see if those risks should be treated, transferred, tolerated or terminated.
- 1.5 CenSus ICT is actively looking at 2 options to be delivered this financial year (2015/16) from revenue budgets to further improve the existing DR position; these are:
  - (i) The use of internet (Cloud) based data storage and processor providers (for example Microsoft's Azure platform), that allows full secure authentication, complies with Information Governance data processing legislation, efficient use of resources for access when required and most importantly remote availability independent of the Council's infrastructure.
  - (ii) The use of the reciprocal backup data arrangement whereby a limited subset (systems prioritised) of Adur Worthing's data, (which is already replicated off-site in Horsham), would be restored, processed by a small hot server farm and made available from Horsham.

## **2.0 Disaster Recovery Process Documentation**

- 2.1 All relevant (Protectively Marked) procedural and technical documentation for the restart of ICT systems has been developed; copies are retained by CenSus ICT both locally at AW and on the centralised CenSus file systems at Horsham. These processes were tested & validated through recovery from 2 site incidents in 2014/2015, but moving forwards require to be reviewed & validated on at least an annual basis. Copies were supplied to Audit in July/September 2015. The documentation also includes contact information for CenSus ICT staff that is not shared beyond CenSus. However, management contact information for the purposes of invocation and escalation are contained within the ICT BIA and other Business Continuity related documentation owned by Adur & Worthing Councils.
- 2.2 Disaster Recovery Invocation and Plans at Adur Worthing are managed by Adur Worthing Councils' Business Continuity Group (BCG), as co-ordinated by the Emergency Planning Officer. As CenSus ICT is a service provider to the Councils the ICT BIA (v1.0; 30/10/15) has been written with this in mind. Any DR incident will be classified, escalated and managed by the BCG depending upon the nature of the invocation. CenSus ICT will be contacted by the BCG according to separately published Adur Worthing Corporate DR Plans to implement CenSus' own procedures and summon relevant resources to recover the ICT environment. Resourcing a recovery following invocation will be managed by CenSus ICT Management to ensure availability of sufficient and relevant staff. Other Stakeholder information is also contained within the ICT BIA document if and when a need arises to contact them. Interested party Stakeholders (who use the A-W Data Centre) include the Citizens Advice Bureau (CAB) and South Downs Leisure.

## **3.0 Risk Mitigation already in place:**

- 3.1 Data Centre Environmental and Physical vulnerabilities have been mitigated through provision of Fire Detection, Suppression and venting systems, together with Uninterruptible Power Supplies (UPS) to provide power (30 minutes' worth) for controlled power down of systems to minimise data loss. The accommodation spaces are secured with steel shuttered windows and fire resistant doors; access systems prevent unauthorised entry to the Centre.
- 3.2 The Data Centre electrical power supply design allows manual connection (planned or post shutdown) of an external generator power source using a manual transfer switch to supply the Data Centre in the event of a prolonged or planned power outage; neither the Town Hall nor Portland House has such protection.
- 3.3 Data Integrity and Availability is protected by several layers of resilient infrastructure and systems and the use of internet based (Cloud) Google for Business services at present supporting primarily the Councils' email service and an increasing amount of document sharing.
- 3.4 The ICT platforms within the Data Centre are designed & built wherever feasible to provide resilience with redundancy for all key components (Power, links, storage, etc.). The extensive adoption of Server Virtualisation across the Partnership (with

the vast majority of applications/data now hosted in this manner) allows for much faster restoration of services than by traditional methods.

- 3.5 Those remaining physical servers and their data are backed up to tape directly; Virtual server systems and data are backed up to disk by the recently implemented VEEAM system that also provides the data replication of backed up data between CenSus Partner sites. Although VEEAM has only been running a few months it has already proved that it can restore files, servers and whole storage areas in just a few hours, providing a short Recovery Time Objective (RTO, the target time for recovering a Business service) that is a vast improvement from restoration via tape.
- 3.6 In the same manner, Recovery Point Objectives (RPO – the target recovery period during which system data might be lost) are also greatly reduced by regular server snapshotting using the VEEAM system.

#### **4.0 Risks that remain**

- 4.1 There is minimal capacity within the CenSus Partnership for an alternative Data Centre or Staff Recovery Site for Adur Worthing. At present Adur Worthing has no plans or funding to create another site (as is also the case at Horsham & Mid-Sussex) and is therefore reliant on CenSus ICT working with its other Stakeholders to provide limited alternative DR capability. Effective cross site data storage & recovery is now in place &, the implementation of Cloud hosting and/or cross site server capacity will begin to address this issue until the full adoption of Infrastructure as a Service. However, in the interim there remains the absence of sufficient available server hardware for restoration of all services
- 4.2 Worthing Council is now responsible for the continuing Extension of ICT Service to the commercial presence of South Downs Leisure and to the hosting of ICT services for the Citizens Advice Bureau (CAB). In particular the CAB has new ICT infrastructure based in the Data Centre and a connected user network based in the basement where the electrical supply is not supported by a room based UPS or generator protected circuit and the room's environmental control is not resilient – these risks require to be communicated to the stakeholders.
- 4.3 As a primary recovery site the Shoreham Centre has limitations as minimal data centre service function can be supported there & the site can only support a limited number (50) of staff to support essential services for the Council as defined by the BCG. Apart from a limited telephony capability, this site will still be predominantly dependent upon the Worthing Data Centre function for its use by displaced staff.
- 4.4 Whilst, as mentioned previously, there is a generator connection point to connect an electric supply (generator) to the Data Centre & UPS capacity for a controlled power down in the Data Centre, there is no provision for an automatically transferred generator and switchgear for continuity of power after the UPS discharges – the current proposal within the Business is the call off of a portable generator on a 4 hour SLA with the potential of a worst case loss of power & ICT services for 4 hours.

## **5.0 Potential further Risk Mitigation**

- 5.1 In order to provide improved assurance around Data Integrity and Availability CenSus ICT is actively looking at future options during the current financial year using DR revenue budget as yet not spent in this area. One option (preferred) being examined is the use of alternative and consolidated internet based data storage and processing providers during FY 2015/16 like Microsoft's Azure platform. The second option under consideration is based around the use of the backup data already replicated off-site to Horsham where the data could be restored, processed by a hot server farm and made available from Horsham. Both options are currently being scoped & costed - CenSus ICT will be in a position to decide which way to go forwards during this financial year.
- 5.2 The strategy for Adur Worthing is to progressively transfer the hosting of applications and associated data to external Cloud based providers (adopting Infrastructure as a Service) – a Project is currently underway to develop a detailed scope & schedule for this work to commence at the earliest opportunity.

## **6.0 Recommendation**

- 6.1 The Joint Governance Committee is asked to note the contents of the report.

### **Local Government Act 1972 Background Papers:**

None.

### **Contact Officer:**

John Ross  
Head of CenSus ICT  
01403 215217  
[john.ross@horsham.gov.uk](mailto:john.ross@horsham.gov.uk)