Infrastructure Improvements phase 2
PROJECT COMPLETION REPORT

Expected Project End Date	Actual Project End Date
31st March 2012	30th April 2012

List all outputs delivered as part of this project

Documentation related deliverables:

- Data network diagrams – depicting the maps of network related infrastructure – Updated with additional improvements and changes

- Applications comparison information – Updated following additional information gathered for IT tender

- Server asset lists – Continued to be updated

Improvements & other deliverables:

- Further replacement of server hardware through direct physical replacement or via virtualisation, including critical replacement of WBC file server – Nightflight

- Complete replacement of outdated network devices

- All mailboxes migrated to new email server for WBC

- Windows update server installed and configured to update a small portion of servers at TRDC and WBC. This is a server that allows windows updates and patches to centrally managed e.g. downloaded and pushed to the appropriate servers at appropriate times. Currently ICT officers have to update each server individually, which is a huge drain on resources. This is currently being piloted until August 2012

- TRDC SAN (Storage Area Network) hardware and software implemented, therefore allowing commencement of movement of required TRDC data on to the new storage system

- SAN software at WBC and TRDC updated to latest release in order take advantage of additional features

- Further migration of WBC servers to the new SAN environment. One server outstanding to migrate.

- Assessment of TRDC data for migration to the new SAN environment.

- WBC and shared services thin client server farm, all firmware updated increasing stability across the farm.

- Backup server hardware and their associated connections to the network, updated to increase the speed at which backups take place over night

- Trial completed of Appgate (remote access & home working) for TRDC

- Interim measure in progress for TRDC enterprise vault (email archiving), which involves data compression of staff user profiles. Estimated reduction in space of 50%.

Other service improvements to note:

- Partial transition of email and web security services to a cloud based system.

- Migration of servers currently on "old" WATFORDBC domain – In progress

- Review of alternative Internet service providers, including review of all links to additional sites e.g. Wiggenhall & Batchworth depot, Charter Place etc.

- Implementation of call (telephone) management system for service desk, allowing call queues to be managed more proactively.

Further actions/Issues to progress

Subsequent remedial work identified for continuation into phase 3 and additional phases is as follows:

- During phase 1 related to work stream - network discovery and audit exercise, an external company was commissioned to complete a review and recommendations paper for all network related equipment and structuring (Signature Networks). This recommendations paper forms the basis of some of the short and medium term objectives for the infrastructure improvement work.

- Completion of the migration of data from the old WBC SAN to the new Netapp SAN. One server outstanding – Lagan (WBC CRM system).

- Ongoing hardware replacement through virtualisation.

- Completion of websense email and Internet security services to the cloud based system.

- Remote working improvements for TRDC and the introduction of additional security (tokens) using the Appgate solution.

- Options appraisal to consider replacement\upgrade of the current TRDC email archiving solution, Enterprise Vault. This product is de-supported and the version we are using is old. One possible solution would be a cloud based option.

- Complete rollout of windows update server.

Other to note:

- Considerable number of audit requirements to be completed, which require infrastructure changes

Other Transition Information

- The development of an improved space for document sharing has allowed all staff within the IT service to take advantage of the information that is being gathered. IT service efficiency has increase through centralisation and updated documentation

- All further documentation prepared will contribute to an efficient transition to any third party provider

Overall Project Review

What went well?

- Project plans were created for each of the work streams, with technical leads assigned to each.

- Design and build work shops to consider technical solutions and options were conducted using both internal and external staff.

- The availability of required resources to ensure the delivery of the work streams remained on

track.

Other Project work completed or significantly progressed within 11/12 Q4:

- Victer (R&B) issue resolution for WBC & new installation TRDC – Completed
- PARIS (R&B – TRDC) – Installed – Implemented
- Academy & Anite Integration (R&B) – Completed
- Uniform upgrades, inc Oracle upgrade (TRDC & WBC) – Completed
- Academy (R&B for WBC & TRDC) Upgrade to 61 – Completed
- Cash receipting repositories created (TRDC and WBC archive income system) – Completed
- Resourcelink – Upgrade – Completed
- WBC Atrium – Property Asset management system – In progress
- Support for implementation of Revs and Bens E-Services – In progress
- Development of TRCD project monitoring tool – In progress

What was problematic?

- Operational issues began to decrease throughout this phase, as a result of the additional stability across both networks. Due to the nature of a lot of this work a considerable amount of was completed out of hours.
- Ensuring staff were free for project meetings has continued to be a challenge throughout.

What would you do differently next time?

- Meet more regularly with the entire infrastructure team. Various resources & skills were used throughout the 12 week programme, at times on an ad-hoc basis. All infrastructure staff need to be clearer about the priorities and reasons for them.

Were any changes approved after the original project plan? If so what effect did this have?

- Changes were required after the initial phase proposed due to operational issues or higher priority given to recommendations from audit.

Benefits

Benefit	Realised Y/N	Detail
Cost savings	Y	Average cost of a virtual server license is £2300, with the average cost of server hardware being between £2000 to £6000, dependent on specification required.
		A more up to date server and network hardware asset list if , therefore allowing us to update external hardware contracts, ensuring these are accurate.
Efficiency gains	Y	Troubleshooting is more efficient and effective as a result of the following:

		• Network monitoring • Network diagrams Once the windows update server is fully implemented this will allow centralised management of all windows patches
Increased infrastructure stability	**Y**	The replacement of critical pieces of network hardware has been essential to gaining further stability with the existing infrastructure environment. More reliable backup information and reporting, allowing infrastructure staff to assess and deal with any backup related issues more effectively.
Documented & therefore retained knowledge	**Y**	Information relating to network diagrams, server hardware and application asset lists and documented backup infrastructure is all now available.
Competency improvement of Staff	**Y**	Through the introduction of newer technologies, internal staff have increased their knowledge and skills by gaining hands on experience.

State where these benefits are likely to be seen and who is accountable for ensuring these benefits are realised.

The benefits have been realised and are being sustained. The Project Sponsor, Avni Patel has overall accountability for benefits realisation.

Stakeholder/Senior User Comment

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APPROVAL

Role	Name	Signature	Date
Project Manager	Emma Tiernan		29.05.12
Project Sponsor	Avni Patel		29.05.12