



Date: Thursday, 7 September 2017

Time: 1.30 pm

Venue: Shrewsbury Room, Shirehall, Abbey Foregate, Shrewsbury, Shropshire,
SY2 6ND

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AUDIT COMMITTEE

TO FOLLOW REPORT (S)

5 Management Report: Information Technology update (Pages 1 - 26)

The report of the Head of Human Resources and Development is attached,
marked 5.

Contact: Michele Leith 01743 254402

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<u>Committee and Date</u>

Audit Committee

7 th September 2017

<u>Item</u>

5

<u>Public</u>

Management Report to Audit Committee on Information Technology

Responsible Officer Michele Leith

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1.0 Summary

This report will provide updates on the following:

- 1.1 Management structure and resources of ICT
- 1.2 Service Improvement and Compliance
- 1.3 DR/BC Project
- 1.4 Future developments of ICT Function
- 1.5 Since the last report in September 2016 Shropshire Council ICT has continued to undergo significant change and improvement.

2.0 Recommendations

2.1 The recommendations are that:

- 2.1.1 The Committee notes the significant progress in the improvement of Shropshire IT function. In particular that a number of these improvements are now being validated through improved audit report outcomes.

3.0 Background

- 3.1 The content of this report is very different to the reports that have been presented to the committee over recent years, from the content presented here members of the committee should see clear evidence of improvement, and gain assurance of increased resilience in the Shropshire Council IT function. Notwithstanding that at the Council Meeting in July 2017 the opinion of the Head of Audit was again qualified in respect to IT, members of the committee are asked to bear in mind that this judgement relates to the period April 2016 to March 2017, making the improvements detailed in this report even more striking.
- 3.2 As well as driving change within the business as usual aspects of the ICT function, IT have now assumed a much greater role in the delivery of the technological requirements of our Digital Transformation Programme. The Infrastructure and Architecture Project now underpins the other major projects in the overall

programme. The team comprises of existing members of staff who will work on the programme to ensure our IT infrastructure has the capability and the capacity to support the new technologies. This will mean that there is knowledge transfer throughout the project as well as ensuring that future IT skill requirements are available internally to support the organisation as it transforms.

- 3.3 An overview of these changes and service improvements are detailed in this report together with improvements that are scheduled to be implemented.

4.0 Structure and Resources

4.1 ICT Management

- 4.1.2 The September 2016 report detailed management changes with the IT function namely *'Michele Leith was asked to provide strategic management capacity within ICT and act as Head of Service for ICT Services, Customer Services, Digital and Print Services, and Communications whilst continuing to fulfil the Head of Service role for Human Resources and Development. Paul Voogt who is programme manager for the Digital Transformation Programme has been asked to provide some technical support for the management function and Karen Davis continues to fulfil the role of ICT Manager on an Interim basis.'*

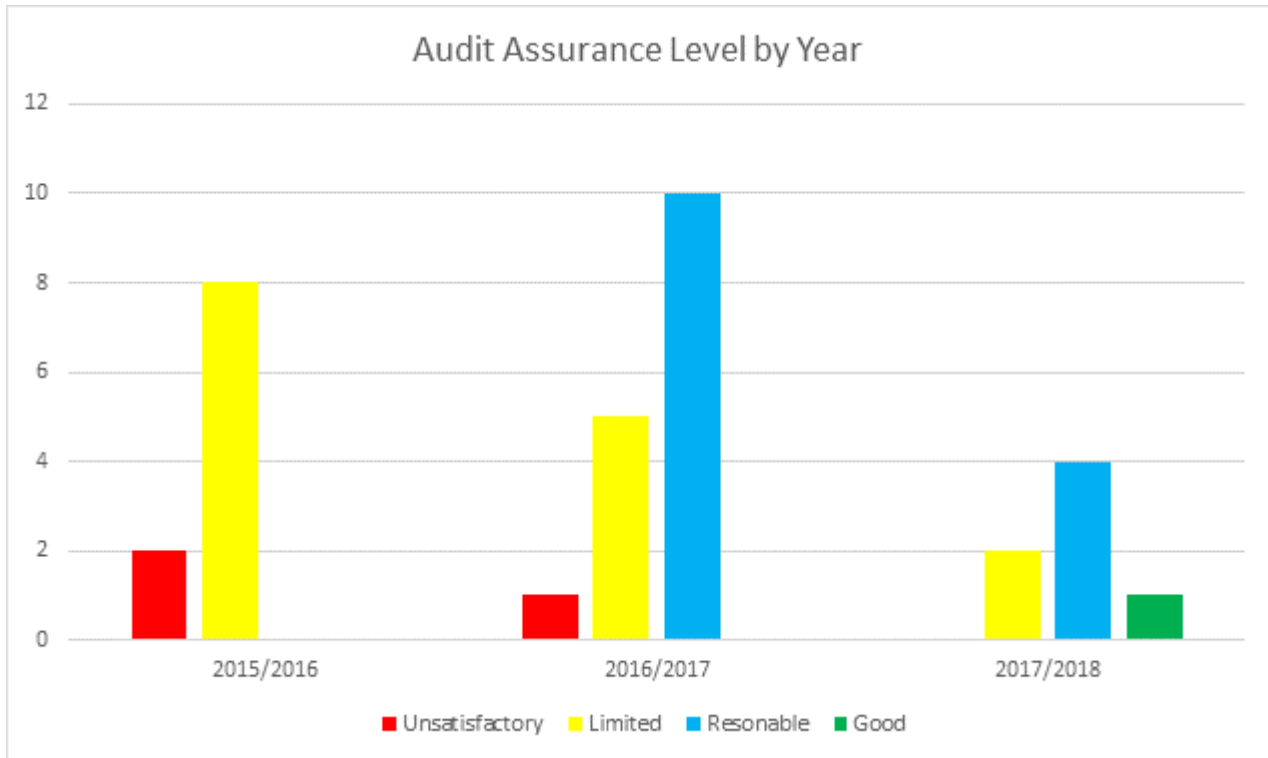
- 4.1.3 Michele Leith is still responsible for the leadership and strategic management of IT, earlier this year and after careful assessment of the capacity of the function to meet the challenges of the future, further changes were made to the management structure. Paul Voogt moved away from operational matters to concentrate on the DTP and a new post Technology and Communications Service Manager was created, Andrew Boxall was appointed to this post in April 2017.

- 4.1.4 A number of other operational changes have been put in place to improve the internal management of ICT, including adopting the internationally recognised ICT management methodology of ITIL. ITIL (formerly an acronym for Information Technology Information Library is now a recognised brand in itself). ITIL is a framework and methodology for managing an IT department which is recognised as best practice. The introduction of these standards was referenced in the previous report, and it is pleasing to confirm that we have now introduced the use of ITIL. This has seen over 95% of the department trained in ITIL methodology and many of its processes and procedures have been incorporated into IT functions. This allows us to better plan, implement and measure our effectiveness. More details are available in Appendix 1

5.0 Service Improvement and Compliance

- 5.1 A significant amount of hard work and commitment by the teams has begun to show dividend. We are pleased to report that performance in audits is significantly improved with a far higher percentage of audits outcomes being judged as reasonable or better. The table below shows the latest position in respect of audit outcomes.

- 5.2



5.3 Notable achievements

- Review of ICT Security Policy completed by ICT, Information Governance and Audit.
- Hardware Replacement Audit has been Unsatisfactory for 15/16 and 16/17. 17/18 Audit has achieved a reasonable rating
- Hardware replacement policy has been documented and agreed - fundamental requirement
- Remote Support Usage standard introduced - addresses 3 significant requirements
- General process documentation in the department has been developed and enhanced – significant/requires attention
- Policies/standards which cover anti-virus provision, user access, backups and security/firewalls have been documented – significant requirements
- Formalised system administration responsibilities for key ICT systems (such as Active Directory, SCCM, Skype for Business and Office365) have been added to relevant officers Job Descriptions – significant requirements
- Documented Change Management process

5.4 BT Wide Area Network (WAN)

The change of provision for our WAN to BT in 2013 had proved problematic with unexpected delays and unforeseen costs. There was an opportunity for the final two years of the contract to renegotiate, this also proved difficult. However, following the escalation of complaint to national level the relationship with BT is much better. This has been achieved through a series of meetings include a number with Frank Malcher, BT's Director of Customer Services. The outcome of this has been positive; we had already negotiated a better price for years 4 and 5, recouping approximately half of the additional costs for year 1-3. However, BT are now keen

to work in partnership with us on community projects, like improving internet security and safety awareness in our schools and IT access in food banks.

5.5 Internet Security Policy

A new up-to-date internet security policy has been drafted. Achieving this is an example of much closer working between areas of the council. The internet security policy is owned and produced by Information Governance; the plan was to update the policy in time for the new GDPR (Data Protection) regulations, which come into force in May 2018. This delay was having significant implications for service delivery in IT and for the council as a whole. So IT supported and Information Governance to update the document for current use, albeit a time limited policy until the new regulations come into force when the document will be revised.

6.0 **Disaster Recovery and Business Continuity Project**

- 6.1 The project was fully initiated in November 2016, the Project Board chaired by Michele Leith meets monthly, progress against the project plan is monitored, details can be seen at Appendix 2
- 6.2 As at the August 2017 Board Meeting the project was slightly ahead of schedule and is currently 60% complete.
- 6.3 The Service Mapping activities are now complete, which means that in a DR/BC context IT now has a clear picture of the system interdependencies and server capacity for each system in priority order for recovery (day 1, day 3, day 7 recovery). This is linked to risk calendar as systems priorities can change on a given day, month in the year.
- 6.4 Clarity around roles and responsibilities within the DR/BC plan have been established in particular the roles/responsibilities for ICT management. The process contains required actions to ensure proper control and management of situations that trigger the use of the DR or BC plan.
- 6.5 A test plan is now in place and the project team is starting work with service areas to ensure their capacity/resilience in a DR/BC situation. This will also ensure a clear shared understanding of role, responsibilities and expectations should a DR/BC situation be triggered.
- 6.6 The VMWare licences (VMWare is the virtual infrastructure on which our systems operate) have been reviewed and upgraded. This upgrade enables us to monitor activity on servers, helping to ensure the effectiveness of the system, and identify any risk to service. Despite the additional cost of this upgrade, we have been able to save £94,418.85 over 3 years on licences.
- 6.7 The data centre at Nuneaton is up and running, with upgraded server capacity. The infrastructure upgrade migrations are taking place. The test environment is up and running which means that we can simulate what will happen if a total failover to Nuneaton is required. The full test plan is complete and live testing schedules prepared. A DR/BC exercise planned for later this year will use the test environment

to failover all systems. Therefore, the status of IT infrastructure and systems will be fed into the exercise in real time. This is a precursor to a live test!!!!

7.0 Future Developments

7.1 Change management

An organisation's IT Infrastructure is like a structure made of dominos – if one falls over it can have a knock on effect. Much like a dominos structure, if the right methodology is followed, part of the structure can be worked upon without impacting the rest of the environment. This may be a design change, such as lifting out a section of a domino trail to add a replacement or an upgrade – but with the right procedures in place, we can avoid collapse.

The objectives of change management support our central IT department to manage our IT infrastructure. This is important at any time, but Digital Transformation will effectively deliver a clean slate with our infrastructure, as it will have been installed with the support of the software providers. With this in mind, we must be particularly careful with any changes made to the infrastructure, which is where this document and its outcomes can help.

A document detailing a corporate approach to change management and reporting was approved by the Digital Transformation programme board for Infrastructure and Architecture, work is now underway to ensure this cornerstone of good organisational IT management is introduced across the Council.

7.2 IVANTI – Service Desk tool

An IT service desk is the brain of the department, where instructions, commands and problems are routed through to ensure the right response is given. Using a piece of software that has been specially configured for this purpose is crucial to the success of the service desk and an existing tool in IVANTI is being reconfigured to accommodate more of the ITIL best practice methodology.

7.3 New IT Strategy

A new IT strategy is being drafted which explains how the department plan to use ITIL methodology to organise and manage the department and service offering. As above systems Administration and Change Management Control will need to be reviewed to support the new strategy.

7.4 Move to the Cloud

A trend has evolved over the past several years for organisations to move their IT infrastructure to “cloud” based solutions. Without going into complex detail, this can be a suitable and preferable solution for many services but for others is not the right way to go. Over the coming year(s), the department will support Shropshire Council as a whole to define the most suitable solutions for moving to the cloud.

It is worth noting that many of our services are already “cloud based”, with more moving that way through digital transformation. Services such as our website hosting are suitable to be cloud based as the benefits outweigh the issues; but other

solutions are better hosted on site, and the team will support the organisation to make these decisions. This will require different skill sets, we plan to use the apprenticeship Levy to upskill our workforce.

7.5 Infrastructure and Architecture (I&A)

As previously mentioned, the IT department are working on and support the I&A strand of Digital Transformation. This work will see the department transform some of their services and methods of functioning in order to be more commercial.

7.6 Central Applications team

Beyond the life of the Digital Transformation Programme (DTP) there is an opportunity to merge several currently separate teams, all offering support for different pieces of software, into a single team. This single team would offer support for all the separate pieces of software but with staff learning two or more pieces, rather than specialising in a single solution. This will require organisation change and no decisions have yet been made in this regard.

7.7 Being Commercial

As a department, we have many Unique Selling Points (USP's) which have a commercial benefit for instance,

- Developing new tools – through Digital Transformation we are looking to deliver new and innovative tools for communicating with residents and businesses, which could be used by partner organisations;
- Marketing our services, either with new websites (ict.Shropshire.gov.uk for example) or with events – we are now marketing and cross promoting our own and Council offered services.
- Being as efficient and effective as possible, being solution focussed and outcome driven.

Another important area of work is our link with the regional Sustainability and Transformation Partnerships (STP). As a department, we are gearing our service up to fulfil some of this work and have representatives at many of the streams of work to ensure any opportunities can be utilised.

7.8 Offer to Schools

The department has worked with schools for many years but if we are to compete in the academy marketplace we need to do things differently. Our service is being improved, our newly developed, Schools Managed Service (SMS) will be introduced fully in September to nine schools. If the SMS is a success, it should become an extremely attractive commercial offering, ensuring Shropshire Council are well placed to attract new business and keep existing contracts.

8.0 **Digital Transformation Programme**

8.1 The DTP will be reported on separately to the committee but it is important to recognise that Shropshire IT is now much more integrated with and integral to the Programme.

9.0 Operational and Strategic Risk Assessment

9 The risk profile has improved significantly over the past year, most notably in the strategic risk

“Failure of existing ICT provision (infrastructure, systems, services and support) could result in significant impact on service delivery and disruption to business activities.”

This risk is now a medium and the risk level should decrease further as further on-going work is completed.

9.2 Our risk exposure has reduced significantly throughout the project. When the project started there were 29 risks, 19 of which were high. There are currently 16 risks, 5 high, 4 medium, 4 low and 3 very low. 2 high risks were added to the register in June.

9.3 In addition, Risk Management have reduced one of their operational risks “Ineffective Business Continuity Plan in place, maintained and up to date, results in an inability to respond effectively during a business interruption.” As a direct result of the implementation of many of the elements of the ICT DR/BC project plan and the confidence they have in the work undertaken to date. Whilst the likelihood score has remained the same, the impact score has been reduced.

10.0 Conclusions

10.1 Now that Shropshire IT has a clear focus, with robust management structures we are seeing levels of improvement that are exponentially better than envisaged a year ago. This report gives the highlights of the huge amount of work that has been undertaken in a relatively short space of time. The most recent audits and follow up audits are starting to provide validation of the management view that improvement is really happening. These improvements should be credited to the hard work of each of the teams.

10.2 There still big improvements to be made and a shift from reasonable audit outcomes to good is now more than an aspiration. Resources particularly with DTP remain a challenge but confidence of success if high.

List of Background Papers (This MUST be completed for all reports, but does not include items containing exempt or confidential information)

None

Cabinet Member (Portfolio Holder)
Steve Charmley

Local Member

Conflicts of interest declared by members

Appendices

Appendix 1 – Adoption of ITIL

Appendix 2 DR/BC Project Summary

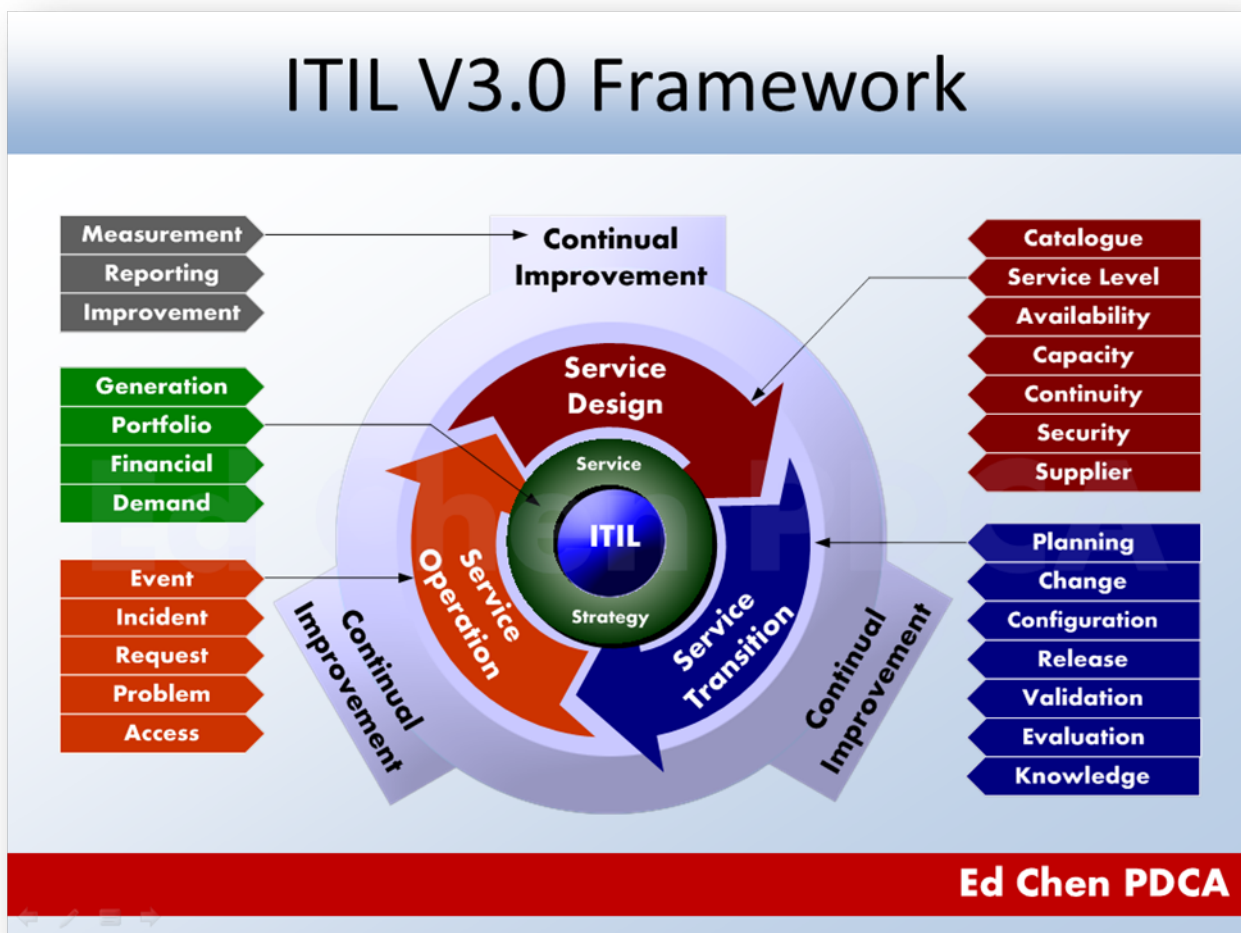
Appendix I – The adoption of ITIL

Introduction

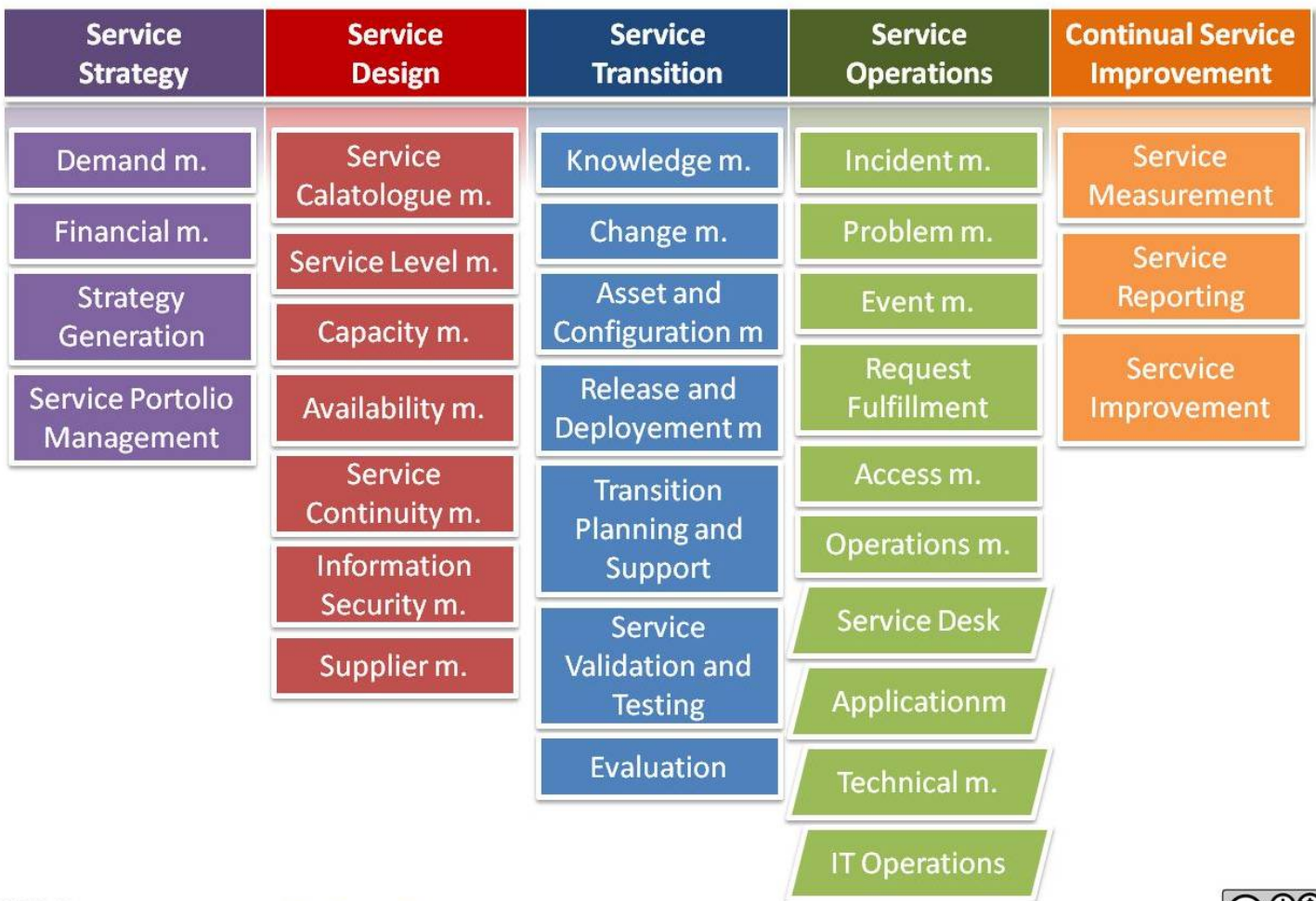
“ITIL, formally an acronym for **I**nformation **T**echnology **I**nfrastructure **L**ibrary, is a set of detailed practices for IT service management (ITSM) that focuses on aligning IT services with the needs of business.

ITIL describes processes, procedures, tasks, and checklists which are not organization-specific, but can be applied by an organization for establishing integration with the organization's strategy, delivering value, and maintaining a minimum level of competency. It allows the organization to establish a baseline from which it can plan, implement, and measure. It is used to demonstrate compliance and to measure improvement.”

<https://en.wikipedia.org/wiki/ITIL>



The IT department is committed to integrating the ITIL framework into everything it does to ensure that its structure, systems and services are perfectly aligned to meet the logistic, strategic and business needs of the council and its service users.



Strategic Service Strands

The diagram on the outlines the various tasks which the IT department needs to deliver in order to provide a successful service which meets the needs of its internal and external customers.

In order to be successful, it is essential that every one of the departmental job descriptions contains at least one of these tasks.

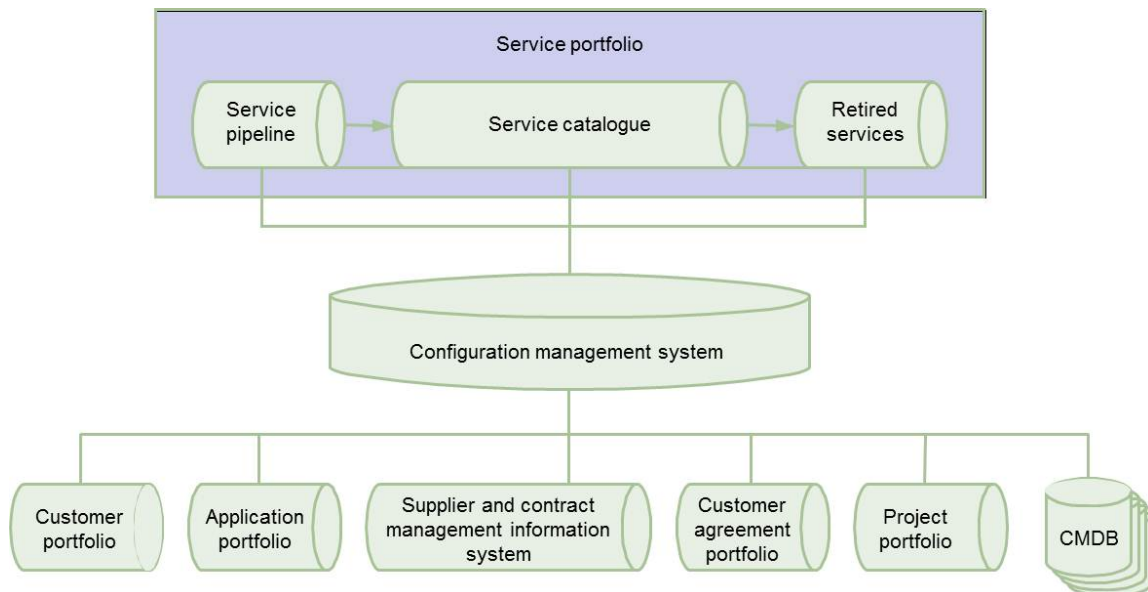
To this end, a **review of the IT department and the Job Roles within it is presently being undertaken** to ensure that this is the case.

Service Portfolio

This is the name given to the “core repository” for all information for all services in an organization.

That is to say, it **outlines where we keep all of the information related to all of our services** that we:

- Have offered in the past
- Offer right now



- Will offer in the future

The Service Portfolio consists of three parts:

1. Service Pipeline

This contains references to services that are not yet live. They may be proposed, or under development

2. Service Catalogue

This contains links to active services through their Service Design Package

3. Retired Services

Services in the process of being discontinued, before they are finally decommissioned

Only the Service Catalogue is visible to the customers and support team.

As part of the review of the IT department, **our Service Portfolio is being constructed**, this will contain all of the information outlined in the diagram above.

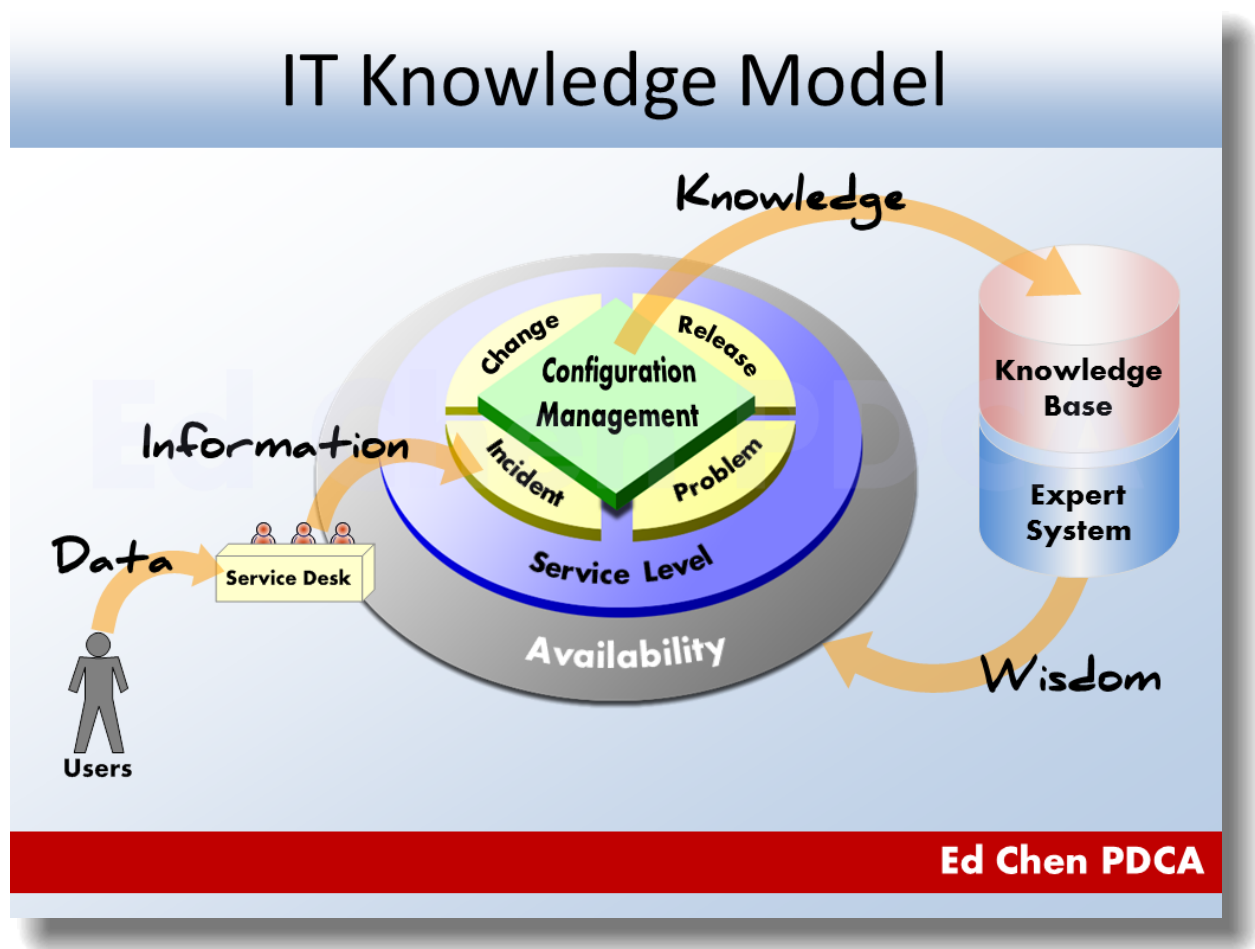
Knowledge Management

“The purpose of Knowledge Management is to gather, analyse, store and share knowledge and information within an organisation.

The primary purpose of this ITIL process is to improve efficiency by reducing the need to rediscover knowledge.”

https://wiki.en.it-processmaps.com/index.php/Knowledge_Management

As part of the review of the IT department, we are constructing an **online knowledge base** for existing and future staff to access to ensure that best practices and lessons learned are

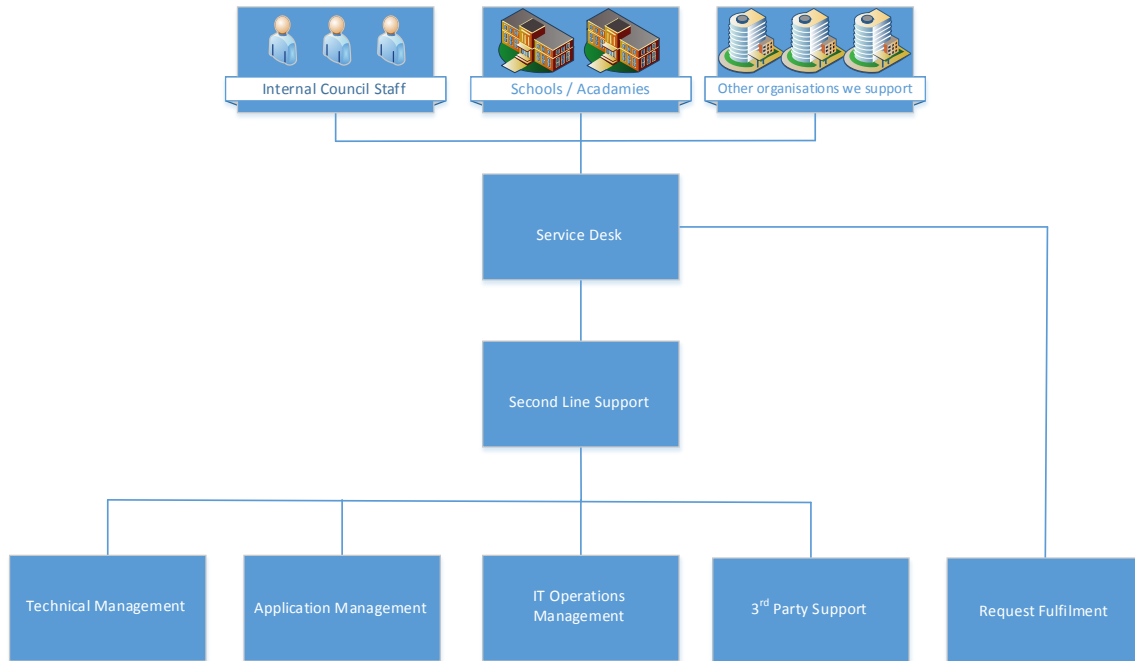


available to all of our staff.

The 'model' IT departmental structure

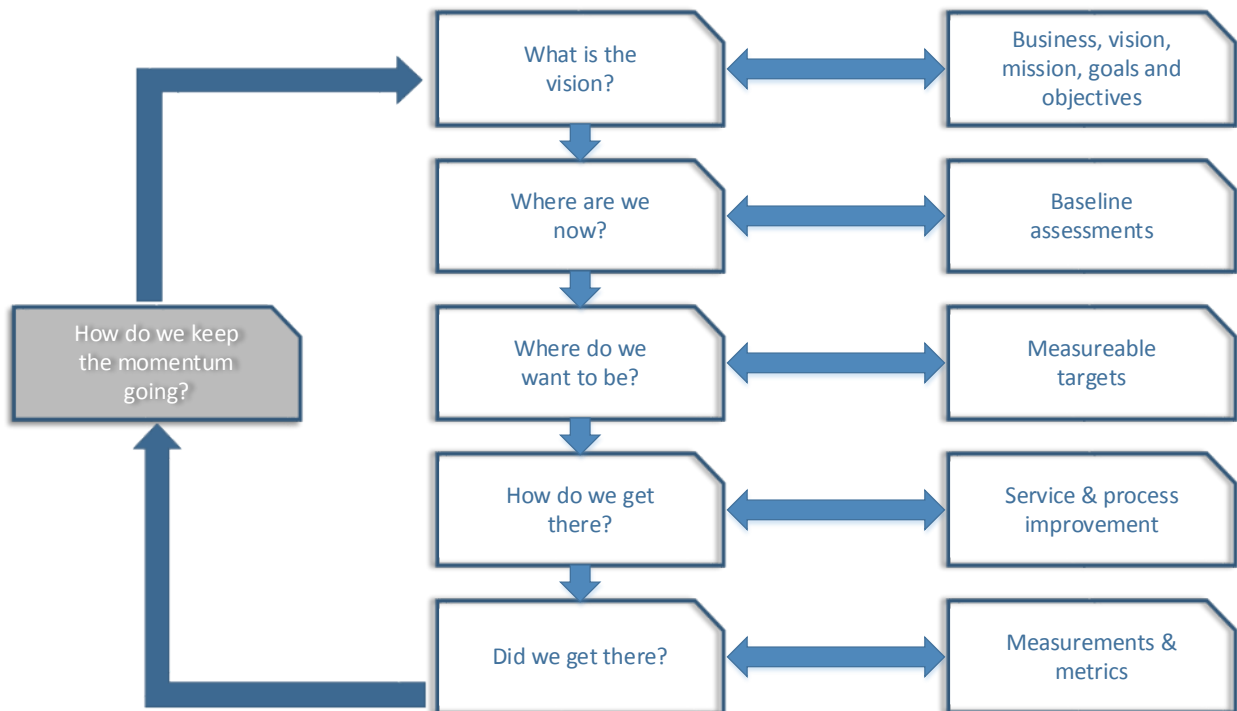
The diagram on this page illustrates a 'model' layout for the council's IT department which would facilitate the delivery of an ITIL based service.

A key objective of the review of the IT department is to identify **how we can best move to this organisational structure** in the most efficient manner possible.



Post review & Digital Transformation

The diagram on this page illustrates the Continual Service Improvement (CSI) cycle that we will adopt to ensure that our service remains **relevant and valued** by all of our service users in the months and years following the review of the IT department and the implementation of the Digital Transformation Plan.



Outcome Definitions

Healthy people

- Potential for future good health is improved
- Demand for health and care services is reduced

Resilient communities

- The range of opportunities for leisure, culture and community participation has increased, with low or no funding.
- Local Members are leading their communities
- A clean and attractive environment is maintained
- Vulnerable people are safe and all are enabled to realise their individual goals
- Needs have been met to prevent demand from escalating
- Enabling and supporting people and communities to do more for themselves and each other

Prosperous Economy

- Page 15
- The economy has diversified into higher added value businesses
 - Children and young people are encouraged and enabled to achieve their potential
 - Jobs for young people have been created
 - The skills base is strengthened and meeting current and future business needs
 - Main market towns grow as hubs for their rural areas
 - Investment into Shropshire has been secured
 - Digital and physical infrastructure has developed creating the conditions for success

Operating the Council

- Corporate support and overheads reduce
- The efficiency of the Council has improved
- Commercial operating is increasing across the Council

Risk Scoring Definitions

IMPACT	5	L	M	H	H	H
	4	L	M	M	H	H
	3	VL	L	M	M	H
	2	VL	VL	L	M	M
	1	VL	VL	VL	L	L
	1	2	3	4	5	
	LIKELIHOOD					

Likelihood	Score	Risk Likelihood Definition
Rare	1	It is unlikely that the event will occur
Possible	2	It is likely that this event will occur but not within the next year
Likely	3	There is a fair chance (50:50) that this event will occur within the next year
Almost Certain	4	The event will almost certainly occur within the next six months
Certain	5	The event has occurred or will almost certainly occur within the next three months





























































Impact	Score	Risk Impact Definition
Negligible	1	<ul style="list-style-type: none"> Day to day operational problems Budgetary issues that can be resolved within Service
Minor	2	<ul style="list-style-type: none"> Manageable disruption to services Noticeable internal impact, but the Service would remain on course to achieve priorities Budgetary issues that can be resolved within Service Management Team Localised reputational damage Isolated complaints Minor Injury to employees or those in the Council's care























Significant	3	<ul style="list-style-type: none"> • Significant loss, delay or interruption to services • Disruption to one critical Council Service for more than 48hrs • Non-delivery of corporate and service plan objectives • Significant stakeholder concern • Attracting short term media attention and potential for litigation/ prosecution from legislative or regulatory bodies • Long term regional damage to reputation • Budgetary issues that can be resolved at Directorate level. • Serious Injury to employees or those in the Council's care • Significant complaints
Major	4	<ul style="list-style-type: none"> • Widespread medium to long term impact on operational efficiency, performance and reputation. • Major disruption to Council's critical services for more than 48hrs (e.g. major ICT failure) • Breach of legal or contractual obligation attracting medium-term attention of legislative or regulatory bodies. • Adverse coverage in National Press/Front page news locally • Budgetary issues that can only be resolved by Section 151 Officer / Chief Executive / Members • Serious Injury to employees or those in the Council's care
Critical	5	<ul style="list-style-type: none"> • Potential to threaten the existence of a service/s • Death of employees or those in the Council's care • Inability to function effectively, Council-wide • Service delivery has to be taken over by Central Government • Front page news story in National Press • Serious breach of legal or contractual obligation resulting in National impact with rapid intervention of legislative or regulatory bodies. • Extensive adverse media interest. • Budgetary intervention at national level



































A	B	C	D	Residual			H	I				J	K		
				E	F	G		Risk Exposure	Risk Category	Healthy People Resilient	Prosperous			Economic	Operating the Council
2	Lack of resources could result in insufficient capacity within ICT to address all requirements to deliver the ICT DR/BC project, compounded by involvement in and delivery of all fundamental and associated dependent projects (Infrastructure Refresh & Service Desk Management Implementation).	Andrew Boxall	Additional Posts to support the project: 1 of 2: Rob Gallagher contracted to role to October 2017 however has now successfully applied to a permanent post in IT (not DRBC role). 2 of 2: Recruitment efforts unsuccessful Emma Murdock has been assigned to another project (Social Care Technology) therefore availability to project is reduced.	4	3	12	Med					Y	Raise with board / confirm whether Rob Gallagher can remain on the Project until 31 October 2017. Impact of Emma Murdock new project commitments on timescales over coming weeks to be ascertained.	End August 2017	
6	Full application failover to the DR site at Nuneaton could be unsuccessful due to only partial testing being undertaken	Emma Murdock	Infrastructure Upgrade Project Completion has resulted in greater capacity at Nuneaton - required memory now present to facilitate failover from Shirehall. Testing to mimic the failover has been successful in a test environment.	3	3	9	Med					Y	Full failover testing required. Other items still to be tested. To be formalised in project plan. Calendar to be completed. June 2017 - Board have agreed that of full testing will be required. This is likely to be at least 6 months planning and preparation.	End December 2017	
7	DR Recovery Process could be affected by skills / knowledge shortage - i.e. through staff leaving organisation, unavailability at time of DR event or lack of backup to those with specialist knowledge	Emma Murdock	OneNote DR Document hold step by step details on how to use SRM. Training undertaken on 04.05.17 gives overview of using SRM.	2	3	6	Low					Y	Processes must be kept up to date - Risk to remain on register as it must be considered by BAU once project closed.	Review January 2018	
8	Recovery could be slowed, disjointed or fail as we are not fully aware of how systems interface with each other	Emma Murdock	More aware of this as Service Mapping is completed - will be maintained as part of BAU activity. This is manual until CMDB is in place. CMDB showing relationships of systems not currently available, this would assist us in the event of a disaster to show what would be affected - this is awaiting Service Desk Management Software to be set up correctly - Project to facilitate this has restarted. Manual Service mapping ongoing.	3	4	12	Med					Y	Completion of Project for Service Desk Management Software (and therefore CMDB). ADDM Applications are being reviewed - picking up from where colleagues left off Ongoing BAU Service Map Updating	TBC TBC Ongoing BAU	
11	Recovery could be slowed as current DR process involves significant manual intervention to recover servers and applications	Emma Murdock	Site Recovery Manager implemented as part of VMWare Infrastructure Upgrade; this facilitates staff in the DR process who can now log on to the SRM application which starts the recovery and brings services online in a predefined order. All appropriate servers have been covered by SRM, any exclusions are excluded as they cannot failover via SRM (e.g. Lync or Domain Controllers which already have a Nuneaton presence) or they are test servers. This has been successful in a test environment but requires testing on the live environment.	2	2	4	V Low					Y	Carry out testing of failover to Nuneaton using SRM. This requires extensive planning and preparation - ties in to planned failover Testing detailed under Risk 6.	End December 2017	
17	Issues with remote accessibility of the corporate network in a full DR scenario if Shirehall is lost. No B / Hot site therefore WAN, Direct Access, VPN, and Airband will stop working. [Staff sites only - Refer to Risk 31 for Schools]	Louise J Powell	Layer 3 Tunnel implemented on the WAN in addition to configuration to support automatic failover to Nuneaton however this has not been tested. The above does not resolve Airband connectivity; Shirehall is single point of access to the WAN for Airband Staff sites the Council has on the WAN (6 Staff Sites)	3	5	15	High					Y	Carry out testing of failover to Nuneaton. This requires extensive planning and preparation - ties in to planned failover Testing detailed under Risk 6. Staff Airband Sites Ascertain DR plans for the sites impacted and what their BC arrangements should involve (decamp etc.)	End December 2017	
19	Recovery documentation inaccessible by other bodies (not including I&S) when it is required.	Emma Murdock	Current documentation is accessible by I&S only	1	5	5	Low					Y	One-Note access permissioned can give selected other users access as required. Requires Risk 20 to be implemented.	End August 2017 [Dependant on Risk 20]	
20	In an event which impacts the availability of ICT Staff there is a risk that Protocol, Device & Login information for another party to access the system is unavailable	Emma Murdock		1	5	5	Low					Y	The plans should include mechanism to release procedural information to a non IT 3rd party in the event of a scenario where IT staff were impacted / unavailable. Review underway with Infrastructure & Security Officer. Virtual Machine to be set up in Nuneaton and kept updated.	End August 2017	
21	Risk of data becoming outdated where staff having to double enter data in the documentation and elsewhere as information changes. e.g. post holder changes and their contact information	Emma Murdock	SACM Policy has been drafted to control changes to pertinent documentation - this Policy will cover the DRBC Document. Process in place to manage changes for areas such as Contact information which is not maintained by ICT.	2	2	4	V Low					Y	Continue current controls to manage risk.	Review January 2018	


























































A	B	C	D	Residual			H	Risk Category			J	K
				E	F	G		Risk Exposure	I	I		
Risk Reference No.	Description of Risk	Officer responsible	Current Controls In Place	Likelihood	Impact	Risk Rating (E X F)	High Medium Low Very Low	Healthy People Resilient Communities Prosperous Economy Operating the Council			Additional Controls / Actions Required	Timescale for implementation of additional controls/actions required
25	ICT Staff unaware of new procedure once implemented or new ICT staff not aware of procedure when put in post.	Emma Murdock	Awareness sessions have been run with the Staff advising the works currently being completed by ICT. It will be the responsibility of the relevant line managers to	2	2	4	V Low				Review requirements for further Awareness Sessions / Testing relevant staff Incorporate existence of DR Document & Team SRPs in to	October 2017 [Subject to controls from Risk 2 being agreed]
27	In a DR event agreed policies and procedures may be prohibitive to full recovery. Delay in recovery due to discussion over what policies it would be acceptable to breach if needed.	Emma Murdock	None.	3	4	12	Med			Y	Authority to bypass certain restrictions in a DR event need to be considered (e.g. in a critical situation would we bypass the restriction which stops users from using their own devices?) Agreed policy exemptions need to be approved and formally documented. Any agreed exemption clauses should be written in to the policies themselves rather than the DRBC documentation. Review with Information Governance and Audit Services required. It is expected this will be carried out towards the end of the project when there is a better understanding of recovery requirements.	End December 2018
28	Failure to have an OOH support rota for critical ICT Staff in the event of business interruption could result in a delay in commencing recovery process. IT do not have an OOH support rota, there is no contractual obligation on staff to be available to support an issue which occurs OOH.	Andrew Boxall	First Line (Helpdesk) available weekdays 0800-1800 , 2 Members of Third Line (Back Office) available weekdays from 0800-1700 There is daily cover by third line over Christmas Break on a volunteer basis with a day off in lieu but no cover out of office hours, on weekends or other bank holidays. Any event which occurs out of office hours would be dealt with 'best endeavours' from the staff willing or available to assist - this has been brought to the Project Board's	4	5	20	High			Y	Management approach to determine whether - the DR approach needs to include that OOH is best endeavours - acceptance by management that this is tolerable. - OR change to staff contracts to include official OOH support reduce the risk exposure	TBC by responsible officer




















































A Risk No.	B Description of Risk	C Officer responsible	D Current Controls In Place	Residual			H Risk Exposure High Medium Low Very Low	I Risk Category				J Additional Controls / Actions Required	K Timescale for implementation of additional controls/actions required	
				E Likelihood	F Impact	G Risk Rating (E X F)		Healthy People Resilient Communities Prosperous Economy Operating the Council	Y	Y	Y			Y
24	Named key holders at DR Site at Nuneaton becoming outdated - staff retaining access after leaving or role change, or required staff not having access.	Louise J Powell	ICT conduct regular reviews of key holders with Warwickshire County Council as part of Service Reviews. There is a contractors pass on site at Nuneaton reception permanently (available when reception is open). Key holders have 24x7 access and are unlikely to all become unavailable at once.	1	1	1	V Low					Y	Risk Closed 10/01/2017	
26	ICT Staff do not have relevant kit required in DR event.	Karen Davis	Policy and procedures are in place that staff should take laptops home with them in an evening, and remove during building alarm (where safe to do so).	3	4	12	Med					Y	Risk Closed 10/01/2017	





























ID		Task Mode	Task Name	Duration	Start	Finish	% Complete	Predecessors	Resource Names
1			DRBC Project	515 days	Mon 01/08/16	Mon 20/08/18	60%		
2			Project Setup	74 days	Fri 30/09/16	Fri 20/01/17	100%		
3			Project Board	3 days	Fri 30/09/16	Tue 04/10/16	100%		
4			Identify Project Board	1 day	Fri 30/09/16	Fri 30/09/16	100%		KD
5			Agree Roles and Responsibilities	1 day	Mon 03/10/16	Mon 03/10/16	100%	4	ML
6			Appoint Project Board	1 day	Tue 04/10/16	Tue 04/10/16	100%	5	ML
7			Project Plan	73 days	Mon 03/10/16	Fri 20/01/17	100%		
8			Draft Project Plan	20 days	Mon 03/10/16	Fri 28/10/16	100%		LJP
9			Complete Version 1 Draft	5 days	Mon 31/10/16	Fri 04/11/16	100%	8	LJP
10			Sign Off Project Plan	5 days	Mon 16/01/17	Fri 20/01/17	100%	9	ML
11			Recruitment	233 days	Mon 01/08/16	Fri 07/07/17	100%		
12			DRBC Support	233 days	Mon 01/08/16	Fri 07/07/17	100%		
13			Approval for recruitment	1 day	Mon 01/08/16	Mon 01/08/16	100%		ML
14			Post Advertised	9 days	Fri 19/08/16	Wed 31/08/16	100%	13	IC
15			Interviews	5 days	Mon 05/09/16	Fri 09/09/16	100%	14	IC
16			Post Filled	1 day	Fri 09/09/16	Fri 09/09/16	100%	15	IC
17			Start Date Agreed	1 day	Fri 30/09/16	Fri 30/09/16	100%	16	HRTeam
18			Post Commenced	1 day	Mon 28/11/16	Mon 28/11/16	100%	17	IC
19			Post Extension Requirements Reviewed	2 hrs	Fri 07/07/17	Fri 07/07/17	100%		
20			Infrastructure Upgrade (VMWare & SRM)	173 days	Tue 20/12/16	Mon 04/09/17	89%		
21			Tender	35 days	Tue 24/01/17	Mon 13/03/17	100%		
22			Project Planning	5 days	Mon 13/03/17	Fri 17/03/17	100%	21	
23			Change Approval	5 days	Mon 20/03/17	Fri 24/03/17	100%	22	
24			Upgrade: Pre-requisite Implementation	65.25 days	Tue 20/12/16	Thu 30/03/17	100%		
25			Memory Upgrade	13.25 days	Mon 13/03/17	Thu 30/03/17	100%		
26			Order Placed	1 hr	Mon 13/03/17	Mon 13/03/17	100%	21	EM
27			Goods Received	1 hr	Mon 13/03/17	Mon 13/03/17	100%	26	
28			Product Installed	5 days	Mon 13/03/17	Wed 29/03/17	100%	27	JF,BM
29			Sign Off & Supplier Paid	2 hrs	Thu 30/03/17	Thu 30/03/17	100%	28	EM,CH
30			Oracle Servers Upgrade	26.25 days	Tue 20/12/16	Fri 03/02/17	100%		

ID		Task Mode	Task Name	Duration	Start	Finish	% Complete	Predecessors	Resource Names
31			Order Placed	1 hr	Tue 20/12/16	Tue 20/12/16	100%		EM
32			Goods Received	1 hr	Thu 12/01/17	Thu 12/01/17	100%	31	
33			Products Mounted in both Datacentres	10 days	Fri 20/01/17	Thu 02/02/17	100%	32	JF,BM
34			Sign Off & Supplier Paid	2 hrs	Fri 03/02/17	Fri 03/02/17	100%	33	EM,CH
35			VMWare Licensing	20.38 days	Fri 20/01/17	Fri 17/02/17	100%		
36			Establish Current Server Status	4 days	Fri 03/02/17	Thu 09/02/17	100%	25,30	EM
37			Establish Server Licensing Requirements	1 day	Mon 13/02/17	Mon 13/02/17	100%	91,36	EM
38			Suppliers Approached & Quotes Obtained	15 days	Fri 20/01/17	Thu 09/02/17	100%		EM,Third Party
39			Order Placed	1 hr	Fri 10/02/17	Fri 10/02/17	100%	38	EM
40			Goods Received	5 days	Fri 10/02/17	Fri 17/02/17	100%	39	
41			Sign Off & Supplier Paid	2 hrs	Fri 17/02/17	Fri 17/02/17	100%	40	
42			Infrastructure Upgrade Implementation	129 days	Mon 27/02/17	Thu 31/08/17	80%	41	
43			NetApp Upgrade	8 days	Mon 27/02/17	Wed 08/03/17	100%		
44			VMWare Upgrade	25 days	Mon 06/03/17	Fri 07/04/17	100%	43	
45			SRM Configuration	5 days	Mon 10/04/17	Tue 18/04/17	100%	44	
46			SAT Testing	10 days	Wed 19/04/17	Wed 03/05/17	85%	45	
47			Infrastructure Reorganisation - July 2017	38 days	Mon 10/07/17	Thu 31/08/17	43%	46	
48			Planning	1 day	Mon 10/07/17	Mon 10/07/17	100%	46FS+46 day	
49			Script Drafting	1 day	Tue 18/07/17	Tue 18/07/17	100%	48FS+5 days	
50			Reorganisation	20 days	Wed 26/07/17	Tue 22/08/17	40%	49FS+5 days	
51			Testing Sign Off	1 day	Thu 31/08/17	Thu 31/08/17	0%	50FS+5 days	
52			Failback Process	2 days	Fri 01/09/17	Mon 04/09/17	0%	51	
53			Project Closure	3 hrs	Fri 01/09/17	Fri 01/09/17	0%	51,46,47	
54			Application DR Testing & Service Mapping	351.3 days	Tue 29/11/16	Wed 02/05/18	32%		
55			Business Services Mapping	351.3 days	Tue 29/11/16	Wed 02/05/18	32%		
56			Map Services	171.3 days	Tue 29/11/16	Thu 10/08/17	100%		
57			Utility Services	40 days	Tue 29/11/16	Wed 01/02/17	100%	18	
58			Day 1 Business Services	40 days	Tue 02/05/17	Tue 27/06/17	100%	57	
59			Day 3 Business Services	20 days	Tue 02/05/17	Thu 13/07/17	100%	58	
60			Day 7 Business Services	10 days	Tue 02/05/17	Thu 27/07/17	100%	59	

ID		Task Mode	Task Name	Duration	Start	Finish	% Complete	Predecessors	Resource Names
61			1 Month Business Services	10 days	Thu 27/07/17	Thu 10/08/17	100%	60	
62			Create ICT Test Process	120 days	Thu 10/08/17	Wed 07/02/18	0%		
63			Utility Services	40 days	Thu 10/08/17	Fri 06/10/17	0%	56	
64			Day 1 Business Services	40 days	Fri 06/10/17	Fri 01/12/17	0%	63	
65			Day 3 Business Services	20 days	Fri 01/12/17	Wed 10/01/18	0%	64	
66			Day 7 Business Services	10 days	Wed 10/01/18	Wed 24/01/18	0%	65	
67			1 Month Business Services	10 days	Wed 24/01/18	Wed 07/02/18	0%	66	
68			Include in IT OneNote / Documentation	60 days	Wed 07/02/18	Wed 02/05/18	50%		
69			Utility Services	20 days	Wed 07/02/18	Wed 07/03/18	50%	56,62	
70			Day 1 Business Services	20 days	Wed 07/03/18	Wed 04/04/18	50%	56,62,69	
71			Day 3 Business Services	10 days	Wed 04/04/18	Wed 18/04/18	50%	56,62,70	
72			Day 7 Business Services	5 days	Wed 18/04/18	Wed 25/04/18	50%	56,62,71	
73			1 Month Business Services	5 days	Wed 25/04/18	Wed 02/05/18	50%	56,62,72	
74			DR Test [Placeholder]	147 days	Mon 03/07/17	Mon 05/02/18	0%		
75			Planning	120 days	Mon 03/07/17	Mon 18/12/17	0%		
76			Planning Placeholder	120 days	Mon 03/07/17	Mon 18/12/17	0%		
77			Communications	10 days	Tue 19/12/17	Thu 11/01/18	0%		
78			... to Management / Service Areas	5 days	Tue 19/12/17	Thu 04/01/18	0%	76	
79			... engagement with Service Areas	10 days	Tue 19/12/17	Thu 11/01/18	0%	76	
80			...to affected to third party customers	10 days	Tue 19/12/17	Thu 11/01/18	0%	76	
81			... to affected to third party service providers	10 days	Tue 19/12/17	Thu 11/01/18	0%	76	
82			DR Test	2 days	Fri 12/01/18	Mon 15/01/18	0%	77	
83			DR Test Review / Lessons Learned	5 days	Tue 16/01/18	Mon 22/01/18	0%	82	
84			Document Findings	10 days	Tue 23/01/18	Mon 05/02/18	0%	83	
85			Business Impact Analysis	70 days	Thu 01/12/16	Fri 17/03/17	100%		
86			Review Current BIA / SRP	10 days	Thu 01/12/16	Wed 14/12/16	100%		EM
87			Agree new BIA template	1 day	Thu 15/12/16	Thu 15/12/16	100%	86	EM[50%],JC[50%]
88			Circulate new template	1 day	Fri 16/12/16	Fri 16/12/16	100%	87	JC
89			BIA /SRP Workshops	7 days	Mon 09/01/17	Tue 17/01/17	100%	88	JC[80%],EM
90			Departments to complete and return SRPs	1 day	Wed 18/01/17	Wed 18/01/17	100%	89	

ID		Task Mode	Task Name	Duration	Start	Finish	% Complete	Predecessors	Resource Names
91			Collate Responses (91 Areas) & Send to ICT	5 days	Mon 06/02/17	Fri 10/02/17	100%	90FS+12 day	JC
92			Agree RTOs & Complete Spreadsheet	25 days	Mon 13/02/17	Fri 17/03/17	100%	91	
93			IT Disaster Recovery Plan (Management's Plan)	235.75 days	Thu 01/09/16	Fri 11/08/17	99%		
94			Creation, Storage & Access	3 days	Tue 01/11/16	Thu 03/11/16	100%		
95			Agree Location & Method of Access	2 hrs	Tue 01/11/16	Tue 01/11/16	100%		
96			Agree Access Permissions	2 hrs	Wed 02/11/16	Wed 02/11/16	100%	95	
97			Set Up Access Permissions	1 day	Thu 03/11/16	Thu 03/11/16	100%	96	
98			Documentation Management	1.63 days	Tue 13/12/16	Wed 14/12/16	100%		
99			Agree Access, Editing & Communication Process	2 hrs	Tue 13/12/16	Tue 13/12/16	100%	95FS+30 day	
100			Sign off by ICT Management	1 hr	Tue 13/12/16	Tue 13/12/16	100%	99	
101			Sign off by Senior Management / Business Areas	1 day	Tue 13/12/16	Wed 14/12/16	100%	100	
102			Document Editing & Communication Process	2 hrs	Wed 14/12/16	Wed 14/12/16	100%	101	
103			First Complete Version Upload	235.75 days	Thu 01/09/16	Fri 11/08/17	99%		
104			Data Gathering	15 days	Thu 01/09/16	Wed 21/09/16	100%		
105			First Draft Completion	10 days	Thu 22/09/16	Wed 05/10/16	100%	104	
106			Draft Review with ICT Management	10 days	Thu 06/10/16	Wed 19/10/16	100%	105	
107			Draft Review with Risk Dept.	10 days	Thu 20/10/16	Wed 02/11/16	100%	106	
108			Draft Review with BCDR SRO	10 days	Thu 10/11/16	Wed 23/11/16	100%	107FS+5 day	
109			Consolidate Draft against existing BCP & SRP	20 days	Mon 09/01/17	Fri 03/02/17	100%	108FS+25 da	
110			Further Draft Review by ICT Management	5 days	Mon 06/02/17	Fri 10/02/17	100%	109	
111			Final Draft Completed	5 days	Mon 13/02/17	Fri 17/02/17	100%	110	
112			Final Draft Approved for First Complete Version	1 hr	Mon 20/02/17	Mon 20/02/17	100%	111	
113			Training	40.63 days	Fri 16/06/17	Fri 11/08/17	80%		
114			ICT Training on new process	4 hrs	Fri 16/06/17	Fri 16/06/17	100%	112FS+80 da	
115			[TBC] Management Training on new process	1 hr	Fri 11/08/17	Fri 11/08/17	0%	114FS+40 da	
116			Implementation Communications Sent	1 hr	Wed 08/03/17	Wed 08/03/17	100%	113FS+1 day	
117			First Complete Version Loaded to SharePoint	0.5 hrs	Wed 08/03/17	Wed 08/03/17	100%	116	
118			Commence BAU Document Management	0.5 hrs	Wed 08/03/17	Wed 08/03/17	100%	117	
119			DRBC Technical Documentation	30.75 days	Thu 01/09/16	Thu 13/10/16	100%		
120			Creation, Storage & Access	3.88 days	Mon 10/10/16	Thu 13/10/16	100%		

ID		Task Mode	Task Name	Duration	Start	Finish	% Complete	Predecessors	Resource Names
121			Agree Access, Editing & Communication Process	2 hrs	Mon 10/10/16	Mon 10/10/16	100%		
122			OneNote Creation	2 hrs	Mon 10/10/16	Mon 10/10/16	100%	121	
123			Agree Access Permissions	2 hrs	Mon 10/10/16	Mon 10/10/16	100%	122	
124			Set Up Access Permissions	1 day	Mon 10/10/16	Tue 11/10/16	100%	123	
125			Access Testing with Authors	1 day	Tue 11/10/16	Wed 12/10/16	100%	124	
126			Access Testing with Readers (Business)	1 day	Wed 12/10/16	Thu 13/10/16	100%	125	
127			Testing Sign off	1 hr	Thu 13/10/16	Thu 13/10/16	100%	126	
128			Document Management	0.63 days	Tue 11/10/16	Wed 12/10/16	100%		
129			Agree Access, Editing & Communication Process	2 hrs	Tue 11/10/16	Tue 11/10/16	100%	124	
130			Sign off by ICT Management	1 hr	Wed 12/10/16	Wed 12/10/16	100%	129	
131			Document Editing & Communication Process	2 hrs	Wed 12/10/16	Wed 12/10/16	100%	130	
132			Implementation of Documentation	1 day	Thu 01/09/16	Fri 02/09/16	100%		
133			Sign Off by ICT Management	1 day	Thu 01/09/16	Fri 02/09/16	100%		
134			Implementation Communications Sent	1 hr	Thu 01/09/16	Thu 01/09/16	100%		
135			Commence BAU Document Management	1 hr	Thu 01/09/16	Thu 01/09/16	100%		
136			Emergency Access Set Up	8 days	Tue 04/07/17	Thu 13/07/17	19%		
137			User Permissions Agreed	1 day	Tue 04/07/17	Tue 04/07/17	100%		
138			User Created	1 day	Wed 05/07/17	Wed 05/07/17	0%	137	
139			Laptop Setup	5 days	Thu 06/07/17	Wed 12/07/17	10%	138	
140			BAU Management Documented	1 day	Thu 13/07/17	Thu 13/07/17	0%	138,139	
141			Ransomware Recovery Planning	62.38 days	Thu 29/06/17	Tue 26/09/17	67%		
142			Engagement with Security Officer	1 day	Thu 29/06/17	Thu 29/06/17	100%		
143			Seek approval from Board	1 day	Tue 04/07/17	Tue 04/07/17	100%		
144			Placeholder - Actions TBC	1 day	Mon 25/09/17	Tue 26/09/17	0%	148,153	
145			Site C Option Review	11 days	Fri 08/09/17	Mon 25/09/17	0%		
146			Review of Options	5 days	Fri 08/09/17	Fri 15/09/17	0%	53FS+5 days	
147			Prepare / Submit Review for Management	5 days	Fri 15/09/17	Fri 22/09/17	0%	146	
148			Placeholder - Actions TBC	1 day	Fri 22/09/17	Mon 25/09/17	0%	147	
149			ADDM Option Review	492.88 days	Thu 01/09/16	Mon 20/08/18	92%		
150			Market Test 1 - BCM	30 days	Tue 10/04/18	Mon 21/05/18	100%		

ID		Task Mode	Task Name	Duration	Start	Finish	% Complete	Predecessors	Resource Names
151			Market Test 2 - Vrealize Navigator	40 days	Tue 19/06/18	Mon 13/08/18	100%	150FS+20 da	
152			Prepare / Submit Review for Management	5 days	Tue 14/08/18	Mon 20/08/18	0%	151	
153			Placeholder - Actions TBC	1 day	Thu 01/09/16	Fri 02/09/16	0%		
154			Audit Actions - BCDR 2016 Audit	319.4 days	Mon 23/01/17	Wed 02/05/18	87%		
155			BCDR Audit 2016 - Ref 1.1	33.13 days	Mon 23/01/17	Thu 09/03/17	100%		
156			"Create BCDR Project Plan"	1 hr	Mon 23/01/17	Mon 23/01/17	100%	10	
157			"Complete DR Plan"	1 hr	Thu 09/03/17	Thu 09/03/17	100%	93	
158			BCDR Audit 2016 - Ref 1.2	0.25 days	Tue 05/09/17	Tue 05/09/17	100%		
159			"Prepare Business Case for full Hot Start option at Nuneaton"	1 hr	Tue 05/09/17	Tue 05/09/17	100%	20	
160			"Descision whether to proceed with option"	1 hr	Tue 05/09/17	Tue 05/09/17	100%	159	
161			BCDR Audit 2016 - Ref 1.3	0.13 days	Thu 09/03/17	Thu 09/03/17	100%		
162			"Complete DR Plan to be included as part of Corporate BCP"	1 hr	Thu 09/03/17	Thu 09/03/17	100%	93	
163			BCDR Audit 2016 - Ref 1.4	49.4 days	Thu 22/02/18	Wed 02/05/18	20%		
164			"Develop a rolling programme of key system restore and recovery over 2 years"	1 hr	Thu 22/02/18	Wed 02/05/18	20%	54	
165			Handover to Business As Usual Management	424.28 days	Thu 01/09/16	Wed 16/05/18	0%		
166			Management Descision on BAU Procedure (See Notes)	10 days	Wed 02/05/18	Wed 16/05/18	0%	154	
167			Placeholder - Actions TBC	1 day	Thu 01/09/16	Fri 02/09/16	0%		