UCISA ITIL Case Study on Nottingham Trent University

1. Introduction

Nottingham Trent University is a large, diverse and vibrant modern university with approximately 24,000 students. Its mission is to deliver education and research that shapes lives and society, and in doing so, the University offers a strong course portfolio designed to meet the needs of both students and industry. With 24,000 students, Nottingham Trent University is recognised nationally and internationally for the effectiveness of its teaching and the relevance of its research, recruiting students from over 90 countries. It has an enviable reputation for nurturing well rounded, confident and ambitious graduates, fully equipped to succeed in their chosen profession and to make a significant contribution to society. Consequently, it is one of the leading universities in the UK for employability.

In 2004, the structure of the University changed from Faculties into Schools and Colleges. At this time, the five IT Support Departments (some of which previously worked out in the Faculties) were centralised and Information Systems was formed. Shortly after, a central Service Desk was created.

Information Systems is separate from Library and Learning Resources, who provide general first line student IT support in open access areas. The Virtual Learning Environment is managed by the Education Development Unit within the Library, and a small amount of IT support for specialist applications and services remains within the Schools and Colleges.

2. Using ITIL

A limited implementation of ITIL v2 started in 2004, with the establishment of the central Service Desk. Staff were also invited to half day ITIL taster sessions, selected staff attended ITIL Foundation courses and a few staff attended ITIL practitioner courses for Business Relationship Management and Service Level Management.

A revised and fully managed implementation started in 2007 to underpin a new IS strategy. The new project was directed towards ITIL v3 building on the existing ITIL v2 foundation.

The drivers for choosing ITIL were:

- External ITIL experience of new senior staff
- The need to provide measurable high quality services
- Using Best Practice and being process driven
- To reduce the cost of keeping the lights on
- Significant organisational change with information systems

The team recognised that the ITIL implementation is significantly about organisational change, the way the IT groups work together, and building effective working relationships with Schools and Colleges.

At the time, the organisation structure within Information Systems was still evolving to support ITIL, service management and a service based culture supporting end to end service. Key teams are now in place alongside the Service Operations Teams; these are a Service Transition Team, a reshaped Service Desk team and a Business Relationship Team.

In early 2007, IS completed an internal assessment based on the OGC/itSMF maturity framework, and subsequently undertook a formal ITIL/ISO20000 based maturity assessment with Pink Elephant. This assessment formed the basis of the driver to improve the maturity of the current processes and, with this, NTU aims to support its ambitious information management strategy that will make us sector leading in systems and services to give NTU competitive edge within 3–5 years.

Within the scope of the project, NTU is also replacing its service management tool to improve the technology underpinning the processes. This software will be deployed University wide, to allow all student and staff queries to be logged by common help desk software with formalised escalation procedures and coordinated responses.

The IS Senior Management Team is committed to ensure that ITIL and service management are used as the framework for all IT service delivery from Information Systems.
3. The service life cycle – service strategy

Governance and strategic direction

In March 2004, Nottingham Trent University (NTU) launched an ambitious new strategy. NTU’s Strategic Plan (2004–2010) is a holistic strategy that covers all areas of the University’s activity. The Strategic Plan can be viewed on NTU’s website.

The University’s new strategy had significant implications for IS. Two of the six strategic aims and two of the six strategic platforms were directly relevant to the work of IS:

Our aims:

1. To develop confident and ambitious graduates equipped to shape society.
2. To provide education that promotes both intellectual initiative and the highest academic standards to prepare students for life and career.
3. To be the university of choice for business, industry and the professions in our areas of expertise.
4. To be recognised both nationally and internationally for the effectiveness of our teaching and the relevance of our research.
5. To transform the learning and working environment to create an inspiring and innovative culture.
6. To have the courage and the will to implement change.

The strategic platforms are six university wide initiatives that are instigating change in the University, putting us in a position to deliver our mission. The Strategic Platforms are:

1. A course portfolio that meets our mission
2. The application of market intelligence
3. Freedom to invest and innovate
4. A resource structure to drive the business
5. Gold standard customer service
6. Strengthening organic growth by collaboration, partnerships and acquisitions

Under Strategic Platform 4, there is a specific section dedicated to NTU online and IT infrastructure:

“We believe that NTU should be a leader in the application of technology to education and learning. Our long-term vision for the overall e-strategy is that we will inspire our students and staff by the way in which we use the latest technology to deliver better services.

However, we are not interested in using technology for its own sake. We will use the latest technology within modern working practices to:

- support student learning
- streamline administration
- eliminate queuing
- deliver faster, more accurate, more accessible information, and
- build a sense of community.”
Six interlocking projects were articulated to enable the achievement of the above vision:

1. Identifying systems and processes that will be used throughout the University.
2. Linking and aligning IT initiatives to the University’s business through the development and implementation of an information management strategy.
3. Requiring University IT systems to be integrated to facilitate the sharing of information and promote process efficiency.
4. Communicating the value that the use of IT delivers to the organisation.
5. Capitalising upon the workforce’s talents using innovative IT tools.
6. Implementing IT performance measures that assess the health of the services we deliver, the development of the IT organisation and the satisfaction of our customers.

Delivery would be via the information management strategy:

“The Information Management Strategy will describe how we will use IT to unite the different parts of the University – the academy and professional services – through streamlined business processes, and how we will use IT to provide a seamless service to all our customers, both internal and external”.

A key role of the Information Management Steering Group (IMSG) is to set information management priorities in line with the University’s business needs. IMSG comprises key stakeholders and decision makers from across the academic, research and professional services areas of the University. Information Systems is represented by its Director.

The IS strategy exists to support the University Strategic Plan, with the information management strategic implementation plan acting as a bridge between the IS strategy and the University’s strategy and objectives.

The IS management team, led by the Director of Information Systems, sets and directs governance across NTU for the technology aspects of IT service, development and projects for example: IT security, architecture, infrastructure and service management.

Internally, Information Systems have adopted internal IT governance and management controls, so business alignment, best value, risk and opportunity management are met. Adopting JISC and NCC guidance, NTU are combining this with ITIL Best Practice to focus on:

- Establishing key decision making areas
- Identification of and alignment to policies, strategies, etc.
- Identification and implementation of the practical elements of IT management (including any appropriate methodologies required)

Service portfolio management and project management

An IS project and portfolio management team exists to provide project management for both business and IT system projects. There is a process for reviewing and approving new projects and allocating resources, which is forming the basis of portfolio management. The methodology for project management is based on PRINCE2.

Further enhancement to this process is underway supported by the implementation of HP’s project and portfolio management tool.

Communications

The Service Desk is responsible for operational communications with users about IS services. This is delivered through an IS support site and service status information, including information about changes and the availability of services, is delivered via email.

A team of Business Relationship Managers are responsible for tactical and strategic communications.

Further information is also made available through a monthly report sent to all Heads of Departments from the Director of Information Systems and through briefings at college and school meetings.

Internal communication occurs through regular one to one and team meetings, newsletters and regular department wide briefings.
4. The service life cycle – service design

Service catalogue management

There is a service catalogue in place and, currently, this is undergoing a review, which aims to present a business and technical portfolio of services.

Business relationship management/service level management

A new team of five Business Relationship Managers performs the activities of service level management. This team represent IS in the College and professional services areas of the University, discussing and gaining an appreciation of the new and changing requirements of the Schools and Colleges. They perform service review meetings and attend committee meetings, and discuss new projects in the pipeline, which appear in the service portfolio.

The division of responsibility is one Business Relationship Manager for each of the Colleges and one BRM for Professional Services (this includes HR, Finance, Estates etc.). Engagement with the research cohort is covered by all BRMs.

The Business Relationship Management team is also responsible for carrying out stakeholder analysis, to ensure that all the discussions, negotiations and agreements for service delivery are carried out at the right level within the Schools and Colleges and with the appropriate decision makers.

The BRM role is considered fundamentally important to the success of quality, cost effective service delivery into the University. This role has also increased the level of engagement of IT with the Colleges in tactical and strategic planning and decision making.

The process and documents

At this time, formal Service Level Agreements are not in place between IS and the University. However, service targets are in place and are published. The further planned development of the service catalogue and service level management processes will assist with this.

Measuring service

A number of KPIs and metrics are in place and are published. They are currently based predominantly on IT metrics, for example, availability. As Service Level Agreements are not in place at the moment, the current measures are really being used as an opportunity to record and measure against a baseline for services upon which to base future SLAs. They do enable the teams to measure and monitor support performance and system availability.

The previous week’s metrics and KPI’s are reviewed in a weekly Operations meeting and published in weekly Operations’ reports. This includes major incidents, number of calls and resolution times, number and nature of changes completed and planned and project status updates. This provides an opportunity to compare metrics and ensure constant service delivery.

The monthly reports present and review KPIs and metrics for each month, for example: number of incidents, major incidents, project status extracted by College. These reports also form the basis of the ongoing service reviews.

A Service Desk live dashboard is in place and displayed to the team via a plasma screen. This enables the Service Desk team to have a visual understanding on the number of inbound calls and service outages from monitoring tools.

Capacity management

Capacity management is an emerging process. The capacity management that is taking place at the moment is operationally based. There is considerable management information being collated to support operational capacity planning.

The maturity of this process over the next 12 months will be developed by the Infrastructure Services Manager and tie into the role of the Business Relationship Managers and Service Owners. They will work with the Schools and Colleges and professional support areas to complete service and business capacity planning.

Availability management

The availability management that is taking place at the moment is operationally based and metrics are in place to measure IT service availability.
This is an emerging process and will be developed to ensure that business availability metrics are agreed, put in place and reported against. The team is building the portfolio of management information being collated to support and measure service availability. This is supplemented by the business impact analysis information collected during a current IT service continuity project.

**Information security management**

The information security management process is well documented and comprehensive at NTU. The areas for improvement will be addressed relatively easily and are primarily about setting service targets and metrics.

**Supplier management**

There is joint responsibility between Information Systems and University Procurement to ensure that the right suppliers are in place. The main role of Procurement is to ensure that the correct policies and processes are followed, and they also manage the legal aspects of supplier management, including contract management for anything that is University wide. IS controls and manages all of the University’s IT purchases.

A monthly service meeting is held with the IT Procurement Manager to improve the way IS manages suppliers.

A recently negotiated strategic partnership is enabling and improving the provision of quality cost effective services to the University. Regular operational and strategic meetings take place at all levels of the organisation to ensure the effective management of the strategic partnership.

5. The service life cycle – service transition

**Change management**

A change management process and change management team are in place. As part of the process maturity work that is being undertaken, the change process is being reviewed and improved, but is still predominantly a manual process at the moment. However, this will be migrated to the new service management tool in October 2009.

Standard changes that follow a repeatable process are documented, approved and then can take place, without further authorisation. These are still recorded within the current service management tool.

Normal changes are authorised by change groups via email, and a more formal face to face Change Advisory Board (CAB) meeting is scheduled every Friday for significant changes that impact on service and those associated with the delivery of projects.

Emergency change is defined, and there is an Emergency CAB (ECAB) to assist in the decision making process on the implementation of an emergency change. Emergency changes can only proceed with approval from a member of the IS Senior Management team.

**Release management**

This is an emerging process with basic release management in place at the moment. The IT service management project currently underway will look at the process of release management in the context of service transition. Development, testing and quality assurance processes are also being put in place following the acquisition of HP management and testing tools.

**Configuration management**

There is a considerable amount of configuration data available in a number of data sources, but there are limited relationships and dependencies. Consolidation of this data into a Configuration Management Database (CMDB) is planned as part of the implementation of the new HP service management tool to be launched in the Autumn. The Service Transition team includes two Service Asset and Configuration Analysts, who have started the development of the process and procedures to support this.
6. The service life cycle – service operation

The Service Desk

The Service Desk is the central point of contact for all staff within the University with a responsibility to manage incidents and service requests for all aspects of IT, AV and systems. The Service Desk is open Monday to Friday, 0800 to 1800.

The Service Desk is staffed by two Service Desk Technicians, two Service Desk Analysts, an Incident Management Team Leader, a Problem Management Team Leader and a Service Reporting Analyst. They are all managed by the Service Desk Manager.

The Service Desk Technicians deal with all routine incidents, and service requests, and the Service Desk Analysts have elevated rights to administer access to systems and services, and have a deeper technical understanding of the services to be able to resolve the more complex incidents.

A Systems and Reporting Analyst is part of the team. This role provides all the management information, not only for the operational service management of the Service Desk, but for all aspects of Information Systems.

The team are responsible for the IS support website, and publish self help information, user guides, knowledge base, service information, news and access to online services.

Incident management

An incident management process and Incident Management Team Leader are in place. There is a good understanding and distinction between incidents and problems, and the process is being reviewed and improved in line with the process maturity work, which is taking place. A major incident process is in place, and the Services Desk also provides major incident support out of hours.

Service requests/request fulfilment

Service requests are managed, and there is a distinction between requests and incidents.

Problem management

A problem management process and Problem Management Team Leader are in place. There is a manual problem management process in place at this time, and this is being reviewed and improved as part of the process maturity work. Problems will be logged and tracked within the new tool once it is launched.

Problems are recorded and managed with workarounds, and known errors documented and published via the Weekly Operations report and on the IS support site.

Access management

Operational access management and support is dealt with by the Service Desk. A Directory Services team within Infrastructure Services manages the back end systems.

Event management

A number of tools are in use to monitor systems and alerts. As part of the HP monitoring tools’ acquisition these events and alerts will be integrated and centralised to ensure they are tracked within the HP Service Manager system.

7. The service life cycle – continual service improvement

As part of the process maturity work, continual service improvement will become a natural part of the process lifecycle. We have put in place metrics and KPIs measuring and monitoring targets, establishing and understanding opportunities for service and process improvement, to ensure we keep the momentum going. All processes will have a process improvement plan owned by each process owner.
8. Service management software

RMS is the application currently being used to support the ITIL processes for incident and request management. The contract for this tool ends in November, and work is well underway to implement a new integrated service management tool, HP Service Manager.

RMS has been in place for approximately 8–10 years. It was originally selected for its ability to capture requests for just one of the previous decentralised IT providers. Its implementation to the new IS was not well accepted, as issues surrounding the Department’s consolidation dominated the landscape at that time.

HP Service Manager 7 supports the full range of integrated processes and is structured around ITIL compliant embedded best practice. The tool also supports Knowledge Centre and the current externally hosted Knowledge Base will be replaced by the new product.

The strategic aim is that everyone on campus will be using the new HP product. This will include Registry, Library, HR, Finance, Warden Services, Student Support Services and the Student Services Centre.

Recommendations on purchasing a software tool

For NTU the requirement for a replacement tool was to support a single, common request management system for the handling of enquiries in the University. The benefits and advantages of this will lead to better utilisation of resources and an improvement in the customer experience through:

- Access to shared data sources
- Recording information in a single place
- Tracking, management and consistent handling of all enquiries
- Consistent implementation
- Reporting
- Access to information resources to handle standard enquiries

In addition to the usual considerations of cost and value for money, key factors and recommendations when implementing a service management tool are:

- Use out of the box functionality and standard ITIL processes, where possible.
- Engage early on with process teams to set expectations on levels of customisation.
- Understand how it will integrate with key data sources and business systems.
- Establish a strong relationship with your integration partner.
- Don’t underestimate the effort required for data collection.
- Ensure that your internal teams are involved at the start, as they are likely to be supporting the system from day one.

9. ITIL development and qualifications

Over the last two years, a number of overviews and briefings have been made available, and communications about process improvement and ITIL have been published in the IS internal newsletter, TeamTalk. A more comprehensive article was written at the start of the IT service management project.

The training that has taken place recently has been targeted at three areas:

- Everyone in IS has participated in a one day, ITIL simulation workshop.
- ITIL v3 Foundation training has been provided to the 32 key individuals, who are going to be Process Owners or Team Leaders, and are considered to be crucial to the success of the ITIL implementation.
- Eight individuals have also been identified to complete v3 Intermediate training in service offerings, service operation and service transition. One individual has already completed the Service Transition intermediate level from the Lifecycle Stream.

The training was provided by Pink Elephant. Nottingham Trent University is considering working with Pink Elephant to host ITIL training on site, and make these events open to other universities, as the availability of ITIL training in the Midlands appears to be very limited.
10. ITIL conclusions and recommendations

Nottingham Trent University would recommend ITIL as a service management framework based on:

- The benefits to the organisation of underpinning and refocussing the services provided by IT departments to the perspective of their customers, eliminating unnecessary duplication of effort and presenting a consistent high quality service offering to end users.
- The fact that it is a Global Best Practice that can be appropriately adapted to the needs of NTU.
- It is process based and gives team members clarity over the work they are expected to complete, why and how their work fits into the overall aim of the organisation, and the standards and levels of quality desired.
- It can be underpinned by toolsets to improve efficiency and quality of knowledge available, with automated workflows that will remove many of the time consuming and repetitive processes done today.
- IS colleagues have opportunities for training and development to develop personally and professionally.

11. ITIL lessons learned

- Support and buy in from Senior Management is important to the overall success of an ITIL implementation.
- Structure/organisation change management – understand what your structure should look like to the support the appropriate processes and roles – it is really about the people.
- Identify the right partners/suppliers – build trust and long term relationships.
- Communication is a key area at all stages.
- Don’t underestimate the internal effort in changing to a new service management tool.

12. Significant areas of experience

- Business relationship management
- Mature organisation change management to support ITIL based around service management – organisational chart available
- v2 to v3 maturity documentation
- Documentation on processes
- Metrics and reporting
- Strategic partnerships with suppliers
- Self help and content management
- Service management toolsets
- Continual Improvement – Dashboard Metrics for ITIL and Capability Plan.

13. Contact information

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### The Nottingham Trent University ITIL Process Maturity Matrix

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1 Subjective rather than objective assessment.