University of Reading

IT STRATEGY

The purpose of this document is to define the overall IT Strategy for the period 2016 to 2021

The IT Strategy will align with the wider University Strategy. It will be used as the criteria for setting priorities within the Strategic Planning Process.

This document defines a vision for IT based upon the consultations with Schools and Functions carried out during the Efficiency and Effectiveness Programme.

The IT Strategy includes an assessment of current gaps and future requirements around the four key areas of Services, People, Systems and Infrastructure. An indicative development map is included to outline key priorities for the next five years.

A set of five key principles for IT are defined. An explanation of these principles and how they will be applied in the context of impact to people, processes and technology is provided. Relevant metrics to measure the progress for each of these principles is also included.

VISION FOR IT

IT will provide an integrated set of services which meet the needs of students, staff, alumni and partners; providing flexibility for future innovation. Ultimately this will support the University as a global leader in research and higher education.

OUR MISSION

We will align with University strategy through stronger governance, working in close partnership with all Schools and Departments. We will apply robust design principles and deliver efficient and effective solutions.

Services

We will design our Services to meet the needs of all areas of the University, by understanding patterns of demand and required performance, measuring our success and addressing concerns. This will enable us to provide a portfolio of IT services that is valued by our customers.

People

Through our collective effort we will manage ourselves more effectively to ensure that we understand and deliver on our commitments.

Systems

Our aim is to implement solutions which support our global ambitions. Systems and support will be available when required in this rapidly changing environment.

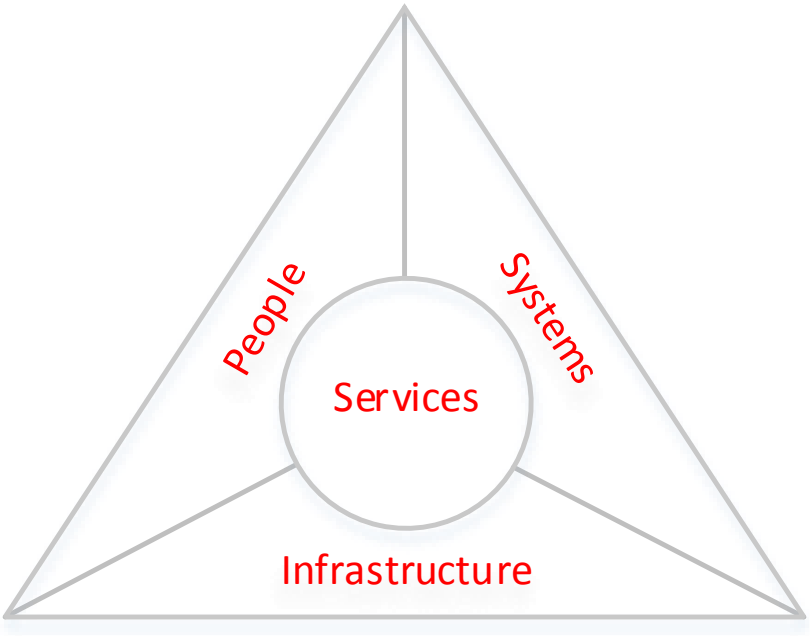
Infrastructure

We will adapt to changes and opportunities using stable, secure and resilient technology. Effective cloud usage and supplier management is key.

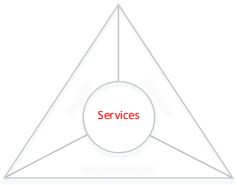
IT services and systems will be based on a shared, integrated architecture minimising maintenance and support overheads by the adoption of standardised technologies and approaches wherever feasible.

ALL ASPECTS OF IT ARE LINKED

A strategic focus requires systems that are less fragmented and easier to support, which in turn will improve the service.



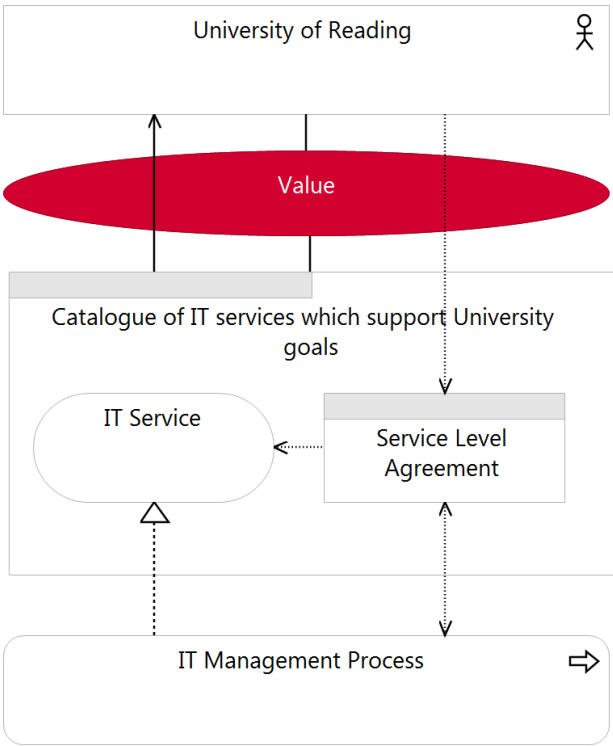
- Improved Services rely on improving People's capability, our Systems and our Infrastructure
- Improving our staff's capabilities will deliver improved Services, robust Systems and a more secure and stable Infrastructure
- Improving our Systems will increase availability and reliability
- Improved Infrastructure will free up time and money to focus on better services and strategic delivery



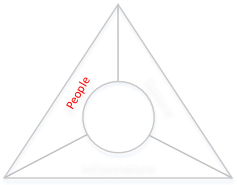
SERVICE

Using a digital first approach we will deliver valued services which are agile and aligned to the needs of the University.

- We will agree and publish an IT Service Catalogue and Service Level Agreements
- We aim to minimise internal cross-charging for standard services where levels of demand can be accurately predicted, and where resources are available to meet peaks in demand
- We will provide a single IT Service Desk, managed using contemporary, industry standard processes and practices
- We will provide the ability to deliver IT Systems which can be accessed remotely and allow users to self-serve to a greater extent where possible
- We will provide standard IT policies to guide IT developments and operations
- Through clear governance we will continue to develop a strategic Service Portfolio aiding the University in prioritising programmes and projects underpinned by IT developments
- We aim to develop a roadmap for the University's IT underpinned by clear architecture principles and standards



We will act as a trusted advisor to Schools and Departments in terms of delivering their current and future IT requirements.



PEOPLE

We will ensure that our staff have the right capabilities and tools to deliver value to the University.

- Individuals will be given appropriate training, certifications and accreditations
- Multi-skilled teams will be able to work on different tasks as priorities demand
- Strategy and governance will ensure that individuals are working on the right things at the right time
- We will understand changing requirements by fostering strong working relationships with all Schools and Services to maximise the value we create
- We will use management tools and processes based on IT industry best practice
- We will manage ourselves more effectively by defining, monitoring and evaluating our processes leading to efficiency and cost reduction
- Using an industry standard maturity model, we will progress to Level 3 maturity for all processes, and aim to be at Level 4 maturity for key processes within the next four years:

5 Optimised

Continually evolving and improving processes adopting new techniques and technologies

4 Quantitatively Managed

Metrics used to measure process performance allowing adjustments and adaptations to be made

3 Defined

Standard processes that are documented. Processes improved over time

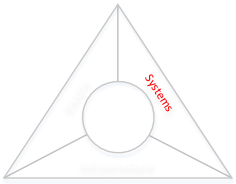
2 Managed

Most processes repeatable. Process discipline not rigorous

1 Initial

Processes unpredictable, poorly controlled and reactive

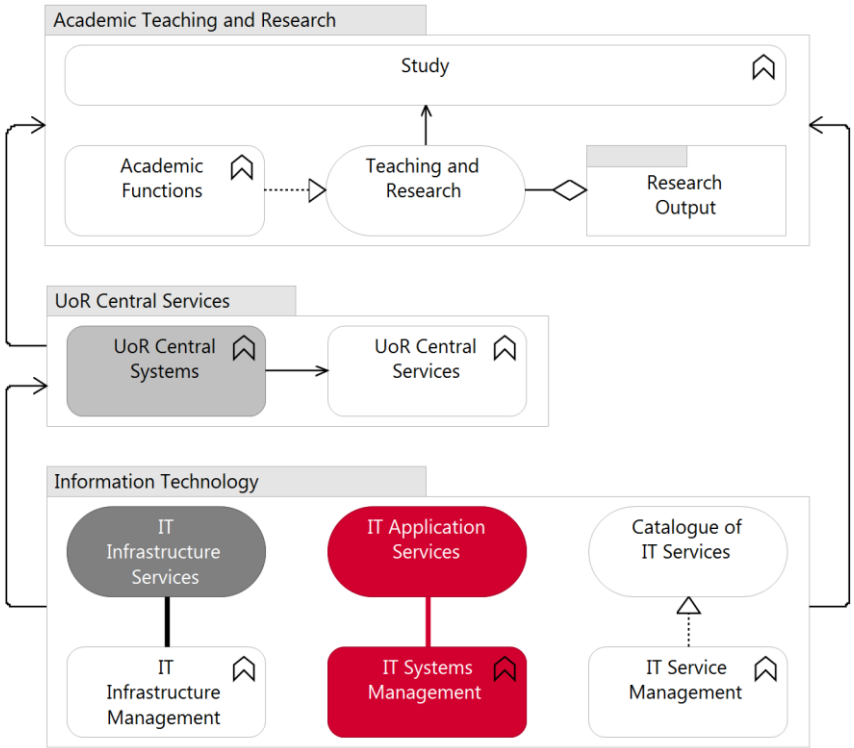
Source: Capability Maturity Model Integration (CMMI) Maturity Levels for Organisations



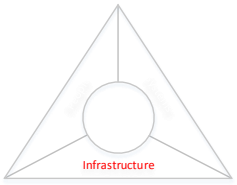
SYSTEMS

We will improve our agility by architecting service orientated systems and take a strategic approach to systems integration.

- Systems development decisions will be made by the University with the aim of maximising the benefit to the University as a whole. Decisions made from a University-wide perspective have greater long-term value than from any individual perspective. However, we will not preclude an individual's need for innovation or responsive change
- We will advise on application development priorities but priority decisions will be made by the University. We will ensure efficient and effective designs with clear benefits are established when identifying the importance of a particular change
- Applications will be independent of specific technology choices allowing them to operate on a variety of technology platforms. This will prevent technology and vendor dependency becoming a driver over user requirements. Middleware will be used to decouple applications from specific software solutions
- Cloud solutions will be considered before in house development. We will manage and integrate all cloud services on behalf of the University ensuring availability, capacity and security needs are met whilst taking advantages of economies of scale

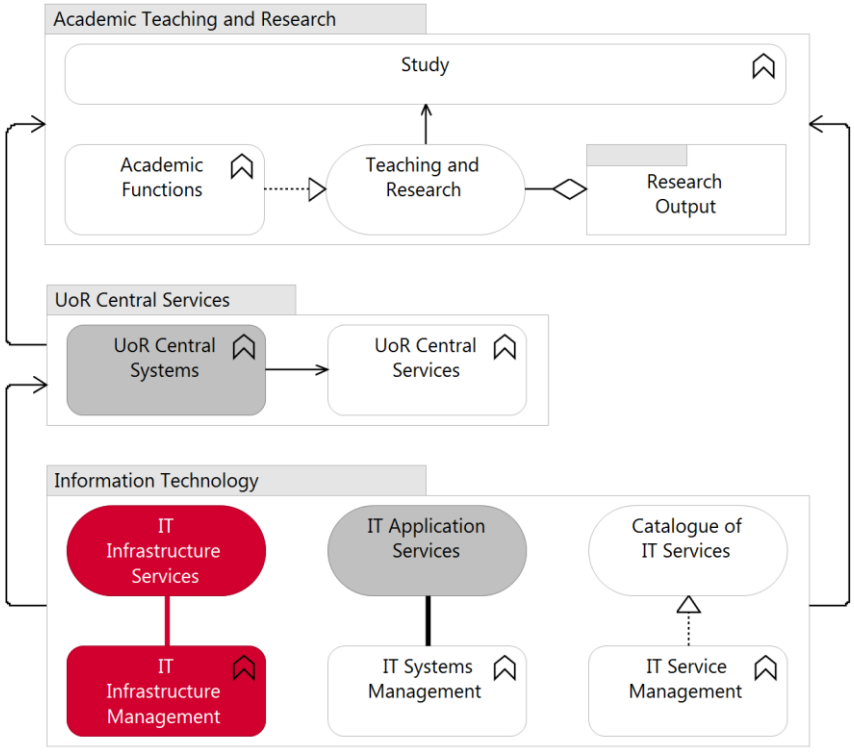


INFRASTRUCTURE



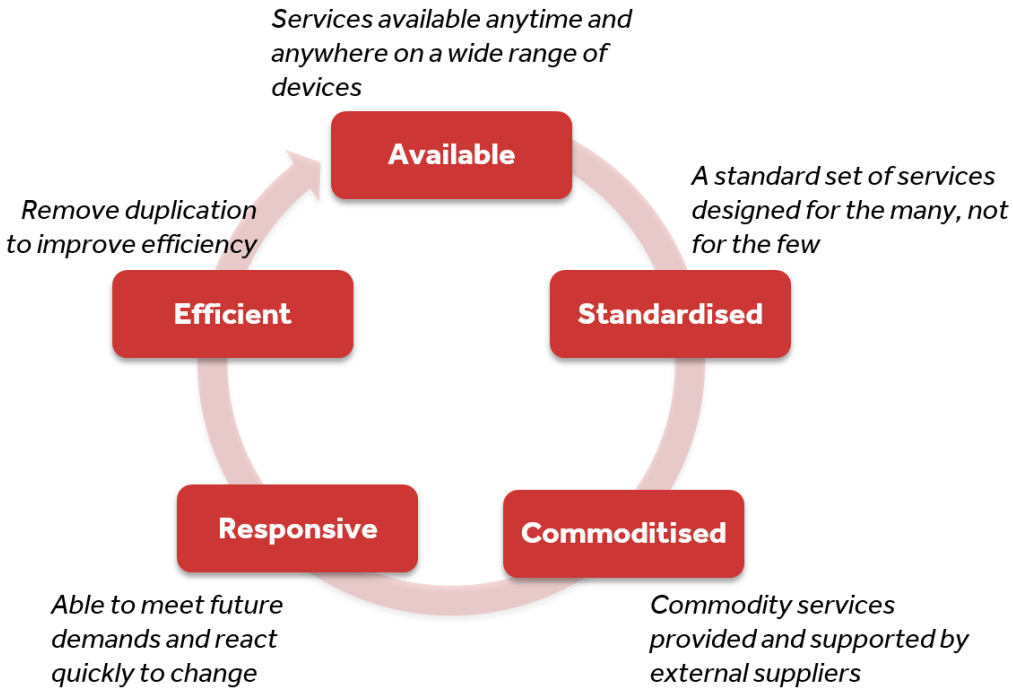
We will ensure a stable and available platform for our Services by designing Infrastructure which accommodates current and future needs.

- We will ensure that securely architected systems are integrated and accessible from a range of technologies and locations
- Where possible, technology will be supported and configured via automatic or remote processes which will free up staff time for more complex tasks
- We will increase the reliability of our infrastructure by taking a holistic approach to Asset Management and Configuration Management. This will give us a clear understanding of which service assets support which systems and where best to invest in resilience
- Infrastructure and hosting will be fit for purpose as we adopt an appropriate sourcing strategy ensuring efficient and effective solutions at reasonable costs and with clear benefits
- We will develop our architectural roadmap focusing on infrastructure that enable solutions to meet user-defined requirements for functionality



FIVE KEY PRINCIPLES FOR IT

The five Key Principles will form the backbone of the IT Strategy to deliver the improved services, capability, systems and infrastructure.



AVAILABLE

Services available when required on a range of devices which allow user flexibility.

Operating Model Dimension	Implications
People	• Staff and students educated on best practice for IT Security • Resourcing in multiple countries • Enable staff to take advantage of flexible working
Process	• Support Desk available for all IT Services, including user self-service where possible • Apply a "Follow-the-sun" model for international support • Development of remote access to secure systems (Agresso, Trent etc.)
Technology	• Capability to upgrade systems with minimum downtime • Ensure that security is robust (e.g. penetration testing is routine, better password policies etc.) • Mobile devices will be managed to improve security and flexible working • Provide more robust e-learning capabilities
Metrics	• Issue resolution in line with Service Level Agreements • System availability to be measured in accordance with SLAs

STANDARDISED

Services design based on common technology standards and agreed Architecture

Operating Model Dimension	Implications
People	We will • deliver services based on an agreed service catalogue • apply appropriate governance to ensure that the IT service remains fit for purpose • act as a trusted advisor for non-standard IT requirements • be open and transparent about the services provided and why
Process	• minimise cross charging within the University for standard services • maintain a service catalogue of standard services • reject non-standard service requests where there is no clear business case
Technology	• maintain and develop all aspects of the shared IT infrastructure and systems
Metrics	• reduction in use of non-standard hardware and devices • procurement savings in IT equipment purchases

COMMODITISED

Commodity services from external suppliers encouraged wherever these are cost-effective.

Operating Model Dimension	Implications
People	• Build effective working relationships with key suppliers • Encourage adoption of common systems and standards, challenging the use of non-standard alternatives
Process	• Ensure that support calls for third-parties are managed effectively • Reuse strategic systems for new requirements wherever possible, reducing the need for niche systems
Technology	• Extend use of standard software • Improve storage and flexibility of Research Data by using external hosting parties for data archiving • Increase use of cloud-based technologies where appropriate, including use of services such as Office 365
Metrics	• Reduced software licensing costs • Improved quality of technical support

RESPONSIVE

Able to react more quickly to change and respond to service developments.

Operating Model Dimension	Implications
People	• IT Business Partners to build strong relationships with Schools and departments to predict future needs • Multi-skilled IT teams, able to react flexibly to demand • Continual investment in IT staff training to keep skills up to date
Process	• Advanced planning in collaboration with Procurement to allow timely sourcing decisions to be made • Appropriate governance so that IT can evaluate and prioritise new service requests quickly • Ability to react immediately to high priority incidents
Technology	• Single, integrated, IT Architecture that will be used to support strategic design and procurement decisions • Improved systems integration via the Enterprise Service Bus – integration services built once and used many times
Metrics	• Internal customer satisfaction rating • Service Desk response times • Reuse of integration services

EFFICIENT

Remove duplication to improve efficiency.

Operating Model Dimension	Implications
People	• Staff working to clearly defined, measurable processes • Individuals multi-skilled and able to perform different roles to react to demand • Better productivity through use of service management & remote support tools
Process	• Measurable service management processes based on IT industry best practice
Technology	• Effective use of IT service management tools such as SCOM, Bomgar and SCCM to increase staff productivity
Metrics	• Quantified efficiency savings and process measurement