ENTERPRISE ARCHITECTURE WITH PLYMOUTH UNIVERSITY

Technology & Information Services

EA-STR-007- Data Centre Strategy

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Vision

Our vision is to deliver a modern, flexible and resilient data centre capability that will be secure, supportable and responsive to business need whilst being able to adapt to digital trends and allow exploitation of digital opportunities in everything we do.

Aim

The Data Centre Strategy aims to inform all other University strategies and technology roadmaps by answering the question "Where will our services be delivered from?"

Context

Plymouth University has suffered for many years from underinvestment in core infrastructure. Physical infrastructure such as the data centre itself is reaching the end of it's useful life and requires significant investment to make good. It also occupies a large footprint that, at least a portion of which could arguably be better utilised as teaching space on a relatively restricted city centre site. The active components contained within it are also reaching end of life, end of support or end of lease. The University does benefit from the use of a shared data centre at Plymouth Science Park, situated approximately 7Km from the main campus served by resilient network links, however the active components operated here suffer from the same issues present within the main location.

In order to facilitate a solid foundation for the University's IT services going forward we must examine how and what services are relevent for the future and define a data centre architecture to carry us forward in a way that is useful to the business, supportable and resilient. This will mean making better use of valuable on-site real estate and augmenting with the use of readily available and scalable external solutions; however, consideration must be given every step of the way to protecting our people and data from harm whilst streamlining and improving processes to at least match expectations from the wider business and other organisational units throughout the University as part of change and service improvement in this fast moving digital world.

Goals

We have identified the following five goals to inform the further development and delivery of IT services to support the overarching strategies and mission of Plymouth University.

Goal 1: Deliver flexible data centre capabilities

We will examine the services being delivered and select the most appropriate location, based on sound business judgement, from which to do so. To achieve this we will:

- Rationalise active data centre or networking components.
- Negotiate realistic agreements with mainstream hosting providers to deliver a flexible and just-in-time private/public cloud facility which will permit delivery of servers, storage and other requirements using a Software as a Service (SaaS), Platform as a Service (PaaS) or Infrastructure as a Service (IaaS) model in accordance with the University Provision of Commodity IT Policy (EA-POL-008).
- Engage with suppliers to facilitate continued/alternate use of rackspace in an off site secure facility to hold our active components.

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Goal 2: Ensure data is secure

Information security is of prime concern for all organisations these days, Plymouth University is no different. We will ensure that this remains the case throughout data centre lifecycles. To achieve this we will:

- Ensure that any cloud facilities used are CESG Business Impact Level (BIL) Accredited and ISO27001 certified in accordance with the University Hosting Policy (EA-POL-014) and Data Classification Policy.
- Ensure that any 3rd party data centre facility used for the provision of rackspace is ISO27001 certified in accordance with the University Hosting Policy (EA-POL-014)
- Ensure suitable physical access controls are in place in all facilities used.
- Drive towards ISO27001 certification for our own on premise and shared data centre facilities.

Goal 3: Provide services which are useful to the business

By improving our data centre capabilities and utilising modern equipment and software to support our active components we will be able to provide meaningful services to the University and improve efficiency. To achieve this we will:

- Invest in contemporary systems and services and enable functionality to permit streamlining of some business processes.
- Invest in orchestration layers within the technologies available to enable more comprehensive, simple, effective and expedient self service models to be adopted.
- Allow transparent costing models to our customers to enable easier budgeting cycles for customers, Technology and Information Services and the University as a whole.

Goal 4: Ensure all services are supportable and maintainable

Irrespective of equipment location it needs to be maintained and serviced on a regular basis. When discussing maintenance windows with 3rd party or cloud providers the University will have less control over schedules. In order for our services to continue to be effectice and meaningful this must happen in a way that does not interfere with University activities. To achieve this we will:

- Negotiate effective maintenance windows with the University and enforce them.
- Negotiate consistent Service Level Agreements with Suppliers around maintenance windows and other factors affecting service delivery and support.
- Develop a sensible and inclusive communications plan for such information.

Goal 5: Maximise efficiency and provide added value to the University

By undertaking this radical shift in the way services are delivered there are some savings to be made and additional benefits to the University which may be gained. In order to maximise and achieve these we will, by using sound business judgement which includes an assessment of value for money:

- Where consistent with goals 1 to 4, deliver a reduced on-campus footprint of IT infrastructure and make valuable space available for other uses.
- Identify skills gaps within support staff and retrain to enhance the supportability of systems.
- Reinvest in staff skills to continue development of change for other University initiatives and requirements.

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Measures of Success

Goal	Title	Measure
1	Deliver flexible data centre capabilities	Adopt a model for data centre provision which will allow a flexible and nimble tiered approach for service delivery in this area. This model, by default, will make use of predominantly cloud infrastacture, allowing expedient growth of service to meet business need whilst maintaining a private facility to allow added security of information.
2	Ensure data is secure	All external facilities in use will be accredited to CESG BIL levels and ISO27001. Internal facilities will drive to be ISO27001 compliant.
3	Provide services which are useful to the business	Customers of our services will benefit from a more flexible approach to data centre provision and transparent costing models.
4	Ensure all services are supportable and maintainable	Systems and services will be maintained in a way to minimise downtime. All maintenance windows will be sensible, agreed with the business and supported by service level agreements.
5	Maximise efficiency and provide added value to the University	Significant decrease in on-site infrastructure will deliver valuable space to the University and reduce the cost to run it. Highly trained staff will deliver an increased response in service delivery and service change initiatives.

Translating the strategy through the University

 Our strategy is translated and delivered from high-level ambitions to local level actions throughout the University and with our partners. It is a process that connects strategy to people, offering sufficient freedom and flexibility to capture creativity and sustain enterprising behaviours.

Guided by our values and leadership principles, Plymouth University's Strategy 2020 will help deliver strong performance and sustainable outcomes that result in reputational gain as we deliver on our mission of 'Advancing knowledge and transforming lives through education and research'.

Strategy 2020 → Supporting Strategies → Key Performance Indicators → Action and forecasts → Individual goals

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