

# Application Rationalisation



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## Current environment

The current UQ software portfolio contains many applications that duplicate functionality, are only used by a small subset of the University, lack ownership or no longer have a convincing reason to exist.

The causes of this include pre-IT-centralisation decisions, siloed technology purchasing, and the historical lack of IT category management or enterprise architecture.

An unmanaged enterprise application portfolio:

- increases direct costs such as licensing and support,
- increases indirect costs such as training and development,
- conceals 'shelf ware' applications that are being paid for but not used,
- encourages unnecessary, short-term software purchases by obscuring existing University software assets,
- compromises the effective capture and use of critical data,
- introduces cyber security risks through added complexity and variability of technical management,
- harms staff productivity and satisfaction through 'interface friction', and
- impairs enterprise agility and responsiveness due to a lack of consistent architecture and technical 'fit'.

It is not about the number of applications. It is about improving the cost-to-benefit ratio of the applications portfolio<sup>1</sup>.

## Application rationalisation

Complexity is risk and cost.

Application rationalisation involves streamlining an application portfolio with the goal of improving efficiency, reducing complexity, and lowering total cost of ownership (TCO). Application rationalisation sets the basis for other technology cost-saving endeavours, including:

- software licence optimisation
- application retirement
- compute optimisation
- project rationalisation
- data storage optimisation
- retiring outdated and low-value applications
- eliminating redundant systems or infrastructure
- standardising common technology platforms.

The concepts and practices of application rationalisation can be extended into service rationalisation; recognising the non-application services provided by IT and including the related rationalisation of infrastructure that naturally follows application rationalisation.

The maintenance, support and operations of the existing application portfolio represents a large part of the University's technology costs. While application rationalisation is often mentioned as one of the top technology cost optimisation ideas, it is often dismissed due to the need for time, money and buy-in from the broader organisation. **Successful application rationalisation requires application users to change their processes and practices equally as much as it requires commercial and legal negotiation, technical migration and commissioning.**

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<sup>1</sup> Note cost and value include concepts such as technical debt and responsiveness to demand.

Cost is not the only benefit of applications rationalisation. A streamlined applications portfolio consisting of a core suite of systems that integrate well together in terms of workflow, and that works 'out of the box' has many benefits:

- **Agility:** Decision making would be improved with less variables and unknowns to consider.
- **Staff and student productivity and engagement:** The current environment has a high degree of 'interface friction' and requires the UQ community to fill in gaps and variances between systems by downloading and uploading data between systems, manual re-entry of data and having to find bespoke tools and methods to be productive.
- **Risk:** A smaller applications portfolio would reduce UQ's cyber-attack surface, help protect UQ data by establishing and enforcing single 'source of truth' systems and reducing the potential for data leakage and loss from the manual handling and manipulation of sensitive data such as student or financial information.

## Implementation

### 1. Build an inventory of applications

The capture of the actual UQ applications portfolio necessarily needs to include applications purchased and managed outside of recognised University technology units. This inventory would include:

- application name, vendor and modules
- key stakeholders that oversee the system
- capabilities supported (measured against the CAUDIT Enterprise Architecture Business Reference Models for Higher Education<sup>2</sup>)
- user groups and numbers
- 2019 cost (including indirect costs where available).

### 2. Assess and rate the value of each application

- **Functional fit against CAUDIT Enterprise Architecture:** The number of capabilities and processes supported.
- **Technical fit against UQ's technology standards, including;**
  - Access and Privileges Management Framework
  - Application Integration Security Standard
  - Application Management Standard
  - Application Security Standard
  - Authentication Framework
  - Cyber Security Risk Management Procedure
  - Data Security Controls Standard
  - Data Governance Standard
  - Information Governance and Management Framework
  - Patch Management Procedure
  - Secure Software Development Framework
  - Software Vulnerability Management Framework

<sup>2</sup> <https://www.caudit.edu.au/EA-Framework>

### 3. Target state definition

Based upon the cost and value ratings of applications, categorise each application<sup>3</sup> as:

- Extend (high functional and technical fit): Keep application and look for opportunities to further invest when investment decisions are made.
- Upgrade (high functional, low technical fit): Modernise the application, aligning it with the future state architecture.
- Migrate (high functional fit, but duplicate and/or high cost): Migrate users and data to higher-rated or lower-cost platform. Standardise across the University.
- Retire (low functional and technical fit, low users, high risk).

### 4. Delivery

The delivery of the application rationalisation program should be estimated and designed following the previous three steps. It is expected that the rationalisation of the application portfolio would be a multi-year endeavour. The defined target state would also inform 'business as usual' activities of operational staff and decisions made by bodies such as the Project Approval Board and Capital Management Group.

Application rationalisation would need to occur in parallel with improvements to how all stakeholders manage the application portfolio and supporting infrastructure to ensure that the disparate and inflexible portfolio does not return. A Technical Leadership Framework will help guide new applications through the design and implementation phases, ensuring that each application has good technical fit and aligns with the Enterprise IT Strategy.

### Reference material

1. FromHereOn (2016) Enterprise Architecture Business Reference Models for Higher Education. Retrieved from <https://www.caudit.edu.au/EA-Framework> 20 July 2020
2. Swanton, B. Kyte, A. Norton, D. (2019) Apply These Best Practices for Application Consolidation. Gartner Inc.
3. Van Der Zijden, S. Hotle, M. Roberts, J. (2017) Eight Steps to Revitalize Your IT Cost Optimization Initiative With Application Rationalization. Gartner Inc.
4. Van Der Zijden, S. Hotle, M. (2019) Taking on Application Rationalization's 'Wicked Problem' of Getting Business Engagement. Gartner Inc.

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<sup>3</sup> It is recognised that some applications are so need-specific or inexpensive that they will fall outside these categories and the application rationalisation process.

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