Goldsmiths
UNIVERSITY OF LONDON

Business Systems Strategic Plan

June 2018

Executive Summary

- Higher Education Business Systems portfolios have expanded in recent years and will continue to grow, focussing on research and student recruitment, retention and analytics.
- The Goldsmiths' Business Systems Portfolio is similar to many in the sector but has lacked a holistic approach to development, integration and management and has a number of gaps. This Strategic Plan, which has been developed via a consultative approach with senior stakeholders, aims to address this.
- The Strategic Plan defines a Goldsmiths' Business System and sets out a series of principles which will underpin the approach to the management of the portfolio.
- The Strategic Plan outlines a set of roles and responsibilities both in IT&IS and Professional and Academic Services directorates.
- The Plan also defines a framework to provide an approach to governance and management of the portfolio, including: a tiered approach to service management; ensuring performance; financial and contract management; technology platforms and; operational delivery and feedback.
- Ongoing governance of the portfolio will be managed by a Business Service Owners Group.
- Although not directly covered by the plan, it is recognised that the Business Systems portfolio must support and align with the University's strategic direction for data management, reporting and management information.
- A high level development Roadmap has been produced, which should be considered to be dynamic and flexible in response to the changing Higher Education, University and technological environments.
- Functionality gaps and overlaps will be analysed and boundary challenges considered by the Business Service Owners Group.
- It is the intention for the plan to remain flexible and agile in support of the Goldsmiths Strategy 2018-2023 but there is much work to be done and resource constraints may prevent quick progress.

Introduction & Purpose

Higher Education Business Systems

The significant changes within UK higher education in recent years have been reflected in the nature and breadth of the business systems (or enterprise applications) portfolio available to institutions across the sector. Traditionally, this has been a mix of the type of systems found in most corporate enterprises (HR, Finance, etc), plus systems running the administrative and operational activities related to Higher Education. An emphasis on the student experience has seen a growth in academic delivery and student facing solutions and witnessed significant investment across the sector in existing systems to enhance services and improve processes and access. The portfolio continues to grow, as attention is turned to research, student recruitment and retention, and learning analytics, as well as meeting significant government data requirements.

It is clear that the business system portfolio will continue to grow for some time, as universities streamline their processes and seek to gain the competitive edge across a range of activities. The emergence, too, of increased collaboration, across both subject and geographical boundaries, will also drive increased expectations of applications - the reduction of barriers, the introduction of online collaborative tools, the greater delivery of services to mobile devices and the seamless movement of data.

Goldsmiths' Business Systems and the Strategic Plan

Goldsmiths' portfolio of business systems is similar to many in the sector, although not as extensive as some in the areas of learning and teaching and research administration. Almost half of the portfolio are known sector leaders or widely used (see table in Appendix A). However, some of these are legacy, have suffered inertia with respect to being kept up to date with the latest versions, are heavily customised or are struggling to support Goldsmiths' processes or respond to external requirements. As a small university Goldsmith's must operate many of the same systems as larger institutions but does not benefit from the economies of scale enjoyed elsewhere in terms of resource (both within IT&IS or the professional and academic services departments) and must develop smart approaches to product selection, process and system operation and supplier engagement. Hitherto there has been a limited holistic approach to the development, integration and management of the Business Systems portfolio and this Strategic Plan aims to address this.

Definition of a Business System

For the purpose of bounding the scope of this plan, a Goldsmiths' Business System is defined as:

An IT system which stores, manipulates, provides access to and reports on University data; supports operational, administrative or academic processes; and is used by a significant number of staff, students, or external stakeholders.

See Appendix A for current portfolio.

Aims of the Strategic Plan

- Outline the fundamental principles and characteristics underpinning the management of the portfolio;

- Identify the key issues affecting the operation and function of the services;

- Develop partnered approaches to support and supplier engagement, governance (system and data ownership and management) and financial management; and

- Shape a (business-led) programme of work for the years ahead, balanced with operational requirements.
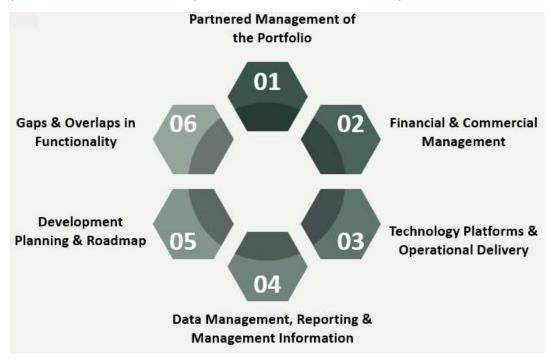
Business Systems Principles

The operation and management of the portfolio will be underpinned by a set of principles which govern and guide Goldsmiths' approach to selection, management and retirement of its business systems.

1. **Governed and managed holistically but not identically**: viewed as enterprise in nature, irrespective of how supported and delivered, but managed according to strategic categorisation.

2. **Business-led and owned**: driven by Goldsmiths' strategic objectives and requirements, for maximum institutional benefit and underpinned by partnerships between IT&IS, Professional and Academic Services and academic departments.

3. **Compliant with legal and regulatory frameworks**: meeting legal and regulatory requirements and data needs.

4. **Single source of funding**: future funding planned via the IT capital budget, stewarded on behalf of the College by the CIO, to enable transparent resource allocation, continual development and training to derive better value and seek greater returns from investment.

5. **Not duplicated or replicated**: single systems delivering across the institution, eliminating "shadow" systems and multiple instances of data.

6. **Lean and agile**: developed with minimal customisations and bespoke features.

7. **Fit for purpose, feature rich, responsive and easy to use**: irrespective of location, device or platform and with appropriate initial and ongoing training provided.

8. **Delivered effectively**: using sector-strong suppliers, via meaningful partnerships and relationships, utilising a range of service delivery models to ensure business continuity.

9. **Data considered as an asset:** data is collected once, used across the institution and re-purposed where appropriate – at all times valid, consistent, secure and compliant.

10. **Innovative where required**: given market consideration, built on standards, exploiting modern IT architecture and risk-managed.

11. **Providing timely management information:** delivered through consistent and controlled System integration and delivery tools.

Portfolio Management Framework

The activities required for the future strategic and management of the portfolio have been brought together into a management framework consisting of a number of themes and objectives:

Theme	Objectives	
Partnered Management of the Portfolio	1	Agree roles and responsibilities between IT&IS and professional and academic service directorates
	2	Develop a tiered approach to service management
Financial & Commercial Management	3	Develop both strategic and operational approaches to vendor management
	4	Rationalise financial and contract management
Technology Platforms & Operational Delivery	5	Select technology and vendor solutions appropriate to business requirements and environment
	6	Ensure appropriate performance of the systems
	7	Develop a partnered approach to service definition and operation
	8	Ensure operational feedback is gathered and acted upon
Data Management, Reporting & Management Information	9	Ensure Business Systems' alignment with data management, management information and reporting requirements
Development Planning & Roadmap	10	Develop and maintain a high level Roadmap for the Business Systems portfolio
Gaps & Overlaps in Functionality	11	Review the functionality and capability of the systems within the portfolio to identify gaps and overlaps

Theme 1:
Partnered Management of the Portfolio

Objective 1: Agree roles and responsibilities between IT&IS and professional and academic service directorates

To ensure a common understanding with regard to management, support and operations and in alignment with best practice service management guidelines, roles and responsibilities across both IT&IS and the business units have been defined for each service and will be reviewed regularly. These roles include:

Business Service Owner (BSO): a service director or senior manager whose core business processes are delivered by the IT service/system and who stewards the data assets*.*

NB for some systems, the data held and processes supported may lie outside of the immediate area of professional responsibility of the main Business Service Owner. An example of this is the student records system which supports operations in timetabling, planning and legal services. In such cases the Business Service Owner will assume system ownership responsibility across this activity.

Service Owner (SO): a senior manager within IT&IS who has overall management responsibility for delivering the IT service

Business Service Operations Manager (BSOM): team leader or support staff for a business function where the IT service is critical to delivering their related business outcomes. Typically thought of as the person with the most working knowledge of the IT service.

Service Operations Manager (SOM): team leader or support staff for an IT&IS service delivery team. Typically thought of as the person with the most technical knowledge regarding the IT service.

The role holders will work in partnership to ensure the best value and service outcomes for the individual business system and holistically across the portfolio.

Objective 2: Develop a tiered approach to service management

Pragmatically it is not possible or required to manage each of the systems in the portfolio in the same manner. Based on a number of factors such as their role in managing "gold" data, breadth of usage and operational importance, eight systems have been identified that are considered to be of strategic importance to the University:

• Student Records System
• Customer Relationship Management (CRM) System
• Library System
• Timetabling System
• Development & Alumni Management System
• Virtual Learning Environment
• University Website
• HR and Staff Recruitment System

A set of guidelines for the approach to management of these systems has been created, covering technical management, business/IT&IS engagement and supplier management. These are outlined in more detail Appendix B.

IT&IS will review the management of these systems regularly to ensure that guidelines are being followed and report to the Business Service Owners Group. Business Systems falling outside of the strategic category will also be managed via a minimum set of similar guidelines but less formally, as appropriate.

Theme 2:
Financial & Commercial Management

Objective 3: Develop a strategic and operational approach to vendor management

The level of supplier engagement for many of the Goldsmiths systems is considered low and will be increased and strategically developed. For business-critical strategic systems, the CIO and Director(s) of Professional/Academic Service departments will form partnered, personal relationships with senior supplier contacts to develop strategic relationships.

The Business Service Owner and Service Owner will work together to define the ground rules for more operational vendor engagements, recognising that to be effective, performance management should be undertaken at least quarterly for strategic systems, where there will be higher expectations. Service failures will be appropriately addressed and compensated though financial service credits or other remedies.

Goldsmiths will also increase engagement within the sector and ensure attendance from both within IT&IS and the wider Professional and Academic Services at user groups and product roadmap events.

Objective 4: Rationalise financial and contract management

The current variety of budgetary arrangements, historically split between IT&IS and Professional and Academic Services departments will be reviewed with a view to consolidating spend into the IT&IS budget over time where appropriate.

This will ensure that a more holistic view of Business Systems finances can be taken. Similarly, system contracts will be held centrally and renegotiated regularly, with strategic system contracts being taken over 3-5 years and the contract lifecycle formally managed to update the contract with service, policy, legal and regulatory changes.

Theme 3: Technology Platforms & Operational Delivery

Objective 5: Select technology and vendor solutions appropriate to business requirements and environment

The current portfolio of Business Systems is delivered via a range of technology platforms, databases and support mechanisms, both on premise and in the cloud. Although the strategic direction of travel is towards cloud-delivered platforms based on controlled technical standards, it is recognised that this is not always appropriate, or available for some applications.

IT&IS will maintain a stable infrastructure platform for developing the target technology and roadmap designs that enables both application and data components, addressing stakeholder concerns regarding the type of platform being used, whether on premise, private or public cloud. Strategic consideration will be given on the suitability of vendor for delivering the most appropriate platform (Microsoft, Google, Amazon etc.) and support mechanism.

Whilst observing the principle of minimal customisations and bespoke developments to core products, it is recognised that some development work will be required to meet the changing needs and strategic objectives of the University, along with statutory obligations and government legislation. IT&IS will create a formal framework for managing these developments, recording new technical functionality and ensuring changes are embedded in testing and support processes.

Objective 6: Ensure appropriate performance of the systems

The University's corporate risk that its IT infrastructure and systems do not meet College requirements can be split into two performance-related elements: Fit for Operation and Fit for Purpose.

Fit for Operation risk is mitigated by ensuring that the supporting IT infrastructure is stable, resilient and available. IT&IS uses an annual, semi-formal Infrastructure Analysis process to assign infrastructure resilience risk scores to each of its systems, with a score of 45/90 or less being considered an acceptable level of risk.

Currently, 6 Business Systems score in the higher risk category, with 6 systems yet to be analysed. Of the high risk, 5 are strategic systems: Library, HR and Staff Recruitment (excluding Payroll), CRM and Timetabling. These will be prioritised in terms of reducing this operational risk and progress reported.

An initial analysis of Fit for Purpose of our Business Systems has also been conducted by surveying business service owners. The results indicated 9 of our Business Systems are not considered fit for purpose. These include 5 strategic Business Systems: CRM, Timetabling, Student Records, Library, and the HR & Staff Recruitment systems, for which a focus on development roadmaps and service improvement plans will be prioritised with the aim of ensuring that all of the University's systems are considered fit for purpose or have replacement plans, within three years.

Objective 7: Develop a partnered approach to service definition and operation

Service Definition Documents will be maintained for all services and agreed by the Business Service Owner and Service Owner. These will clearly define the service, ownership, escalation processes, core hours of support and operation, scheduled maintenance arrangements, support contracts, etc.

Regular operational reports, covering timetabled, near-future development and operational activity, performance and incidents, problems and changes, and issues and risks will be produced by the Service Owner for discussion with the Business Service Owner.

Objective 8: Ensure operational feedback is gathered and acted upon

User feedback will be gathered either through Business Service Owners or Business Service Operations Managers, the IT&IS Business Relationship Managers or through audit and review recommendations. Enhanced features will be submitted as service development requests that will be progressed in conjunction with the relevant Service Owner.

The following will be maintained to support interactions with key stakeholders:

- IT Development Group – planning group consisting of IT staff covering the areas of Service Strategy and Planning as well as Service Operations.
- Regular academic department meetings to assist in identifying required/ desired enhancements.
- Regular liaison meetings with other services such as Student Administration and with the teams supporting business activities such as HR, Finance and Payroll
- The Student Union is consulted periodically about proposed changes in services for students.

Theme 4:
Data Management, Reporting &
Management Information

Objective 9: Ensure Business Systems alignment with data management, management information and reporting requirements

Goldsmiths is maturing the institutional approach to data management, management information and business intelligence and as such, the detail of the strategic direction for these areas is not covered in this Strategic Plan.

However, given the role of the strategic systems in stewarding of data for compliance, reporting and data analytics purposes, it is crucial that systems align with these plans in terms of their tactical and strategic reporting, data management and integration capabilities.

Some "gold" source data systems (in particular the Student Records system) are heavily customised, which will inhibit agility regarding compliance reporting in the future. This must be robustly challenged in future replacement or redevelopment plans across the portfolio.

A move towards a common data architecture will be made, together with a consolidation of reporting mechanisms. Goldsmiths has recently invested significantly in the Boomi Integration Platform as a Service (IPaaS) system. This will play a strategic role in the management of data integration in the future and will be mandated for all future integrations, together with a phased approach to its use for existing data feeds.

Theme 5: Development Planning & Roadmap

Objective 10: Develop and maintain a high level Roadmap for the portfolio

A high level Roadmap for the portfolio has been developed as input to the Strategic Plan (see Appendix C), which will be maintained and developed going forwards. This highlights the following:

- a large amount of development and replacement activity is planned for the earlier years of the plan which will influence activity in the later years (3 systems are in the planning/procurement phase and a further 3 systems are in implementation/early life support).
- A significant number of systems require significant fixes or upgrades to improve fit for purpose.

The plan should be considered flexible and dynamic and will require regular dialogue and review by the Business Service Owners Group, in response to Higher Education, University, and technological environments, to ensure success.

Theme 6:
Gaps and Overlaps in Functionality

Objective 11: Review the functionality and capability of the systems within the portfolio to identify Gaps and Overlaps

The Strategic Plan recognises that gaps in the portfolio currently exist and that further requirements may emerge over time.   It is also recognised that several Business Systems have elements of the same or similar functionality within them, but may require development to bring into service for specific functions.

As a pragmatic approach, IT&IS will lead, in partnership with Business Service Owners and Business Service Operations Managers, a functionality and business objectives review across all systems.

Where multiple options are identified or challenges defining boundaries between the departments and requirements exist, the Business Service Owners Group may take a view on outcomes.

Ongoing Management and Governance

The Business Systems Strategic Planning Group will transition into the Business Service Owners Group, with similar membership.

This will provide ongoing holistic governance of the portfolio and a forum for future planning considerations.

Summary

The Business Systems Strategic Plan addresses prior gaps in shared understanding and awareness of the management of the Goldsmiths' Business Systems portfolio and provides a framework and set of guidelines within which to move forwards.

Its intention is to remain flexible and agile in support of the Goldsmiths Strategy 2018-2023, in particular *Theme 7: Building an efficient and effective infrastructure* and in response to the external environment.

The systems assessment work already undertaken and the developing Roadmap provide a good base from which to proceed, ensuring collaborative prioritisation, alignment with the Capital Plan and strong governance processes. However, it is acknowledged that resource constraints may prevent portfolio development from progressing as quickly as ideally required.

There is still much collective work to be done and the next steps include creation and engagement of the Business Service Owners Group, dissemination of the Plan, embedding of new approaches within the key teams, alignment of new development requirements with resource availability and a more detailed iteration of the portfolio Roadmap.

Appendices

Appendix A – Current Business Systems Portfolio

Academic Systems	Corporate Systems
Student Records System Unit-E	HR & Staff Recruitment System Agresso & Hireserve
Customer Relationship Management System Microsoft Dynamics	University Website / Content Management System Terminal 4 CMS
Library System ExLibris Aleph	University Intranet SharePoint
Staff and Student Timetabling Scientia	Finance System Agresso
Virtual Learning Environment Moodle	Payroll System Agresso
Student App ExLibris CampusM	Development & Alumni Management System Raisers Edge
Careers System Target Connect	Access Management System Microtrak
Lecture Capture (new)	Access Management System CCure
Accommodation System Occam	Research Support System GRO
Student Engagement System (new)	Alumni E-Mentoring System Goldsmiths Connect
	Facilities & Asset Management System MiCad
	Procurement System Agresso

Appendix B – Strategic Systems Management Guidelines

Technical management

Less than 45/90 score on resilience risk in Infrastructure Analysis (completed annually)
Regular backup/restore testing
System monitored by current tools and critical incident processes in place
System security-scanned once every two years
Upgrade plans in place to ensure system is within less than 2 release points
All data integrations using integration platform where possible
Database and system specifications based on Microsoft operating systems and databases
Prioritised for cloud-based hosting
Service operation documentation reviewed annually

Business/IT&IS engagement

Business/IT service roles and responsibilities agreed and documented
Agreed annual operational plan
Regular joint reviews of service desk queries and incidents
Development plans in place
All changes and developments planned and reviewed by BSO and BSOM at change advisory boards
Biennial (table top) disaster recovery exercises conducted between IT&IS and BSO team

Supplier engagement

Regular Senior Level supplier engagement (at least annually)
Quarterly supplier and SLA service reviews
Business and IT&IS annual joint attendance at user group meetings
Regular engagement with other sector clients
Longer term contracts in place (suggest 3 to 5 years)

Appendix C – Portfolio Roadmap

System	Category	1st Year of Contract	Contract Length	Contract / Licence Renewal Date	Maintenance Renewal Date	17/18	18/19	19/20	20/21	21/22	22/23
Academic Systems											
Student Record System - Unit-E	S	2003	3 Years	2021	Aug-19	Develop & Enhance			Maintain	Replacement & Retire ?	
Customer Relationship Management System - Microsoft Dynamics	S	TBC	TBC	TBC	TBC	Develop & Enhance		Maintain			
Library System - Aleph	S	Unkown	Annual	2018	Apr-18	Replacement & Retire					
Staff and Student Timetabling - Scientia	S	TBC	TBC	TBC	Jul-18	Develop & Enhance		Maintain	Review		
Virtual Learning Environment - Moodle	S	2011	Annual	2018	Jan-19	Develop & Enhance		Maintain			
Student App - ExLibris		2017	3 Years	2020	Nov-18	Implement	Develop & Enhance			Maintain	
Careers System - Target Connect		2016	Annual	2018	Jul-18	Develop & Enhance		Review			
Lecture Capture		TBC	TBC	TBC	TBC		Implement	Maintain			
Accommodation System - Occam		2015	Annual	2018	May-18	Maintain	Upgrade	Maintain			
Student Engagement System		2018					Implement				
Corporate Systems											
HR & Staff Recruitment System - Agresso & Hireserve	S	2015	25 Years	2039	Aug-18	Maintain	Upgrade	Develop & Enhance	Maintain		Upgrade
University Website / Content Management System - Terminal 4 CMS	S	TBC	TBC	TBC	Oct-18	Maintain		Upgrade	Maintain		Review
University Intranet - Sharepoint		TBC	TBC	TBC	TBC	Maintain		Review			
Finance System - Agresso		2015	25 Years	2039	Aug-18	Maintain	Upgrade	Develop & Enhance	Maintain		Upgrade
Payroll System - Agresso		2015	25 Years	2039	Aug-18	Fix	Upgrade	Maintain			Upgrade
Development & Alumni Management System - Raisers Edge	S	2009	Annual	Flexible	Nov-18	Develop & Enhance	Maintain				
Access Management System - Microtrak		TBC	TBC	TBC	Not in Support	Maintain	Retire				
Access Management System - CCure		TBC	TBC	TBC	TBC	Implement		Maintain			
Research Support System - GRO		2017	Annual	2018	Aug-18	Maintain			Review		
Alumni E-Mentoring System - Goldsmiths Connect		2015	3 Years	2018	Jan-18	Maintain				Review	
Facilities & Asset Management System - MICad		2016	10 Years	2026	Sep-18	Implement		Maintain			
Procurement System - Agresso		2015	25 Years	2039	Aug-18	Maintain	Upgrade	Maintain			Upgrade