

IT Strategy and Architecture

Application and Integration Strategy

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1 Executive Summary

The British Council has set a significant and very ambitious growth target to become a £1 billion (£969 million) business by the end of 2015, while at the same time make savings and cuts of £44 million annually by 2015 on top of the £26 million in 2011–12. This will include further headcount reductions both in the UK and overseas. We will implement an ambitious programme to further increase efficiency and to re-shape our overseas network (as outlined by the Corporate Plan 2012 – 2015). We need to achieve more with less, seek out efficiencies and transition to a more cost-effective operating model.

In order to support this level of growth and efficiency a number of strategic programmes have been initiated. These programmes are independently delivering key elements of our vision, e.g. ESUP, CRM, Digital and Global Finance Change Programme. It is therefore essential that we now assess these against the British Council Vision and align to the IT direction.

The Application and Integration Strategy will provide the IT direction in order to deliver the systems to achieve The British Council Vision.

An Application and Integration Strategy is essential to provide direction for the delivery of:

- Standardised and simplified application estate to cost effectively support current and future business operating models.
- Provide our businesses with the platforms they require to support our revenue generation plans.
- Reduce costs and effort for project delivery by providing a defined target IT landscape.
- Provide criteria to enable and support a clear IT and project decisions.
- Enable the understanding of strategic versus tactical project deliverables.
- With a strategy in place there is no need for long studies, Proof of Concepts and Tender Exercise.
- Provide the flexibility to introduce new capabilities, technologies and sourcing options to support the changing and adapting needs of the business.
- Provide the ability to retire capabilities easily with minimum impact to business and IT operations.
- Help achieve the business strategy and deliver business outcomes.

2 Document Structure

Section 3 **Business Context** outlines the key drivers for the strategy.

The Application and Integration Strategy itself is presented in Section 4 **Strategic Response**.

The *IT Strategy 2015 and Beyond* identifies 6 key themes that influence our strategic thinking:

- Exceptional customer service
- Social British Council
- IT on demand
- More choice, more options
- Digital services anytime, anywhere
- Smarter working

and 5 key ways in which IT can contribute to our success, by supporting key business objectives:

- Revenue generation
- Managing cost
- International programme delivery
- Marketing and customer service
- Maintaining our global presence

These themes and contributions are mapped to specific elements of the Application and Integration Strategy in Section 4; this section also identifies which existing programmes (if any) are already delivering elements of the strategy.

Section 4 outlines the **Strategic Response** to delivery.

Section 5 documents **Risks and Issues**.

3 Supporting Documents

The Application and Integration Strategy document is part of a complete set of strategy documents and should be read in conjunction with the following publications:

1. IT Strategy 2015
2. Platform and Network Strategy
3. Content and Collaboration Strategy

4 Business Context

1. The Corporate Plan envisages an organisation that in 2015 will be very different in size and shape – more agile, more effective, and more efficient; delivering increased cultural impact despite reducing government grant, and delivering increased revenue from English & Exams and Programmes & Projects.
2. We want to become an entrepreneurial public service: flexible and agile, generating surplus, less risk averse in pursuing opportunities, investing in the products we need to develop, nurturing talent – and executing with passion.
3. We need to make it easier and cost effective to assemble new; and amend existing IT capabilities to support business initiatives and growth targets, reducing time to deliver and increasing quality of service.
4. We must use IT as an enabler to achieving our business vision and targets, leveraging core capabilities centrally to deliver economies of scale while focusing local knowledge to develop the business.
5. We have a need to acknowledge and adopt an accountability framework, with agreement in terms of centrally and locally procured and delivered services.
6. Global technical innovation progresses at an exceptional rate; this has and continues to create affordable consumer technology. Our customers expect us to leverage this innovation in our product offerings allowing them the flexibility to interact with the British Council at their convenience.
7. We are also faced with ever increasing competition, we must therefore embrace the appropriate technology to secure and enhance our position in the market place.
8. The increasing amount of uncontrolled technical development and procurement, enabled by cloud services, may appear to offer benefits i.e.: the flexibility to procure applications that meet the immediate need, relative ease with which new applications can be deployed and integrated and relative short time to market. However, this has introduced unnecessary expense and a degraded service to our customers, leading to customer uncertainty about our products and how we manage our customer journey from prospect through to fulfilment.
9. We must consider the delivery of interim and tactical solutions in the context of the perceived immediate returns against the organisation’s longer-term strategy.
10. The business operating models are continually evolving and IT is core to delivering our services and must adapt to support the operating models.

5 Strategic Response

To date we have taken a pragmatic approach to our Application and Integration strategy in order to align and support the business operating models and project delivery. However, this has led to an organic growth and increase in the number of applications fulfilling similar business functions, combined with complex system-to-system (point-to-point) integration.

The British Council is faced with an ever-growing business need to automate more processes in order to leverage efficiencies and remain competitive, this means that the organisation is more than ever dependent on its IT systems. Our challenge is that business workflows are actually embedded in and dictated by core systems that support the business. These systems do not always provide the flexibility to amend or adapt processes easily. Therefore, where appropriate, we will transition business workflows away from the core systems and onto appropriate technology providing the required flexibility.

Our vision is for the British Council to use its integration approach to deliver more flexible and agile products and services to existing and new customers, and move away from monolithic applications and complex and costly point-to-point integrations.

There is significant behavioural change required from the business and IT in order to understand the sizeable impact to the organisation of adopting our Application and Integration Strategy and the required ways of working. There is a need to understand the extent Business Units are prepared to share capabilities and 'hand off' divisional investment for common themes to central management and delivery.

Our Application and Integration Strategy will therefore state how in future we will exploit and effectively manage our application estate, and define how we deliver efficient system integration.

Application and Integration Domain

The strategy is being implemented via a number of in-flight programmes and projects; however it is acknowledged that from an integration perspective the ESUP Programme is the primary delivery and funding vehicle and will implement the applications and technology along with the Integration Centre of Excellence and TDA to facilitate Integration Governance.

Ultimately, our Application and Integration Strategy will be made possible by our integration platform; enabling re-use of business service and reducing development effort and time to market.

The strategy will focus on delivering against the following categories:

- Delivery Approach
- Governance
- Standards
- Integration Maturity
- Business Process Modelling (BPM)
- Managing the Application Estate
- Tools

5.1 Delivery Approach

The Delivery Approach covers what are to be considered as best practices to deliver the most cost effective and efficient solution design.

1. We will reduce our reliance on costly resources where appropriate by reducing the level of bespoke development required to deliver business and application services and increase the level of commercial-off-the-shelf (COT) solutions.
Related themes: IT on demand
Supports: Managing cost
Existing programmes: IT FOM
2. We will adopt open standards for software and systems to ensure interoperability between systems, applications and data, thereby delivering short term and future system flexibility.
Related themes: IT on Demand
Supports: All key business objectives
Existing programmes: All Programmes
3. We will provide 50% of systems from the cloud, reducing costs, increasing flexibility, simplifying project delivery and focusing on improving service.
Related themes: IT on Demand
Supports: All key business objectives
Existing programmes: IT FOM, CRM
4. We will execute an assessment exercise to identify capabilities that can be made available as services via an integration service wrapper. These services will be incorporated into the Integration Service Catalogue for visibility and reuse.
Related themes: IT on demand
Supports: Managing cost
Existing programmes: None
5. We will provide flexible and comprehensive Business Intelligence (BI) by utilising our existing BI Warehouse, ETL tools and Business Objects reporting capability, exploiting our global data footprint and enabling the business to utilise the information to drive business decisions.
Related themes: Exceptional Customer Service
Supports: All key business objectives
Existing programmes: All programmes (increased emphasis required)

5.2 Governance

Governance covers the policies, roles and responsibilities to be established within the British Council to direct and control how the organisation uses technologies to accomplish business goals.

6. We will produce an Integration Services Catalogue¹ as a reference artefact. The upkeep of the catalogue is the responsibility of a Service Catalogue Librarian. This role currently does not exist

¹ An Integration Services Catalogue is a central store of all reusable Integration Services.

within the British Council and is unlikely to be a dedicated role. However, the responsibility and ownership will reside with the TDA.

Related themes: IT on demand

Supports: Managing cost

Existing programmes: None

7. We will extend the TAG and TDA role from managing technical gaps and dependencies to also utilise the programme assessment as a repeatable process to be executed via the TDA to understand future programme alignment to our strategy.

Related themes: IT on demand

Supports: Managing cost

Existing programmes: IT FOM

8. We will develop our governance approach to ensure IT supports the evolving business operating models.

Related themes: IT on Demand

Supports: All key business objectives

Existing programmes: All projects

9. We will expand the remit of the Data Quality Centre of Excellence and Data Sharing policy to include Master Data Management (MDM), production of a data model, data dictionary and global data governance, the outcome of this will mean data sharing across applications will be the norm, and more easily managed.

Related themes: IT on Demand

Supports: All key business objectives

Existing programmes: All Programmes

10. We will implement an Integration Centre of Excellence managed by the IT Strategy and Architecture team to assist, guide and develop best practices to enable the transition from the current application development approach to an integrated approach.

Related themes: IT on demand

Supports: All key business objectives

Existing programmes: All Programmes

5.3 Standards

Standards cover a set of published documents which cover specifications and procedures designed to ensure the technical integrity of all IT solutions being delivered within the British Council.

11. We will establish and adhere to an IT Security Policy providing message and file encryption, system security, key management, user access monitoring, trust brokering for integration with third parties and staff training to an industry standard such as ISO27001.

Related themes: IT on demand

Supports: All key business objectives

Existing programmes: None

12. We will establish guidelines for the development and management of reusable services, establishing how services will be designed, developed and agreements made between the

providers of services and the consumers of those services that inform the consumers of what they can expect and the providers what they are obligated to provide.

Related themes: IT on Demand

Supports: All key business objectives

Existing programmes: All Programmes

13. We will provide an Enterprise Integration Architecture which is location agnostic, permitting the use of in house and cloud based capabilities and enabling the provision of business capabilities to appropriate locations and channels as chosen by the business.

Related themes: IT on demand, Digital service anytime, anywhere

Supports: Managing cost

Existing programmes: None

14. We will define and agree performance standards that will drive Service Level Agreements in the form of KPI's of the individual Integrated Services. Enabling us to evaluate if the service(s) meets agreed SLA's and facilitate the assessment of the service and its ability support extending its use.

Related themes: IT on Demand

Supports: All key business objectives

Existing programmes: IT FOM

15. We will improve user experience by providing:

- Single sign on to core systems
- Common user interface and navigation across core systems
- Accessibility via any device
- Adherence to our usability and mobility standards

Related themes: IT on Demand, Exceptional Customer Service

Supports: All key business objectives

Existing programmes: All projects

16. We will define software development standards including frameworks, coding standards and approved development tools to facilitate quality control of our code, simplified testing and the scaling of our in house development capabilities and enable the control of outsourced bespoke work to third parties.

Related themes: IT on Demand

Supports: Managing Costs

Existing programmes: IT FOM

17. We have a need to define a standard set of reusable Message and Data Manipulation Patterns, examples are provided in the separate document - **Application and Integration Strategy Supporting Appendices.**

Related themes: IT on Demand

Supports: All key business objectives

Existing programmes: IT FOM

5.4 Integration Maturity

Integration maturity specifies how to measure the service integration levels of the British Council and the IT systems and business applications. In addition, it provides guidance on how to achieve certain levels of service maturity necessary to attain the desired business benefits.

18. We will provide appropriate Integration and Service Oriented Architecture (SOA) education and overviews for our IT and Business colleagues in order to achieve a consensus of the general meaning of the concept and what it means for the business and IT.

Related themes: IT on Demand

Supports: All key business objectives

Existing programmes: None

19. We will up skill IT resources to understand their role in delivering integrated capabilities, reducing the level of customisation required to deliver solutions. There is also a need to up skill colleagues in project estimating, planning, development and testing in order to support an integration delivery approach.

Related themes: Managing Cost, IT on Demand

Supports: All key business objectives

Existing programmes: None

20. We will counter the increased demand on people, process and tools by developing the integration skills of the organisation, e.g. business to define requirements, IT to interpret and both to understand service reuse and the composition of current services to assemble new business services.

Related themes: Managing Cost, IT on Demand

Supports: All key business objectives

Existing programmes: None

5.5 Business Process Modelling (BPM)

Business Process Modelling covers the delivery of end to end processes within and across IT systems.

BPM facilitates the re-use of common services and adaption of these services within different processes.

21. We will deliver business process automation and real time business transaction processing by providing the ability for our IT systems to operate effectively together, sometimes in real time. This means that the technology that goes into producing solutions must be integrated and building such solutions involves harnessing the capabilities of many software functions from multiple sources into a unified capability. Each component function will be made available to be called and executed in the required sequence to fulfil the business process.

Related themes: IT on Demand

Supports: All key business objectives

Existing programmes: All Programmes

22. We will identify and select the appropriate technology and tools that support SOA best practice to support the delivery of this strategy while recognising our immaturity.

Related themes: IT on Demand, Smarter working

Supports: All key business objectives
Existing programmes: All Programmes

23. We will implement a Business Design Authority to manage Business Process Management (BPM) & Governance. Maximising the reuse of services is a dependency to the success of our strategy and the realisation of the benefits. In order to quickly identify service reuse there is a need to understand and have reference documentation of the following:

- Business functionality, workflows and processes, for example a common customer registration process.
- Standardised and integrated capability across business functions and units, for example common customer billing or invoicing capability.
- Standardised application function reference architectures integrated to business functionality, for example online payments functionality delivered by SAP, can be utilised online by customer to pay invoice.
- Assignment of a BPM change owner(s) – The change owner will take a holistic view of each change request and assess the impact on business workflows. The change owner(s) have authority to sanction or veto changes.

Related themes: IT on Demand
Supports: All key business objectives
Existing programmes: IT FOM

24. Where appropriate we will transition business workflows away from the core systems and onto appropriate technology providing increased agility and flexibility.

Related themes: IT on Demand
Supports: All key business objectives
Existing programmes: All projects

5.6 Managing the Application Estate

This section realtes to the management of the Application estate from inception through to de-commissioning.

25. We will deliver a framework to define, manage and optimise our business services. The framework will provide a reference against which change initiatives can be assessed and aligned and over time simplify the IT landscape. The framework will define single components to provide capabilities across the enterprise and will ultimately lead to a rationalised landscape.

Related themes: IT on demand,
Supports: Managing cost, Revenue Generation
Existing programmes: All Programmes; IT FOM

26. We will exploit and govern our existing IT capabilities with a view to reducing, consolidating and managing the full application lifecycle including retirement. We will implement an Application Lifecycle Management process (ALM) to provide the necessary controls of our:

- Agile delivery and development methodologies and code base
- Procurement of services
- Proactively manage the retirement of systems
- Cloud sourced and SaaS solutions

- System renewal (either migrating to Cloud or replacing existing)

Related themes: IT on Demand

Supports: All key business objectives

Existing programmes: IT FOM

27. We will continually mature our organisation wide planning to enable the identification of common requirements and reuse of common services, leading to the alignment of individual programme deliverables and assigning common themes to the appropriate programme, for example payment service could be assigned to GFCP in order to deliver a single reusable payment service for the entire British Council.

Related themes: IT on Demand

Supports: All key business objectives

Existing programmes: IT FOM

28. We will define a Target Application Architecture with distinct capabilities, enabling proactive management and change thereby retaining and developing existing applications that are core to our service, and identify shared business and application services we can decommission reducing the number of systems to enable the consolidation of duplicate systems. These will be incorporated within the service catalogue with the appropriate status e.g. current, sunset, decommission etc., reuse will be managed by the TDA.

Related themes: IT on Demand

Supports: All key business objectives

Existing programmes: IT FOM

29. We will increase the scope of programmes to encompass the migration and decommissioning of regional point solutions, for example CRM to Salesforce.com. Thereby providing a global SVOC, leveraging economies of scale and ultimately cost savings across the British council.

Related themes: Managing Cost

Supports: All key business objectives

Existing programmes: All programmes

5.7 Tools

Modelling tools (e.g. UML) provides a set of tools which delivers system artifacts using industry recognised conventions and standards.

30. We will utilise UML modelling across the entire project lifecycle in order to standardise and universally represent the elements of the project.

Related themes: IT on Demand, Smarter working

Supports: All key business objectives

Existing programmes: IT FOM

31. We will utilise Sparx Enterprise Architect to document End to End Sequence flows, Service Contracts and Mappings utilising.

Related themes: IT on Demand, smarter working

Supports: All key business objectives

Existing programmes: IT FOM

5.8 Implementation Approach

The implementation approach and process covers how the IT service will be deployed, installed and transitioned into an operational service.

In order to assess the Total Investment Plan and any pipeline activity in terms of alignment to the delivery of the strategy, a set of consistent Delivery Principles were defined with assessment criteria. This provides a view of the action required to achieve re-alignment between the current portfolio and the delivery of the IT Strategy.

The following table summarises the strategic elements presented in section 4, their alignment to current programmes and identifies gaps in order to successfully deliver our strategy:

Strategic Elements	Existing Programme
Reduced reliance on costly resources (1) Identify reusable capabilities (4) Integration Services Catalogue (6) Establish security policy (11) Provide Enterprise Integration architecture (13) Integration and SOA education (18) Counter increase demand on people (20)	None
Repeatable Programme Assessment (7) Expand remit of Data Centre of Excellence (9) Implement Integration Centre of Excellence (10) Establish development guidelines for reusable services (12) Deliver process automation & real time transaction (21) Deliver appropriate technology and tools (22) Deliver Architecture Framework (25)	ESUP
Flexible and Comprehensive BI (5) Adopt Accountability Framework (8) Provide 50% of systems from the cloud (3) Improve colleague user experience (15) Transition business workflow away from core systems (24) Increase programme scope to include decommissioning (29) Utilise UML modelling (30)	All projects
Adopt Open Standards (2) Define and agree performance KPI's (14) Define software development standards (16) Define message and data patterns (17) Up skill IT (19) Implement BPM governance (23) Exploit & Govern IT capabilities (26) Mature organisation wide planning (27) Define Target Application Architecture (28) Document End to End Sequence Flows, Service Contracts and Mappings (31)	IT FOM

6 Risks and Issues

1. Implementing an Application and Integration Strategy will require an understanding of the large scale change and the high level of commitment required across the business and IT. An uncoordinated approach to Enterprise Integration will build systemic risk and introduce cost into the organisation.
2. Programmes and projects must embrace the strategy; which will provide a sound foundation on which to develop new and existing services. Misconceptions associated with delivery costs and time must not adversely influence the project approach and direction leading to the implement of their own point solutions.
3. Integration often fails due to poor governance, these needs addressing effectively at the inception phase. We must ensure consistency of quality across business services and the technical services that support them. It is necessary to manage the change portfolio and engage with the projects and programmes to ensure this happens.
4. We must clarify our legal position in terms of cloud based systems and compliance with data residence regulations in each jurisdiction.