A Partnership and New Model for UBC Library IT in the 21 Century

Allan Bell, AUL, Digital Programs and Services
(Paul Joseph, Systems Librarian)

University of British Columbia
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Overview
Overview

Introduction and Context

IT Assessment and Findings

Recommendations

Service Design and Process
Introduction and Context
Introduction and Context

UBC is undertaking a broad program of IT transformation on campus:

- maximize investments
- better utilize skills and talents of IT staff
Introduction and Context

Assessment to identify and document the current situation, future requirements, and recommendations for change:

- immediate operational challenges
- management processes and practices
- technical assets, interactions and risks
- people focus
Introduction and Context

Significant cognitive dissonance:

- assessment discovery and recommendations
- new organization(s)
- remediation work identified
- significant projects in-flight and completed
IT Assessment and Findings
IT Assessment

3 areas of investigation:

- Business analysis
- Applications inventory
- Infrastructure review
Business Analysis
Business Analysis

Informed by Enterprise Architecture principles:
Business Analysis

- Business processes and activities use data.
- Data that must be collected, organized, safeguarded, and distributed using applications.
- Applications such as custom or off-the-shelf software tools that run on technology.
- Technology such as computer systems and telephone networks.
Business Analysis

Informed by Enterprise Architecture principles:

- create strategy, vision and road maps
- define business capabilities
- establish IT governance
Business Analysis

Ideally resulting in an alignment between Library strategy and IT services.
Business Analysis

Goals of the analysis:

- consult with staff
- generate capability map
- identify business functions
Business Analysis

Staff consultation:

- 15 cross-functional meetings
- 8 branch and 2 campus consultations
- Total of 39 interview sessions
Business Analysis

The capability map:

- describes an organization’s potential
- represents an organization’s functional abilities
- provides a framework for aligning strategies
Business Analysis

An effective capability map:

- captures the business interest
- provides a stable view of the business
- can be used to link resources and activities
Business Analysis

What does a capability map look like?
Business Analysis

What does a capability map look like?

Our capability map employs a nine-box matrix.
Business Analysis

What does a capability map look like?

Our capability map employs a nine-box matrix.

And conveniently slots into 3 categories:
Business Analysis

Collections
Business Analysis

Collections

Engagement
Business Analysis

Collections

Engagement

Management
Business Analysis

- Develop Collections
- Provide Access to Collections
- Assess and Maintain Collections
# Business Analysis

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Business Analysis

Diving deeper, business functions describe high-level functions that enable the capabilities
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Business Analysis

Develop Collections

Select Materials
Obtain Materials
Receive and Process Materials
Describe Materials
Digitize Materials
Business Analysis

Provide Access to Collections

- Situate materials in collections
- Enable discovery of materials
- Develop and manage access policies
- Enable and control access to materials
- Retrieve and deliver materials
# Business Analysis

## Assess and Maintain Collections

- Review materials and collections
- Assess material quality
- Evaluate material usage and access
- Deselect materials
- Renew, replace, preserve materials
- Maintain material descriptions
Applications Inventory
| A | B | C | D | E | F | G | H | I | J | K | L | M | N | O | P | Q | R | S | T | U | V | W | X | Y | Z |
| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 | 19 | 20 | 21 | 22 | 23 | 24 | 25 | 26 |
| A | B | C | D | E | F | G | H | I | J | K | L | M | N | O | P | Q | R | S | T | U | V | W | X | Y | Z |
| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 | 19 | 20 | 21 | 22 | 23 | 24 | 25 | 26 |

The table above contains information related to various categories such as A, B, C, D, etc., across different rows and columns. Each cell contains specific details that are not clearly visible in the image. For a precise understanding, the entire table should be comprehensively analyzed.
Applications Inventory

Goals of the applications inventory:

- inventory
- visualizations
- process maps
- analysis
Applications Inventory

Review parameters:

- end-user scope
- complexity
- lifecycle planning
- user and admin access
- personally identifiable information
- ...and 60 additional metrics
Applications Inventory

Reviewed over 130 applications and mapped them to the capabilities:
# Applications Inventory

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<td><strong>46</strong></td>
<td><strong>29</strong></td>
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<td>Engage with Community</td>
</tr>
<tr>
<td><strong>16</strong></td>
<td><strong>6</strong></td>
<td><strong>11</strong></td>
</tr>
<tr>
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<td>Manage Facilities, IT &amp; Finances</td>
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<tr>
<td><strong>1</strong></td>
<td><strong>10</strong></td>
<td><strong>23</strong></td>
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Applications Inventory

Application development:

<table>
<thead>
<tr>
<th>Developer</th>
<th># of Applications</th>
</tr>
</thead>
<tbody>
<tr>
<td>Freeware</td>
<td>12</td>
</tr>
<tr>
<td>Open Source</td>
<td>29</td>
</tr>
<tr>
<td>UBC Library</td>
<td>47</td>
</tr>
<tr>
<td>Vendor</td>
<td>46</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>134</strong></td>
</tr>
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Applications Inventory

Application deployment:

<table>
<thead>
<tr>
<th>Environment</th>
<th>% of Applications</th>
</tr>
</thead>
<tbody>
<tr>
<td>Desktop</td>
<td>15</td>
</tr>
<tr>
<td>Externally hosted</td>
<td>17</td>
</tr>
<tr>
<td>Server</td>
<td>61</td>
</tr>
<tr>
<td>Server group</td>
<td>7</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>100</strong></td>
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# Applications Inventory

Server OS:

<table>
<thead>
<tr>
<th>Environment</th>
<th>% of Applications</th>
</tr>
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<tbody>
<tr>
<td>Linux</td>
<td>79</td>
</tr>
<tr>
<td>Mac</td>
<td>19</td>
</tr>
<tr>
<td>Windows</td>
<td>2</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>100</strong></td>
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</table>
# Applications Inventory

## Databases:

<table>
<thead>
<tr>
<th>Environment</th>
<th>% of Applications</th>
</tr>
</thead>
<tbody>
<tr>
<td>Microsoft Access</td>
<td>4</td>
</tr>
<tr>
<td>Microsoft SQL</td>
<td>2</td>
</tr>
<tr>
<td>MySQL</td>
<td>84</td>
</tr>
<tr>
<td>Oracle</td>
<td>4</td>
</tr>
<tr>
<td>PostgreSQL</td>
<td>6</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>100</strong></td>
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Applications Inventory

Findings:

Complexity

65% of applications require multiple servers or integrations with other applications
Applications Inventory

Findings:

End-user scope

53% accessible to the world
Applications Inventory

Findings:

Lifecycle planning

66% of the applications require update or change decisions
Applications Inventory

Complex visualizations
Infrastructure Review
Infrastructure Review

Goals of the review:

- hardware inventory
- application infrastructure
- security scan
Infrastructure Review

Hardware inventory:

- 87 virtual servers
- 19 physical servers
- 400 staff desktops
- 700 public desktops
Infrastructure Review

Hardware inventory:

- staff storage and backup solutions
- staff and public desktop support
- classroom and labs support
- software license management
- printers
- network management
Infrastructure Review

Application infrastructure:

- lack of application management and deployment lifecycle
- databases and server infrastructure requires consolidation
- security patching required
Infrastructure Review

Security issues:

- identity and access management
- personally identifiable information
- firewall upgrades
- anti-virus for Mac
- need to upgrade several versions of PHP
Recommendations
Recommendations

There are over 220 recommendations and the transition process will include further analysis and planning to implement them.
Recommendations

4 areas of focus:

- guiding principles and assumptions
- governance
- staff transfer & organization structure
- technical recommendations
Guiding Principles and Assumptions

- ongoing need to innovate, deploy, and integrate applications
- some roles dedicated to Library exclusively to increase responsiveness
- standard enterprise services used wherever possible to increase efficiency
- strong development practices to be efficient, innovative, and lower support costs
Governance

Strategy

Library Systems Governance Committee

- Annual Review: Establish programs/initiatives aligned with Library Strategy
- Quarterly Review: Assess and revise strategic programs/initiatives

Initiatives

Library IT Management Team

- Monthly Review: assess and revise projects/initiatives; combine and escalate requests

Implementation

UBC IT Library

Other UBC IT Resources

- Daily Review: review and prioritization within existing projects
Staff Transfer & Organization Structure

- retention of existing Library services and support requirements, resources and processes (unless change is recommended)
- senior leadership for various IT disciplines and services
- career framework and development through connectivity with respective service areas
- existing enterprise processes and resources
Staff Transfer & Organization Structure

- Library IT Team connected to Senior Leadership in UBC IT
- UBC Vancouver and UBC Okanagan represented to leverage shared ideas and services
Staff Transfer & Organization Structure

- Senior Manager UBC IT Library dotted-line relationship to AUL recognizes:
  - Priorities and funding come from the Library
Staff Transfer & Organization Structure

- Systems Librarian dotted-line relationship to Enterprise Architecture recognizes:
  - Library has a continuing need for complex applications, data integrations and innovation
  - Library faces important issues that inform and influence UBC-wide solutions
Technical Recommendations

- allow the Library’s resources to focus on its strategic Business Capabilities
- have an effective operations environment
- use the strong operations base to allow the Library to become more nimble and responsive
- minimize time and maximize return on investment for new initiatives
Service Design and Process
Service Design and Process

Improving collaboration and transparency in the creation of new services:

- sharing of ideas and expertise across the Library
- transparency in the decision-making process
- visibility of all initiatives underway
- alignment of decision-making process to our strategic objectives
- process for how ideas for new services are captured
- optimization of budgets and resources
The Process

**DISCOVER**
Submit your idea for a new using the 1-page Idea Template
Submit to relevant Standing Committee

**DESIGN**
Further develop your idea with more detail in a 2-page business case
Standing Committee submits to LOT and Lib Exec

**DEVELOP**
If required, complete a project plan to develop the solution
LOT and Lib Exec review

**DEPLOY**
The solution has been developed & ready to be operationalized
Standing Committee, LOT and Lib Exec operationalize lifecycle and evaluate
**DISCOVER**

1. Clear description of the idea
   - what problem is it solving?
   - what opportunity is it realizing?
2. How will it help us achieve our strategy?
3. What will success look like?

**DESIGN**

1. ID features critical for success
2. ID solution options
3. ID project & support cost
   - scenarios
   - initial cost estimates
   - people & skillsets required
   - potential operational costs & funding model

**DEVELOP**

1. Clear description of the idea
   - what problem is it solving?
   - what opportunity is it realizing?
2. How will it help us achieve our strategy?
3. What will success look like?

**DEPLOY**

Service is Operationalized

1. Change management
   - communication plan
   - training plan
2. Performance monitoring in place if relevant
3. Decommissioning of old systems / processes accounted for

**DECISION CRITERIA**

- **STANDING COMMITTEE**
  - Strategically relevant to the Library
  - Request owner identified
  - Cannot be done by existing services
  - ID resources needed for next stage
  - Approval to enter design stage

- **STANDING COMMITTEE, LOT & LIB EXEC**
  - Steering group is established
  - High level task list created
  - Smart goals & success measures
  - Alternative solutions compared
  - Promotion strategy considered
  - Total cost of ownership, Benefits & ROI identified

- **STANDING COMMITTEE, LOT & LIB EXEC**
  - Project is satisfactorily complete
  - Communication & training underway
  - Change plan being implemented
  - Ongoing ownership is in place
  - Ready to operationalize & deploy
Any questions?