Introduction to Business Architecture for Itana

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University of Washington Information Technology
For Itana on October 7, 2016
In This Deck

- **Context**: About the UW; benchmarking about business architecture, and adapting it to the institution
- **Our Challenge**: Why change is hard; the gap that business architecture helps fill
- **A Case Study**: Creating a cross-functional initiative
- **Early Lessons**: Observations about business architecture work
- **How EA Can Help**: Promoting and supporting business architecture
Context
The University of Washington

- Founded in 1861 in Seattle
- Over 55,000 students and 25,000 employees on 3 campuses
- 16 colleges and schools; four regional medical centers
- $6.9 billion budget in FY 2016
- $1.3 billion in research awards in FY 2015
- Mix of central IT (UW-IT) and distributed IT organizations
- Enterprise Architecture function located in central IT
“The ultimate goal is to **actively manage change** rather than letting change manage the University.”

Strategic Planning at the University of Washington: The Sustainable Academic Business Plan

(July 2016)
Business Architecture is most critical in organizations managing significant change.

Sponsoring a Business Architecture practice is a way to dedicate resources specifically to the work of cross-functional alignment and transformation.

Source: STA Group, What is Business Architecture?
A technology agnostic view of the enterprise
Focused on how **people** work in **organizations** to create **value**

Strengthening the **management tools** used to structure and lead an enterprise, such as strategies, policies, and processes

(For more references, see the appendix or [this reference deck](#).)

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**The Enterprise as Described by Business Architecture**

![Diagram](image)

Figure 1.1: Aspects of the Business Represented by Business Architecture

Adapting Industry Business Architecture Practices

> Business architecture practices from the private sector tend to assume:
  — Relatively centralized decision-making
  — Relatively high accountability across the enterprise
  — Relatively mature management skills and readiness for change

> As we adapt these practices to our institution, we seek to:
  — Understand our current maturity and readiness for change
  — Understand change as a “process of becoming different”
  — Work together to improve the effectiveness of our change processes in multiple ways
A Decentralized Institution Relies on Federated Business Architecture

The diverse nature of the UW, and the embedded nature of Business Architecture work, naturally lead to a federated model. EA can support practitioners and help grow the capacity for Business Architecture at the UW.

Practitioners:

Business Architecture by UW Leadership
- Develop UW strategy
- Guide UW unit strategies
- Frame UW-wide initiatives

Connect UW and unit strategies; set institutional priorities

Business Architecture by UW Units
- Develop unit strategies
- Actively manage business change
- Actively evolve business capabilities

Connect business and IT strategies; pursue cross-functional initiatives

Business Architecture by IT Divisions
- Develop IT strategies
- Actively evolve IT services
- Form and support cross-functional initiatives

Supported by EA
- Define and promote the practice and value of Business Architecture
- Build governance and other foundations for the practice
- Train practitioners in methods
- Connect practitioners with each other
- Guide people to resources
- Join in selected initiatives

Supported Business Architecture practitioners Grow capacity for Business Architecture

Practitioners: 9
Our Challenge
Our Challenge

- The UW is in the midst of far-reaching transformative change:
  - **Planned** changes driven by UW strategy
  - **Unplanned** external changes
  - **Deferred** changes that need attention

- UW leaders know first-hand that change is challenging:
  - **Pace** of change challenges existing decision-making
  - **Scope** of change challenges existing organizations
  - **Complexity** of change challenges existing information
  - **Pressure** of change challenges how we distribute resources

… More **stakeholders** need to come to more **far-reaching** agreements, more **quickly**, with better **analysis**
Good Change Processes Rely on Mature Organizations

All these aspects are important for an organization to be an effective partner:

<table>
<thead>
<tr>
<th>Differentiating capabilities</th>
<th>Interfaces</th>
</tr>
</thead>
<tbody>
<tr>
<td>Specific roles, skills, knowledge, experience, tools, etc.</td>
<td>Relationship management</td>
</tr>
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These enable us to create specific value that others in the institution need

These enable us to be effective as an organization and are foundational to all our work

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Good Change Processes Rely on Mature Organizations

All these aspects are important for an organization to be an effective partner:

These enable us to create specific value that others in the institution need.

These enable us to be effective as an organization and are foundational to all our work.

This is how others receive the value we offer, and how we receive participation, input, and support.

We fully know our partners, and they know us.

It’s clear what we offer and we reliably deliver it.

We successfully collaborate with others on new things.

We have clear ways to receive and give guidance.

All aspects are important to being an effective partner.

**An organization:**

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These enable us to create specific value that others in the institution need.
The Challenge of Cross-Functional Initiatives

In a university, cross-functional initiatives typically require several medium or large organizations to find each other as partners with shared goals ... actively collaborate ... and remain aligned over a period of years:

Cross-functional initiatives are a challenge to every organization’s ability to continuously:
- Interface with partner organizations
- Provide specialized value consistently
- Manage itself to a high level

In addition, each major initiative itself is an organization, with all the same challenges.
The IT-Campus Partnership

Higher ed IT organizations increasingly recognize their key role as strategic partners in change:

Source: Education Advisory Board, EAB’s IT Functional Diagnostic
Characterizing IT-Campus Partnerships

Campus: “We want to make an incremental improvement and we have well defined requirements.”

IT: “We have a service catalog, just order whatever you need.”

Campus: “We want to make an incremental improvement, but we’re not sure what kinds of tools might help us.”

IT: “We have account managers to explain our available services and help you find a fit.”

Campus: “We face a major business change, and we’ve scoped it, gathered the right stakeholders, defined a roadmap, and know our needs.”

IT: “Our PMO can gather IT resources to work with you on a project.”

Campus: “We face a major business change, but we don’t really know its scope, who on campus should be involved, or what we need from IT.”

?
The Gap that Business Architecture Practitioners Fill

The UW needs people who can:

> Help units define strategy and translate it into goals
> Identify opportunities for cross-functional business and technology initiatives
> Liaise between groups of stakeholders and help to ‘connect dots’
> Connect business stakeholders with each other and with IT stakeholders
> Conduct discovery and analysis across UW units, framing decisions for stakeholders
> Create long-term roadmaps for process, information, and systems change
> Help establish initiatives, programs, and projects
> Help keep these efforts aligned
A Case Study

Space Information Management at the University of Washington
Jenni Laughlin
Background

At the University of Washington, information about campus facilities and spaces is created and updated by multiple campus organizations. The lifecycle of each facility and space is complex, and changes are very common - from floor plan changes, to renovations, to updates for maintenance reasons. Ownership and use of space, and the financial implications of the use of space, also changes rapidly.

The strategic work of the university around facility and space information, such as placement of instructors and researchers in appropriate spaces, and long term capital planning to meet anticipated future needs, requires information and reporting that is either impossible to pull together or sourced from many organizations in a manual, ad-hoc manner. Further, operations teams struggle to understand the facility asset they are charged with maintaining, because documentation and processes are scattered and sometimes ad-hoc.

Some examples of the impact of this include:

The current “CAD Check Lean” initiative estimates that over the last 5 years, the University spent $37M reworking missing, misplaced, or inaccurate floor plans in CAD - mostly as a result of paying contractors to redo inaccurate/incomplete base drawings and information during construction and renovation processes.

The Provost-funded OneGIS initiative seeks to build a platform to use space data more strategically, but the data to support this vision is scattered across business and technology silos. Changes to this data is managed inconsistently, and data models across applications are not reconciled.

Efforts to improve the transition from capital construction to occupancy are challenged by discontinuous information flow, leaving occupants and operations and maintenance teams disconnected from key documentation designed to help run the building.
Over the summer we were able to construct a high-level business process landscape as part of our initial analysis. This artifact was designed to show how dependent we are on each other for the same information, and frame why this isn’t a problem any one group can solve alone.
Related Efforts Underway

In the current state, understanding the state, utilization, and efficiency of the University’s facilities is all but impossible to accurately evaluate.

Many initiatives and significant resource time has been devoted to trying to address parts of this problem space, but solutions and significant overall improvements remain elusive.

<table>
<thead>
<tr>
<th>Lean initiatives such as:</th>
<th>Systems initiatives such as:</th>
<th>Organizational efforts in:</th>
</tr>
</thead>
<tbody>
<tr>
<td>● CAD Check</td>
<td>● OneGIS</td>
<td>● Real Estate</td>
</tr>
<tr>
<td>● BIM to FM</td>
<td>● PNBDB migration and UW Profiles</td>
<td>● Capital Planning</td>
</tr>
<tr>
<td>● Facility - Related information library / Innovator replacement</td>
<td>● PM Web</td>
<td>● Capital and Space Management</td>
</tr>
<tr>
<td>Proposed TAP initiative</td>
<td>● Space Strategy Team / “Portal” (space request system)</td>
<td>● Facilities Services</td>
</tr>
<tr>
<td>● Space Utilization - create policy to optimize use of space in support of UW’s mission</td>
<td>● “Sightlines” research about deferred maintenance.</td>
<td>● UW-IT</td>
</tr>
<tr>
<td>Cross-Organization</td>
<td>● “UW Profiles” reporting effort</td>
<td>● School of Medicine</td>
</tr>
<tr>
<td>● Finance Business Transformation (FBT)</td>
<td></td>
<td>● EH&amp;S</td>
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<tr>
<td></td>
<td></td>
<td>● MAA</td>
</tr>
<tr>
<td></td>
<td></td>
<td>● Office of Research / GCA/OSP</td>
</tr>
</tbody>
</table>
While respecting the need for different parts of the organization to support different business needs in different ways, we also have what I call a “village problem”.

The practice of business architecture, to me, is about helping to surface these kinds of ‘village problems’, describe them so we can use a common language and understanding, and make it safe and productive to bring key stakeholders together to collaboratively define ways to “become different”.

**A Village Problem**

In the current state, **there are significant impediments to improving the management of critical facility and space-related information so it is accurate, accessible, and consumable.** These include:

- **The facility lifecycle is complex.** Business processes related to producing or consuming information about it span organizations, cultures, and technologies.
- **Many siloed “solutions” have been created that have exacerbated the problem.**

For an information management strategy to work **across departments and across the facility lifecycle**, we need significant and coordinated change to the “way we do business”.

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**Diagram:**
- People
- Process
- Technology

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Current state use cases help to show why micro efforts to do the right thing are stymied when interacting with a macro problem space. It also helps a diverse group of stakeholders see where interests can be aligned.

**Use Cases**

**What’s the headcount in the UW Tower?**
Utilization is currently a derived concept - and even current usage basics like headcount take weeks to surmise ...

**How do we assess space utilization?**
When we need to create more in-depth information to understand space utilization today, we resort to herculean efforts ...

**Can I find the current drawings for a building?**
When we need a current floor plan, various groups search in various repositories in various ways ...

**Why can’t I find the current drawings?**
When a change to a floor plan is made, various groups update various repositories in various ways ...
Describing the problem is not enough: a business architecture practitioner must also be prepared to channel the constructive energy that comes from the sense of shared purpose we’re developing. Here I use benchmarking as a tool in helping the group ‘pivot’ from thinking about the problems to thinking about possible paths forward.

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**Evolving the Village**

“To fully implement a facilities portfolio asset management approach, federal agencies require a workforce with a set of core competencies in three areas of expertise and with a skills base. The three areas of expertise are

- Integrating people, processes, places, and technologies by using a life-cycle approach;
- Aligning the facilities portfolio with the organization’s missions and available resources; and
- Innovating across traditional functional lines and processes to address changing requirements and opportunities.

The skills base includes a balance of technical, business, and behavioral capabilities along with enterprise knowledge.”

Source: Board on Infrastructure and the Constructed Environment Division, Engineering and Physical Sciences, National Research Council of the National Academies

Making it real! This represents a concrete set of metrics that we can target in early stages of shared work. I start to discuss the need for a cross-functional roadmap to guide related efforts toward development of accurate information.

**Future State: Early Measures and Questions**

Focus on developing skills, information models, practices, and technology that get us these measures per space/facility:

- Cost per Square Foot (owned);
- Cost per Square Foot (leased);
- Employees Housed;
- Cost per Person;
- Customer Satisfaction;
- Vacancy Rate;
- Non Revenue Producing Space;
- Net Income; and
- Funds from Operations.

Questions we can address with this information:

- What facilities do we have?
- What condition are they in?
- What facilities are needed to support the organization’s missions?
- What problems and issues need to be addressed?
- How much are we investing? How much do we need to invest?
- What are the results or outcomes of those investments?
- What are the outcomes of decisions not to invest?

The long term vision is necessary to discuss as well. I use this slide to connect and confirm key concepts:

- Units and organizations will always want and need to choose the right business applications for their work.
- The trick will be to develop strategies and practices and technologies that allow these applications to share data and information across them.
- etc.

**Future State Vision**

How might we efficiently manage facility and space information in the future?

We will always need niche business applications to do our work, but they can be actively managed in concert to meet complex overall stakeholder needs while reducing redundancy.

To meet the needs of EACH functional area, and accurately report on data ACROSS functions, we can rely on institutional data models and repositories, integrated with business applications, and aligned with strategic goals.

This is true for both documents (unstructured data) and for structured data.

**Common Information and Integration Strategy / Practices**

Manage evolving relationship between business applications and institutional data

- Spacial attributes
- Financial attributes
- Utilization attributes
- Compliance attributes
- Maintenance attributes
- Operational performance metrics

Shared Repository of Organized Unstructured Data (Documents)
Next steps need to be concrete!

**Recommendation**

We propose that the University sponsor a cross-functional task force, combining resources representing several organizations and active initiatives, to recommend an actionable business and technology roadmap for managing facility and space information.

### Prep for launch
- Identify stakeholders from active initiatives and organizations across the facility
- Form an **information management steering group** with representation from organizations across the facility lifecycle
- Prep facilitation of the launch

### Gather
- Consolidate requirements of producers and consumers of key facility and space information across the facility lifecycle, and initially align on goals (30 days)

### Synthesize
- Synthesize findings from active initiatives to initially assess the nature and magnitude of the work required to meet proposed goals (60 days)

### Envision and Agree
- Agree on what is possible in the short, mid and long term, and roadmap:
  1. Technology change and leveraging of existing UW-IT, Facilities, and CPD assets
  2. People and process changes
  3. Present findings to senior leadership for feedback (90 days)

We propose that the University sponsor a cross-functional task force, combining resources representing several organizations and active initiatives, to recommend an actionable business and technology roadmap for managing facility and space information.
Early Lessons
Characteristics of Business Architecture Work

Business Architecture work is:

- **Cross-functional**: Constantly cross existing organizational siloes at all levels to get to the right scope of problem and solution
- **Embedded**: Work closely and quickly with stakeholders at all levels (from SMEs to executives, individually and in groups) in their own business terms to build momentum and agreement
- **Breadth and depth**: Learn and use information quickly across related domains but in enough depth to link related issues in each domain
- **Organic**: Frequently re-prioritize which problems and solutions are actionable, what scope is feasible, and who can be involved

Business architects require a combination of skill sets:

- **Leadership skills** including listening, building trust, providing vision, and creating consensus with stakeholders at all levels of management
- **Project management** at an advanced level: Creating momentum and continuity across diverse units with rapidly evolving scope
- **Business analysis** at an advanced level: Synthesizing unit and enterprise needs into long-term roadmaps across business functions
Business Architecture is a Team Effort

Like other architects, because of their catalyst role, business architects will quickly become overloaded if management doesn’t provide the right teams.

The engagement team should grow as the initiative gains momentum

- Business Architect
- Project Administrator
- Data Architect
- Solution Architect
- Business Analyst
- Project Manager
- Data Analyst
- Subject Matter Experts

Business architects should be enabling change; they should not become individual “heroic leaders” or new bottlenecks for change.
How EA Can Help
The diverse nature of the UW, and the embedded nature of Business Architecture work, naturally lead to a federated model.

EA can support practitioners and help grow the capacity for Business Architecture at the UW.

**A Decentralized Institution Relies on Federated Business Architecture**

**Practitioners:**

**Business Architecture by UW Leadership**
- Develop UW strategy
- Guide UW unit strategies
- Frame UW-wide initiatives

**Business Architecture by UW Units**
- Develop unit strategies
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- Actively evolve business capabilities

**Business Architecture by IT Divisions**
- Develop IT strategies
- Actively evolve IT services
- Form and support cross-functional initiatives

**Supported by EA**

Define and promote the practice and value of Business Architecture

Build governance and other foundations for the practice

Train practitioners in methods

Connect practitioners with each other

Guide people to resources

Join in selected initiatives
**Enabling Business Architecture**

Help leaders understand the importance and nature of business architecture work

- The work is crucial to defining and executing strategic goals
- The work requires an advanced skill set and significant time

Recognize and promote a federated model for business architecture

- In a large, distributed institution, practitioners will naturally be distributed
- EA can best support practitioners in a well-recognized federated model

Help create organizational foundations for successful business architecture

- Easier, less ad hoc access to sponsors
- More mature governance processes

Provide shared concepts and methods and refer people to services

- Business architecture vision
- Architecture methods
- Change framework
Architecture Method Examples

Itana has published methods relevant to business architecture:

- Architecture Methods
  - Capability Maps
  - Case for Action
  - Process Maps
  - Roadmaps
  - Semantic Data Models
  - ... and more ...

At the UW, some of the methods we’re using most actively:

- Business Process Mapping
- Strategy DIY Kit

And there are other teams at the UW that provide related services:

- Services in Organizational Excellence
## Draft: Change Framework

### FOSTER: Manage to Enable Change

- Manage Vision and Strategy
- Define Metrics & Measures
- Develop Communication, Alignment, & Governance
- Develop Portfolio, Project, & Program Management
- Develop Organizations and People to Participate in Change
- Build Relationships with Partners and Vendors
- Foster Ideas for Change
- Create Spaces for Innovation

### TRANSFORM: Lead in Change Initiatives

#### Understand the context for change
- Assess Drivers & Opportunities
- Assess Organizations & Stakeholders
- Assess Capabilities & Processes
- Assess Information & Solutions
- Assess Policies, Rules, & Regulations
- Assess Possible Scopes
- Assess Potential Impacts

#### Build agreement for change
- Develop Stakeholders
- Build Cross-Functional Communication
- Extend Vision & Strategies
- Develop Roadmaps
- Connect With and Extend Governance
- Agree on Outcomes, Metrics, & Measures
- Fund and Gather Resources

#### Execute change
- Define & Build Programs and Projects
- Recruit & Develop People, Roles, & Skills
- Manage Programs
- Manage Projects
- Design and Implement Solutions
- Manage Information
- Manage Adoption of Change

### SUSTAIN: Operate in a Context of Change

- Maintain Continuity Through Change
- Actively Manage Risk
- Make Information Visible
- Continuously Improve Organizations & Processes
- Continuously Improve Services & Solutions
- Utilize Governance, Policies, & Rules
- Utilize Metrics & Measures
- Continuously Grow People & Roles

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This section is scalable based on the magnitude of each change initiative.

### Aspects of the Enterprise that Enable and are Affected by Change:

<table>
<thead>
<tr>
<th>Drivers, Opportunities, &amp; Risks</th>
<th>Organizations &amp; Functions</th>
<th>Portfolios</th>
<th>Capabilities</th>
<th>Information &amp; Data</th>
</tr>
</thead>
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<td>Vision &amp; Strategies</td>
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<td>Services &amp; Products</td>
<td>Processes &amp; Value Streams</td>
<td>Solutions &amp; Technologies</td>
</tr>
<tr>
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<td>People &amp; Roles</td>
<td>Initiatives &amp; Projects</td>
<td>Metrics &amp; Measures</td>
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Example: Manage to Enable Change

- My unit has shared vision, goals, and strategy that we refer to regularly in our decision-making and work.
- We agree how to measure whether we are making progress.
- There is good communication within my unit, and separate teams are communicating well on how they work toward shared goals.
- We know the complete list of services and projects we’re working on and their priority.
- Each of our projects has a plan and we know its status.
- We actively develop individuals’ leadership and management skills in roles that are essential to leading change.
- There is a clear way for other units to engage us in active discussion about potential changes.
- We have effective relationships with our partners and vendors in which we get the most out of each others’ strengths.
- Everyone in my unit understands how ideas are assessed and how viable ideas can result in changes.
- We have ways to experiment with new ideas safely without disrupting each others’ work.
Questions?

We’re going to use CMMI. It’s a model for developing a process to create a framework.

Or it might be a process for creating a framework to make a model.

There’s no budget for training, so we’ll be relying on guessing more than usual.
APPENDIX
Scenario: A small organization

FOSTER: Manage to Enable Change

- Annual strategy update and periodic review
- Small teams working closely together
- Close relationship with a few other units
- Working closely with just a few vendors
- Ad hoc idea gathering and informal prioritization are sufficient
- Not enough resources to just try things out

TRANSFORM: Lead in Change Initiatives

1. Understand the context for change
2. Build agreement for change
3. Execute change

- Relatively easy to reach agreement with partner organizations on relatively small joint changes
- Small projects are closely supervised and go pretty well
- Attempts at larger projects may have failed in the past

SUSTAIN: Operate in a Context of Change

- Most attention is focused on continuity and quality
- Risk is relatively low
- Processes may not be fully documented
- Not much extra time to improve; mostly do what we did last time
- Policies and rules are relatively easy to keep up to date

We can handle the limited amount of change we face.
**Scenario: A medium organization, 5 years later**

**FOSTER: Manage to Enable Change**
- Annual strategy update, but there’s only time to involve managers
- Communication breakdowns between some teams
- Some partner units are frustrated with their relationship
- Some vendor relationships are not fully utilized
- Some good ideas are being lost
- Unable to try out ideas that could really help

**TRANSFORM: Lead in Change Initiatives**
- Inability to spend time reaching agreement with partner organizations is limiting the organization’s ability to improve its own services
- Not enough resources to explore broad enough options
- Most small and medium projects still go pretty well
- Starting to lose track of small projects people are doing
- Inability to manage larger projects is now an obstacle

**SUSTAIN: Operate in a Context of Change**
- New changes may disrupt quality of existing services
- Slowly growing risk but not enough time to deal with it
- Processes have changed and grown beyond documentation
- Past investments are no longer being built on, just maintained
- Policies and rules may be going out of date

**Our limited capacity for new kinds of change is starting to hold us back.**
Scenario: A large organization, 10 years later

FOSTER: Manage to Enable Change

- Many teams are not aware of a shared strategy
- Teams in independent silos are doing redundant work
- More partner units have given up on trying to collaborate
- Redundant vendor relationships are resulting in waste
- Many people no longer try to channel their ideas through the organization
- Uncontrolled “pilots” are reducing quality of service

TRANSFORM: Lead in Change Initiatives

- Understand the context for change
- Build agreement for change
- Execute change

- Gradual decline in engagement with partner organizations has led to a need to invest heavily in re-establishing relationships in order to keep the organization relevant
- Increasingly complex customer needs often exceed ability to assess
- Smaller projects are no longer tracked by management
- Medium projects have trouble finding resources to get started
- Large projects are contending for the same key people

SUSTAIN: Operate in a Context of Change

- Unexpected changes continue to disrupt services
- A formal risk management program is starting to control risk
- Investing in re-defining processes within the organization
- Some past investments are at end-of-life without a plan for replacement
- Investing in re-defining governance and updating policies

Our limited change capacity is making us less relevant within the institution.
Architects as guides

1. Be positioned to find out about problems and ideas before they become projects. Understand needs and propose ideas.

2. Place ideas in their appropriate context (current and future). Guide people to the right scope for the problem and solution.

3. Evaluate alternative options. Make the case for the best options.

4. Identify related changes. Enable the organization to manage interrelated changes within and across projects, teams, roadmaps, or portfolios.

5. Enable success at different stages within initiatives (such as design). Provide context, continuity, best practices, and analysis.

6. Over time, promote best practices and process changes that enable solutions to be reached more quickly, in better alignment with each other and with organization goals.

On this page, different kinds of architects work at different scales (e.g., team, project, enterprise) and apply different expertise (e.g., technology, data, process, business domain) and skills (e.g., facilitation, leadership, analysis).
In this value stream, the Business Architecture practice supports change, from strategy through to creation of a solution.

**Example: A Business Architecture Value Stream**

![Diagram of the Business Architecture Value Stream](image_url)

*Figure 1.4: The Business Architecture Value Stream*

Business Architecture complements other descriptions of the enterprise.

In the TOGAF framework, Business Architecture is a phase in understanding the enterprise in order to plan well-governed changes.

**Example: Business Architecture as Part of an Enterprise Architecture Framework**

**Outputs:**
- Refined and updated versions of the Architecture Vision phase deliverables
- Baseline Business Architecture
- Target Business Architecture, typically including:
  - Organization structure
  - Business goals and objectives
  - Business functions
  - Business services
  - Business processes
  - Business roles
  - Business data model

Draft Architecture Requirements Specification

Business Architecture components of an Architecture Roadmap

*Figure 8.1: Phase B: Business Architecture*

Source: The Open Group Architecture Framework, Phase B: Business Architecture
As a function, Business Architecture bridges between more general product and service planning and more specific business analysis and solution design.

**Example: Business Architecture Complements Other Planning and Delivery Functions**

Business Architecture as a Profession

- **Business Architecture Guild** sponsors events and publications
- Publishes a Business Architecture Body of Knowledge (BizBOK) and Business Architecture Maturity Model (BAMM)
- Seattle has a **Business Architecture Meetup** group
- About 200 “Business Architect” job search results in LinkedIn, compared to about 800 for Enterprise Architect or Data Architect
- As a new profession and practice, Business Architecture faces some challenges:

![Chart: What are the three most significant barriers to BA success?](chart)

**Source:** Jeff Scott, *Building a Sustainable Architecture Practice* (2014)
Stakeholders researching a potential renovation, a new project, or any significant work order manually look for floor plans and other drawings across repositories. Changes are made, but drawings are not always updated, especially not across repositories.

REO uses spreadsheets to manage pre-lease process pull together space info for specific customers. Leases are created, with cost per sq ft., using a different measurement standard than UW floor plans.

Manually pull drawings based on change report

Manually enter space information (triggers: new lease or renewal)

Manually pull change report

"Space Web Service" (room # validation only?)

OUA manually updates space inventory data, and adds records where no floor plan exists (when notified)

Manually extract data dump

Manually enter or add new records

"Budget" *Org code *Person

Repository of UW - created CAD floor plans

"Project Vault" archive (MAPS team use only)

Team archive of everything submitted to CAD Check

Enterprise Document Management (Oracle WebCenter)

Facility Information Library (FIL)

Document repository for facility-related asset information

ArcGIS application with Invision plugin

ArcGIS database schemas (inc custom)

Transformation Script (floor plans)

"GIS"

Map views of interior/exterior spaces (parcels, facilities, rooms)

Inventory of facilities, rooms, and room assignments (with map views)

"Project Vault" archive (MAPS team use only)

"OUA“ floor plans only

Team archive of everything submitted to CAD Check

Enterprise Data Warehouse (EDW)

Manual lookups: *Budget *Org code *Person

Room #s

Space Reports

Starter “Space Management” Systems Landscape v3 (June 2016)

*Green text describes how we manually create, pull, or push critical data when processing drawings from a new capital project

= narrates creation of critical space information that does not make it back to GIS
## Facility Lifecycle Management (Space Information Management focus)
Manage a facility from conception through end of life

<table>
<thead>
<tr>
<th>Pre-Design</th>
<th>Design</th>
<th>Construction</th>
<th>Transition to Operations</th>
<th>Operations and Maintenance</th>
<th>Renovation</th>
<th>End of Life</th>
</tr>
</thead>
<tbody>
<tr>
<td>Find drawings relevant to the potential project</td>
<td>Create design drawings</td>
<td>Communicate changes to design</td>
<td>Submit as-builts</td>
<td>Manage work orders</td>
<td>(see pre-design - operations and maintenance activities).</td>
<td>Retire outdated drawings (records management)</td>
</tr>
<tr>
<td></td>
<td>Approve design for creation of facility and room numbers</td>
<td>Create as-builts</td>
<td>Process submittals for formatting standards</td>
<td>Identify required proactive maintenance</td>
<td></td>
<td>Retire active use of drawings in core business applications</td>
</tr>
<tr>
<td></td>
<td>Build UW floor plans based on submittals</td>
<td></td>
<td>Process submittals for records retention</td>
<td>Research warranties</td>
<td></td>
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<td></td>
<td>Identify required updates to floor plans (new/changed)</td>
<td>Manage utilization of space</td>
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<td></td>
</tr>
</tbody>
</table>

All of these activities either produce or consume floor plan drawings.