Business-Driven, IT Architecture Transformation

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Today’s topics

• Defining business vs. IT architecture, alignment and transformation
• Business risks, challenges and assessing technical debt
• Role of business architecture, from strategy definition through solution deployment
• Leveraging the business architecture / IT architecture transformation framework
• Framing IT architecture transformation through a business perspective
• Shifting to a business-driven, IT transformation approach
Business Architecture Definition

Business architecture represents holistic, multidimensional business views of: capabilities, end-to-end value delivery, information, and organizational structure; and the relationships among these business views and strategies, products, policies, initiatives, and stakeholders.1

IT Architecture Definition

"Blueprints of the technologies, data structures and applications that collectively comprise the information technology (IT) environment of an enterprise."2

Business / IT Architecture Alignment

State in which automated systems and data architectures fully enable business strategy, business capabilities and stakeholder value

Business / IT architecture transformation is the means of achieving “alignment”

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(1) Source: Federation of Enterprise Architecture Professional Organizations, adopted on January 14, 2017, after passing a vote by FEAPO Member Organizations.

Business Architecture Domain Overview: Mapping the Business Ecosystem


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Business Architecture Differentiators

- Business architecture is foundational, transcending a given initiative or scenario
- Business architecture is reusable
- Business architecture scales horizontally and vertically
- Business architecture is not constrained to internal views
- Business architecture improves other disciplines
- Business architecture is politically agnostic

Consider one value stream example:

“Take a Trip” value stream traces entire customer end-to-end journey

Blueprints of data structures, applications and technologies that represent current and/or target state of IT deployments

- Application architecture
- Data architecture
- Technical architecture
- Shadow systems

IT architecture should not be confused with the IT organization

The IT organization is just another business unit in a business ecosystem
Ability to deliver real business value is realized and enhanced through formal integration of business and IT at the architecture level.

How a Business Accrues Technical Debt

- **Technical Debt**
  - Results from applying IT architecture changes that degrade data and application architectures over an increasingly elongated timeframe
  - Each set of changes increases time and cost of applying future changes, curtailing a business’s ability to accommodate strategic objectives and business vision

- **Technical debt is driven by:**
  - IT architectures that have grown increasingly misaligned to business model
  - Continuous pressure to apply more changes to IT architectures never meant to support rapidly shifting business models
  - Lack of executive understanding that technical debt is being incurred and that it presents a significant and growing risk to the business
Technical Debt Results In:

- Inability to address customer discontinuity across business units and product lines
- Diminished capacity to manage risk, regulatory compliance, change management and crises*
- Business costs escalate as the business works around core IT systems
- IT solutions result in more business disruptions than they resolve
- Essential requirements are applied inconsistently or missed altogether
- Ongoing IT investments appear fully disconnected from priority business challenges and objectives, creating significant business risks

*Business Architecture Now, Not Later? A Lesson from Crisis Management
BrightTALK Recorded 13 April 2017
https://www.brighttalk.com/webcast/12231/253795
Evaluating Technical Debt From a Business Perspective

Matrix represents IT architectures as a whole or portions thereof

Application systems are plotted on this matrix

Initiatives may use this plotting approach based on the applications impacted

Degradation of data, application and technical architectures

Level of IT & business architecture misalignment

Continuous business / IT architecture alignment, with minimal disruption and capital investment

Complete IT architecture replacement required, which triggers major, highly disruptive capital investment

Major IT portfolio investment needed to align business & IT architectures & address IT architecture degradation

Source: Business Architecture Associates, Inc.
IT Investments Must Look Beyond Technical Architecture to Address Technical Debt, Business Challenges

- Current-to-target state transformation comprises many individual initiatives moving towards common business objectives, in cohesive fashion, over extended period of time

“Rainbow Model” represents transformational journey that concurrently transforms business architecture and data, application, application and technical architectures

When journey only travels across technical architecture, business value is highly constrained

At many organizations, IT will spend 10’s or 100’s of millions of dollars annually, whether those investments are business-driven or not.

It is incumbent upon the business to ensure that these investments are business-driven and deliver business value by:

- Framing investments in business terms that clearly articulate and reconcile business objectives and investment focal points within the business, before the discussion shifts to IT.
- Ensuring that all IT investments have traceability back to business objectives and impacted business focal points.
- IT spending is a constant; but can the business directly trace dollars spent back to the improvement in customer and related stakeholder value and overall improvement in business capabilities?
Transformation Planning Leverages Business Architecture Based Technical Debt Metrics

Business / IT Architecture Alignment Sample Metrics
- Capability Instances Across IT Assets
- Capability Automation Percentages
- Capability Automation Percentages Across Value Stream Stages

Metrics require business-to-IT architecture cross-mappings

Degradation data, application and technical architectures

Quadrant I
- Application
  - IT Architecture Metrics
    - Reliability
    - Security
    - Maintainability
    - Performance Efficiency
  - Metrics supported by work from Consortium for IT Software Quality (CISQ)

Quadrant II
- Level of IT & business architecture misalignment

Quadrant III
- Capability Instances Across IT Assets

Quadrant IV
- Capability Automation Percentages Across Value Stream Stages

Source: Business Architecture Associates, Inc.
Using Technical Debt Matrix as input to Business-Driven, IT Transformation & Investments

**Decision matrix provides rapid analysis for executives to:**

- Invest wisely in business-aligned IT solutions (Q II / Q III)
- Determine when technical architecture upgrade satisfies business needs (Q IV)
- Avoid reinvesting in fully bankrupt IT assets (Q I)
- Evaluate among business/IT alignment scenarios, such as cross-business unit system consolidation, transform in place, migrate to new IT architecture

**Application**

**Source:** Business Architecture Associates, Inc.
What Technical Debt Analysis from a Business and an IT Perspective Tells Us

- Capability mapping to IT architectures exposes major IT architecture challenges by exposing:
  - Massive capability-related redundancies, where what the business does is implemented in hundreds or thousands of systems and technologies
  - Fragmentation and inconsistencies in what the business does
- Redundancies, fragmentation and inconsistencies:
  - Lead to poorly aligned and often conflicting information and related business challenges
  - Destabilize IT architectures, making them particularly difficult to change in substantive ways
  - Stymie investments to align IT architectures to business strategy and business architecture
- The good news: capabilities, and business architecture in general, provide insights into phased transformation options and related business-driven strategies
Business Architecture: Framing Strategy Definition through Solution Deployment

Business architecture:
- Informs strategy
- Interprets strategy
- Provides rapid business and IT architecture impacts prior to project definition
- Helps frame initiatives
- Used end-to-end to scope requirements, frame IT deployments
- Ensures link back to business objectives

Source: Business Architecture Guild, BIZBOK® Guide v6.0
Leveraging the Business Architecture / IT Architecture Transformation Framework™

Current Business Architecture

Business Transformation

Synchronized Business / IT Transformation

IT Transformation

Current IT Architecture

Source: TSG, Inc.
To Maximize Value, IT Investments Must be Readily Traceable to Clearly Defined Business Objectives

- Steps to ensuring that IT investments are driven by business objectives:
  - Set clear, measurable, attainable business objectives
  - Frame objectives through capability, value stream, information and stakeholder perspectives
  - Frame IT architecture impacts through business architecture lens
  - Highlight current state IT architecture constraints to the delivery of business objectives
  - Align IT transformation plans with corresponding business transformation plans
Target State Architecture Concepts:

Microservices:
- Organized around capabilities*
- Capabilities and (micro) services share common principles, both being object based
- Capability decomposition enables microservice definition and refinement

Cloud deployment
- Capability usage across business unit and value streams provide key input to cloud strategy context
- Generally, supporting and non-core capabilities are more cloud suitable
- In all cases, capability framed services provides greater business agility and cloud options, now or later

Current to Future State IT Architecture Leveraging Capabilities to Define Legacy Impacts, Future State Services


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Business-Driven, IT Architecture Alignment & Transformation Requires a Robust Knowledgebase

Clearly defined relationships among business and IT architecture domains within business architecture knowledgebase are essential to business-driven, IT architecture alignment and transformation.
Businesses Should Seek Continuous, Non-Disruptive, Business-Driven, Business / IT Alignment

Today, most businesses undergo disruptive, large-scale, very expensive IT transformations.

These transformations are characterized by many individual business unit investments in siloed IT systems.

This pattern of disruption will continue until businesses shift to a business-driven IT transformation and investment approach.

Businesses should seek to achieve continuous, non-disruptive transformative alignment, driven by business objectives from a holistic perspective.
Shifting to a Business-Driven, IT Transformation Perspective

- Shift from a business unit-specific, application architecture-driven approach to framing IT investments from a capability and stakeholder value perspective.

- Where IT programs and investments are not traceable to business objectives, reestablish the link to strategy as viewed through capability, value stream and stakeholder lens.

- Frame initiatives from a business perspective and not simply based on the application systems involved in the effort.

- Highlight overlap of initiatives based on capability and value related impacts.

- Consider the direct business value of every IT dollar spent.
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Thank You!

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