Architecture Strategy Choreographs the Dance of Change

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Outline

• Architecture 501
  ▪ or Architecture for dummies the intelligent

• Enterprise Architecture 501
  ▪ or Enterprise Architecture for dummies the intelligent

• Strategy 501
  ▪ or Strategy for dummies the intelligent

• Putting the Lessons Together
Architecture 501

- What is architecture?
  - the set of decisions that an architect makes

- What is an architect?
  - the person who makes architecturally significant decisions

- What is architecturally significant?
  - the architect decides

absolute nonsense, or really keen sense?

What is Architecture?

- Architecture is the organizational structure of a system
  - the elements or components that comprise the system, their externally visible properties, and their interrelationships
  - the architectural mechanisms that address cross-cutting concerns or systemic properties

- Architecture is the expression, in terms of views and descriptions, of a set of decisions addressing
  - system strategy
  - system decomposition and composition
  - system properties or cross-cutting concerns
  - system integrity
Architecture Decision Model

Architectural Strategy
- Translates business strategy to architecture strategy; sets technical direction for the system; establishes architectural vision, principles, philosophy and objectives
- Focus: make high-level decisions that will strongly influence the architecture of the system; rule certain choices out, and guide selection and tradeoff decisions

Architecture
- Structures and relationships; described in various views; documents assumptions and rationale
- Focus: provide overall system views, showing system building-blocks and their interrelationships; address cross-cutting concerns; take a system-wide view in setting priorities and making tradeoffs

Architectural Guidelines, Policies and Standards
- Use model and guidelines for applying the architecture; policies, mandates and standards to address architecture objectives; recommendations
- Focus: guide engineers in creating designs that maintain the integrity of the architecture; guide procurers in purchasing technologies and solutions

What is Architecturally Significant?
- A concern is architecturally significant if it must be dealt with at the level of the system
  - It is largely a matter of scope of impact
    - strategic and broad impact ==> architecturally significant

[Diagram showing Enterprise, Solution, Application]
Principles to Guide Architects

- **Minimalist Architecture Principle:**
  - Keep your architecture decision set as small as it possibly can be, while still meeting your architectural objectives.
  - *If a decision can be delegated to someone with a more narrow scope of responsibility, then do so!*

- **Decisions with Teeth Principle**
  - Only make a decision part of your architecture if you can make it stick
  - *There must be a process to ensure the decision is adhered to*
  - *or you must be passionate enough about it to do what it takes*

- **Connect-the-Dots Principle**
  - Show how decisions relate to higher level goals or decisions
  - *You must document and communicate this traceability*

Enterprise Architecture 501

- **What is Enterprise Architecture?**
  - The defining characteristic that differentiates Enterprise Architecture from other architectures is that the *system* of interest is the entire enterprise
  - concerns and decisions are addressed at enterprise scope
  - it crosses (internal) organizational boundaries e.g.,
    - covers multiple business units
    - crosses functional boundaries
Evolving Definition of Enterprise Architecture

- The definition of Enterprise Architecture has been evolving
  - Technology Architecture alone was not sufficient to address enterprise IT goals like “a single view of the customer”
  - Enterprise IT Architecture alone is not sufficient to ensure business/IT alignment

Evolving Definition of EA
Broader Scope, Higher Potential Value

- EA = ETA
- EA = EWITA
- EA = BA + EWITA

EA = TA
Reduce IT cost and enhance operations

EA = EWITA
Enhance Value Management

EA = BA + EWITA
Enhance Business/IT Alignment
Evolution of Organizational Design

- Organizational Design has also progressed through a series of “revolutions”

- functional specialization
- business process reengineering
- enterprise architecture

Evolutionary Paths Converge at Enterprise Architecture

- Organizational Design and Enterprise Architecture have converged because
  - we cannot ignore technology in business process design
  - we cannot ignore the business in technology solution design

- Enterprise Architecture = the architecture of business capabilities
  - We need to design business capabilities, that are a combination of
    - people
    - process and
    - technology
  - working together to produce business results
Business Capabilities

- Business capabilities may be
  - inherent in people/process only (manual)
    - very few left these days
  - provided by fully automated systems
    - not too common in most industries
  - produced by a collaboration between people and technology in technology-enabled processes
    - create more efficient and effective processes
    - enable innovation through better access to information, enhanced productivity or by acquisition by purchasing technology solutions
  - aligned by strategic performance objectives

EA as Business Capabilities Architecture

What Does it Look Like?

External Influences

Suppliers
- Hardware
- Television Programs
- Movies
- Website Content

Core Business
- Manage Suppliers
- Acquire Content
- Manage Content
- Distribute Content
- Content
- Manage Technology
- Manage People
- Manage Brand
- Manage Services
- Manage Customer

Customers
- TV Regulators
- Pressure Groups
- Government
- Competitors
- Internet Portals
- Other Channels
- Customers

New Entrants and Substitutes
Strategy 501

• What is strategy?
  § Strategy sets direction, articulating a high-level path forward

• What is business strategy?
  § Our business strategy establishes
    • our unique identity
    • our differentiating value proposition
    • our differentiating capabilities

Strategy Formulation: What is our unique Identity?

• The key here is a Statement of Identity
  § that is crisp, memorable, easy-to-communicate
  § that will align our organization and distinguish us from others in the marketplace:
    • “We are the easy-to-use smart technology company” (Apple?)
    • “You can depend on our products” (HP?)
    • “We are the low-price airline” (Southwest?)
  § What are we known for, and what do we want to be known for?
Strategy Formulation: What is our Value Proposition?

Industry
- What is the structure of the industry?
- What trends and forces could (re)shape the industry?

Us
- What is our value proposition?
- What value will be added by others?
- How will this differentiate us?

Customers
- What needs characterize the market segments?
- What trends and forces could (re)shape these markets?

Competitors
- What is their value proposition?

Strategy Formulation: What Capabilities do we Need to Build?

Us

Identity

Value Proposition

Capabilities

What capabilities do we need to
- create
- enhance
- sustain
to deliver our value proposition?
Strategy Formulation: What Role will the Value Network to Play?

- Us
  - Identity
  - Value Proposition
  - Capabilities
  - Value Network
  - Enhanced Value
  - Added Capabilities

Strategy Implementation

- Strategy implementation has two critical parts
  - transmission: not just communication of the strategy, but transfer of energy and empowerment
  - assessing effectiveness:
    - establish performance measures related to each strategic objective
    - monitor progress toward objectives
Strategy Implementation: Transmission

- **Goal:** empower, invigorate and inspire the entire organization to do their best work to accomplish the business strategy
  - because they can make a difference, they will!

- **Key tool:** Strategy Maps, showing how each group aligns with and expands on higher level
  - identity
  - value proposition
  - capabilities

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Strategy Implementation: Assessment

- **Assess performance**
  - set sub-ordinate objectives related to strategic business objectives
    - from strategic to tactical
  - monitor progress towards strategic objectives
    - from the ground up

- **Key tool:**
  - Balanced Scorecard
  - at every level

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It All Seems So Simple
Yet …

"Business" creates strategy

"IT doesn't get it!"

"The business doesn't get IT!"

"IT doesn't matter!", Nicholas Carr, HBR, May 2003

Putting the Lessons Together

Current EA informs Business Strategy

Business Strategy is refined in the next generation EA

EA as Business Capabilities Architecture
Architecture Strategy Choreographs the Dance of Change

Review

- Key Lessons
  - Architecture addresses concerns that have strategic and broad impact across the system.
  - Enterprise architecture is most effectively treated as the architecture of the capabilities of the business, where capabilities are created by people, process, and technology together.
  - Competitive strategy establishes the organization’s unique identity, its differentiating value proposition and its priorities for building, sustaining and jettisoning capabilities.
  - Now Enterprise Architecture is the natural next step after business strategy, and creates the bridge between business strategy and technical strategy.
Resources
GEAO

• The Global Enterprise Architecture Organisation (GEAO)
  
  ▪ http://www.geao.org/

References
Architecture Books

• Hofmeister et al. *Applied Software Architecture*, 2000
References
Strategy Books

  - If your management team uses the Balanced Scorecard, this one is a must read. Strengths: covers Balanced Scorecard and Strategy Maps.
  - Very highly recommended! Strengths: good treatment of product platforms
  - *This is a classic!* Strengths: very good treatment of strategy, analysis of competition, market signals, industry structure

References
Architecture Papers

- Architecture
  The following papers are published on [http://www.bredemeyer.com/papers.htm](http://www.bredemeyer.com/papers.htm)
References
Strategy Papers

• Strategy

Resources

• Web Resource Sites
  § Resources for Software Architects: http://www.bredemeyer.com
  § Enterprise-wide IT Architecture: http://www.ewita.com
  § Global Enterprise Architecture Organisation: http://www.geao.org/
  § Enterprise Architecture Community: http://www.eacommunity.com/

• Enterprise Architecture Project Sites
  § Department of Commerce IT Enterprise Architecture Home Page http://www.hpcc.noaa.gov/docita/
  § HCFA IT Architecture site: http://www.hcfa.gov/standards/ita/itarch.asp
  § NASCIO's Adaptive Enterprise Architecture Development Program Resources https://www.nascio.org/hotissues/EA/index.cfm#tool-kit
Training

- Bredemeyer Consulting’s *Enterprise Architecture Workshop* and *Role of the Architect Workshop* both include a module strategy on that describes and lets you practice our approach to Architectural Strategy. See [http://www.bredemeyer.com](http://www.bredemeyer.com)
- Grove Consultant’s International *Strategic Visioning* training will provide you with a very useful skill in graphically facilitating groups through the strategy process. See [http://www.grove.com](http://www.grove.com)