Strategic and Operational Architecture Management Processes
Quality Gates, Metrics and KPIs

act!
Klaus D. Niemann
Managing Director and Partner

John F. Kennedy Platz 9, D-38100 Braunschweig
T +49 (0) 531 / 12337 0
F +49 (0) 531 / 12337 20
E info@act-consulting.de
W www.act-consulting.de
www.enterprise-architecture.de

Architecture World '07
## References

### Leading Life and Non-Life Insurance Company
- Post-Merger Application Portfolio Analysis and Optimization;

### Health Insurance Company
- Definition and Implementation of Architecture and Governance Board.

### Building Society
- Implementation of strategic Architecture Management.

### Bank
- Application Portfolio Model and Implementation of Application Management.

### Health Insurance Company

### Bank
- Architecture Audit, Reference Architecture for Multi-Channel-Banking.

### Automotive
Organizations

- Working Member of Architecture Forum
- TOGAF Development
- Conference Presentations

- Member of International Committee on EA Standards
- Lead Author for „Enterprise Architecture Management Guide“

- Partnership

- Author for „Journal of Enterprise Architecture“

- act! Architecture Management Days
- German EA Forum since 2003
Contents

- The Purpose of an Enterprise Architecture
  - The CIO's Management Information System

- The EA Process
  - Strategic and operational Architecture Management Processes

- The big Picture

- The Role of Architecture Management in developing and enforcing Standards
  - Commodities and Differentiators: How to prioritize Standards Development
Szenario: Infrastructure Consolidation

Given a large, distributed and extremely heterogenous infrastructure environment, the tasks of
- consolidation,
- ongoing optimization and
- standardized development are highly challenging:

- Impact of changes within System Architecture
- Effects on applications
- Support of present processes and OUs
- Side effects on projects
- Fulfillment of requirements
- Standards’ compliance
Development of an Enterprise Architecture

- Business architecture
- Application architecture
- System architecture
- Transition landscape
- Requirements
- Standards

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Enterprise Architecture Reveals Relations

- Application architecture
  - Application system
    - Service
    - Project
  - Component
    - Interface
    - Platform
      - Device
      - Infrastructure system
      - Platform
  - Requirements
    - Process
    - Goal
    - Org. Unit
    - Driver
- System architecture
  - Application landscape
  - Business architecture
    - Goal
    - Org. Unit
    - Driver
    - Process
What is an Enterprise Architecture?

The term enterprise architecture refers to a structured, harmonized and dynamic collection of plans for the development of an enterprise’s IT landscape:

1. Organizational charts
2. Business Process Models
3. Goals and strategic plans
4. Application Maps
5. Class Models
6. …

This architecture

- is arranged in various levels of detail and views,
- is specifically designed for certain stakeholders (e.g. managers, planners, owners and designers),
- illustrates different aspects of IT systems (e.g. data, functions, interfaces, platforms, networks) and their alignment with the business (e.g. objectives, strategies, business processes) in past, present and future scenarios.

⇒ builds the basis for informed decision making

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Architecture Management ...

- aligns IT to the business and covers the span between strategy and implementation.
- ensures the correct and reliable transformation from strategy to operational systems through well-defined and repeatable architecture management processes.
- is the EA process and one of the three building blocks of a successful EA practice.

Enterprise Strategy
- Objectives
- Constraints
- Organization
- Processes
- Products

Implementation
- Applications
- Frameworks
- Patterns
- Infrastructure
- Platforms

Architecture World '07
Architecture Management ...

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EA Processes

Strategic Architecture Management
- Plan and develop EA
- Plan and develop application portfolio
- Plan and develop business architecture

Enterprise Strategy
- Objectives
- Constraints
- Organization
- Processes
- Products

Operational Architecture Management
- Plan and develop software architecture
- Plan and develop systems architecture
- Plan and develop reference architectures

Implementation
- Applications
- Frameworks
- Patterns
- Infrastructure
- Platforms

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Processes of Architecture Management

- Analysis of Enterprise- and IT-Strategy, definition of objectives and framework
- Documentation of requirements and Business Drivers
- Drawing of map of components
- Drawing of map of processes
- Definition of services
- Compilation of glossary/definitions of terms

- Definition and maintenance of structure of Enterprise Architecture
- Generation and maintenance of model of Enterprise Architecture

- Specification of valid reference Architectures and application scenarios
- Expertise to cover Architecture-determining requirements

- Development and maintenance of Infrastructure Systems Portfolio
- Carrying out technology projects (Development, optimization, allocation)
- Definition of services

- Analysis of application- and infrastructure landscape
- Generation and evaluation of application portfolio scenarios
- Derive application portfolio plan

- Determination of requirements on architecture
- and evaluation thereof
- Generation of Architecture scenarios
- Carry out Technical Prototyping
- Planning of Implementation
- Carry out Architecture reviews
- Definition of Architecture characteristics
t-eam: toolbox for enterprise architecture management

business architecture
- objectives
- strategies
- requirements
- constraints
- business processes
- business components

application architecture
- services
- applications
- data
- security
- components
- interfaces

systems architecture
- platforms
- service & support levels
- environments
- infrastructure systems

Enterprise Architecture Organization

your IT in line with business strategy
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A comprehensive Architecture Management is...

- closely cross-linked with the other IT-Management processes
- operatively and strategically focused
- value oriented
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Cross-linking of IT-Management Processes I
Project Example
your IT in line with business strategy

Architecture Management Context: Initialize a new project

Demand
- Demand Management
  - Demand (incl. Cost/benefit)
    - Accept /Deny
  - New Order

Enable
- Architecture Management
  - Proposal for solution
  - Sec. Appr.

Supply
- Program & Project Management
- Quality Management
- Risk & Security Management
- Portfolio Management
- Service Management

Solution?
- Solution?

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**Architecture Management Context:** Initialize a new project

1. Demand Management requires Solution Proposal (e.g. appropriate Reference Architecture incl. heuristics, new architecture scenario) in order to complete project proposal.
3. Demand Management presents project proposal to Portfolio Management.
4. Demand Management establishes new project.
**Project Example**

**Architecture Management Context:** Initialize a new project

---

**Demand**

- Solution?
- Demand Management
- Demand (incl. Cost/benefit)
- Accept/Deny
- New Order

**Enable**

1. Proposal for solution
2. Sec. Check
4. Derive business case

**Supply**

- Develop solution proposal
- Identify architecture determining factors from requirements
- Prioritize architecture determining factors
- Evaluate reference architectures for usable architecture scenarios
- Evaluate solution alternatives
- Evaluate architecture scenarios
- Specify favored architecture scenario
- Derive business case

---

Architecture World '07
Architecture Management Context: Initialize a new project

Demand

Supply

Enable

Roles

- Responsible: Operational Architect
- Participating: Analyst
- Coordinating: Strategic Architect
Architecture Management Context: Initialize a new project

Demand

Demand Management

Demand (incl. Cost/ benefit)

Accept /Deny

New Order

Enable

Service Manager

Proposition for solution

Sec. Check

Risk & Security

Evaluate reference architectures for usable architecture scenarios

Evaluate solution alternatives

Evaluate architecture scenarios

Specify favorized architecture scenario

Derive business case

Supply

Program & Project Management

Quality Management

Change & Configuration

Roles

Responsible: Operational Architect

Participating: Analyst

Coordinating: Strategic Architect

Input

⇒ Recent State
⇒ Requirements
⇒ Expected benefit (strategic, economical)
Project Example
your IT in line with business strategy

Architecture Management Context: Initialize a new project

- **Demand**
  - Demand Management
  - Portfolio Management
  - New Order
  - Demand (incl. Cost/benefit)
  - Accept/Deny

- **Enable**
  - Service Management
  - Proposal for solution
  - Sec.Check
  - Proposal for solution

- **Supply**
  - Program & Project Management
  - Quality Management
  - Change & Configuration

- **Roles**
  - Responsible: Operational Architect
  - Participating: Analyst
  - Coordinating: Strategic Architect

- **Output**
  - System short description (preliminary version)
  - Solution alternatives (preliminary version)
  - Business case (preliminary version)
Project Example

your IT in line with business strategy

Architecture Management Context: Initialize a new project

**Demand**: Demand Management

- Demand (incl. Cost/ Benefit)
- Accept /Deny
- New Order

**Enable**: Demand Management

- Solution?
- Proposal for solution

**Supply**: Supply

- Sec. Check
- Sec. Appr.
- Program & Project
- Change & Configuration

- Responsible: Operational Architect
- Participating: Analyst
- Coordinating: Strategic Architect

**Quality requirements and measurements**

**Input**
- Recent State: Existence and estimate of the completeness
- Requirements: Existence and estimate of the completeness
- Documentation on expected benefit: Existence and estimate of the completeness

**Output**
- System short description: Existence; Evaluation of the expected degree of performance and coverage of the requirements;
- Solution alternatives: Existence; Quality of documentation, especially documentation of decision reasons
- Business Case: Existence; Estimate of the completeness
- Quality of the process of developing solution proposal

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Growing Importance of Architecture

Architecture is not only subject to operational (project-) objectives, but also and more to strategic challenges: Business-IT-alignment, monitoring and controlling of IT (Governance), compliance to legal requirements (e.g. Sarbanes-Oxley).

The road from the development of project architectures leads to the overall and strategic controlling of the business-architecture.

The focus of Architecture on a single project must expand to the business-wide application landscape to meet the requirements on consolidation, re-use, and standardization.

The strategy of Architecture on a single project must expand to the business-wide application landscape to meet the requirements on consolidation, re-use, and standardization.
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Architecture Governance

- Projects are fed by a defined set of standards
- Compliance with standards is developed with Solution Architects
- An operative Architecture process is established
- Architecture Governance instruments (Reviews, Boards) are regularly applied
- Standards are continuously cultivated
Strategic Planning of Standards Development
Strategic Planning of Standards Development

Win Market/Segment Leadership

Win Cost Leadership

Change the Business

Differentiators

Commodities

Ensure Cost Leadership

Run the Business

Ensure Market/Segment Leadership

Example

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Strategic Planning of Standards Development

- **Differentiators**
- **Enablers**
- **Change the Business**
- **Run the Business**
- **Commodities**
- **Resources**
- **Drivers**
- **Basics**
Strategic Planning of Standards Development

- Differentiators
  - e.g. Product Development

- Change the Business
  - e.g. CRM

- Resources
  - e.g. Telephony

- Drivers
  - e.g. ECM

- Commodities
  - e.g. Telephony

- Basics

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Standardization vs. Differentiators and Commodities

IT-Services, contributing to business differentiators, need adjustment to standards or exceptions based on business opportunities.

IT-Services, contributing to business commodities, must be highly standardized, except for constraints.

Exceptions due to constraints (e.g. legal regulations)

Exceptions due to business opportunities

Project generates differentiating characteristics for the business!
Reduction of Non-Standard Services

Improve efficiency through reduction of non-standard services.

Concentrate on development of standards for differentiator services - high value at low cost.

Development of Standards

Exceptions due to constraints (e.g. legal regulations)

Exceptions due to business opportunities
Thank you very much for your attention!