

# Evaluating the Benefits of Architectural Work

Eetu Niemi  
Aisa Project  
7.2.2007



# Introduction

- Architectural work has to be justified by demonstrating positive impacts
- Challenges
  - Undefined and unconfirmed benefits of architectural work
  - Lack of established metrics and evaluation criteria
- This study aims to
  - Define the benefits of architectural work
  - Present evaluation criteria and metrics for quantifying the realization of benefits



# Research Process

- **Literature review on architectural work benefits**
  - Charting literature for references of benefits.
  - Product: preliminary list of 27 benefits
- **Workshop III 8.8.06**
- **Composing a categorization of architectural work benefits**
  - Analyzing and combining results
  - Product: categorization of EA benefits
- **Literature review on architectural work benefit evaluation**
  - Charting for evaluation criteria and metrics
  - Assigning the criteria and metrics found to the architectural benefits
  - Products:
    - list of evaluation criteria and metrics assigned to 23 architectural work benefits
    - list of seven emphasized benefits and their related metrics and evaluation criteria
- **Workshop IV 12.10.06**
- **Reporting**
  - Analyzing and presenting the results of the workshop with the architectural work benefits, benefit evaluation criteria and metrics
  - Product: report



# Architectural Work Benefits

1	Evolutionary EA development & governance
2	Provides a holistic view of the enterprise
3	Improved alignment to business strategy
4	Improved alignment with partners
5	Improved asset management
6	Improved business processes
7	Improved business-IT alignment
8	Improved change management
9	Improved communication
10	Improved customer orientation
11	Improved decision making
12	Improved innovation
13	Improved management of IT investments

14	Improved risk management
15	Improved staff management
16	Improved strategic agility
17	Increased economies of scale
18	Increased efficiency
19	Increased interoperability and integration
20	Increased market value
21	Increased quality
22	Increased reusability
23	Increased stability
24	Increased standardization
25	Reduced complexity
26	Reduced costs
27	Shortened cycle times



# Example of Metrics: Increased Efficiency

Evaluation target	Metrics	Type	Sources
<b>Organization</b>	Organizational costs: Costs of transactions, Overhead costs and Infrastructure costs	Objective Financial	(Drury 1992; Morgan 2005)
	Accordance to budget (organization-level/business-unit level/department-level group level)	Objective Number	(Drury 1992)
	Organizational Financial Metrics: Revenue growth, Profitability, Cash flow, Return on Investment, Return on Equity, Economic Value Added, Market share	Objective Financial	(Drury 1992; Morgan 2005; Papalexandris, Ioannou et al. 2005)
	Costs avoided through elimination of redundant/duplicative/overlapping functions/departments/groups/teams/positions	Objective Financial	(GAO 2003; SETLabs 2004)
<b>IT Assets</b>	Number of assets - Systems - Software products - Licenses - Servers - Etc.	Objective Number	(Rosser 2006)
	- All IT costs - Maintenance costs - Operations cost	Objective Financial	(SETLabs 2004; Rosser 2006)

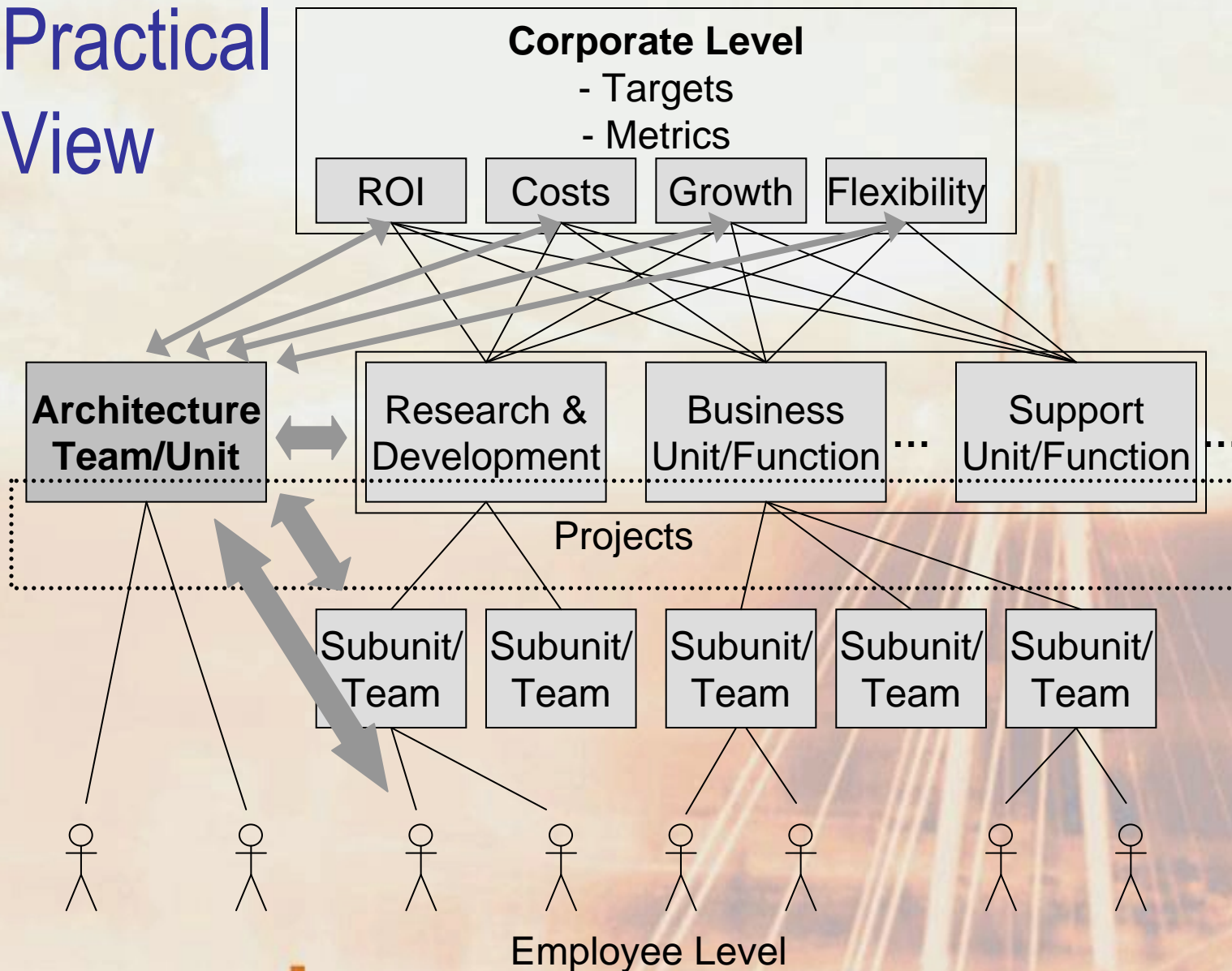


# Challenges

- Proposed metrics too great in number
  - Would not suit practice without a guiding reference model
- Practical view of architectural work benefits and their evaluation (developed by the company representatives in workshop IV)
- Based on three categories of benefits (costs, growth, and flexibility)
    - Basic targets and needs of a business enterprise and its owners



# Practical View



# Conclusion (1/3)

- Report presents
  - benefits of architectural work
  - evaluation criteria and metrics for the benefits
  - classification of benefits (basic need of an enterprise, suggested by the company representatives in workshop IV)
  - practical view of architectural work benefits and their evaluation (developed by the company representatives in workshop IV)





# Conclusion (2/3)

- Contribution to practice
  - architectural work benefits as a basis for defining the objectives of architectural work
  - rationalizing architectural work in the initial stages by presenting potential benefits
  - benefits and their related metrics and evaluation criteria as a basis for developing a measurement system
  - the practical view as a reference model for a generic corporate measurement system



# Conclusion 3/3

- Challenges
    - a great number of factors affect the realization of benefits
    - defining a generic set of benefits with respective metrics
      - the prioritization of benefits is company-specific
    - balancing between presenting short-term and long-term benefits
    - architectural work benefits cannot be directly measured (?)
    - communication as a prerequisite to benefits
- How to attribute realized benefits to architectural work?

