Architectural Work Status –
A Case Study of Three Finnish Business Enterprises

Eetu Niemi, MSc (econ.), Researcher

eetu.niemi@titu.jyu.fi

Project AISA (http://www.titu.jyu.fi/aisa/)
Outline

- Enterprise Architecture (EA)
- Study Background
- Research Process
- Generic Evaluation Model for Enterprise Architecture
- Enterprise Architecture Work Status
- Enterprise Architecture Work Challenges
- Summary and Development Suggestions
- Further Research
Enterprise Architecture (EA)

Enterprise Architecture

Business Architecture

Information Architecture

Systems / Applications Architecture

Technology Architecture / Infrastructure
Study Background

- Academic and industry interest
- Potential for significant benefits
- Fragmented research domain
- Few studies on EA work status

What is the status of EA work in companies?
Research Process

Generic Evaluation Model for EA

Case companies

Semi-structured focus group interviews

Data analysis: EA work status, challenges & maturity

Conclusions & suggestions for development

http://www.titu.jyu.fi/aisa/
Generic Evaluation Model for EA

- The model consists of
  - areas of EA work (adapted from EA critical success factors)
  - key questions related to these areas
  - six maturity levels

- Introduced in detail by Ylimäki (2006)
Enterprise Architecture Work Status

- Company 1 – IT service provider
  - EA work methods, models and tools
  - EA evaluation methods, metrics and criteria
  - Knowledge and skills
  - Project management practices

- Company 2 – IT user organization
  - EA frameworks and work methods
  - EA policies
  - EA planning linked to IT investments

- Company 3 – IT user organization
  - Objectives and benefits
  - Business-driven
  - Development plan
  - Independent EA team

http://www.titu.jyu.fi/aisa/
Enterprise Architecture Work Challenges

Scoping & Purpose
- Benefits and objectives identified superficially

Maturity levels
0 Undefined
1 Initial
2 Incomplete
3 Defined
4 Managed and measured
5 Optimizing

IT Investment and Acquisition
Business-Drivenness
Governance
Assessment / Evaluation
EA Models and Artefacts
Project Management
Development Methodology, Framework and Tool Support
Communication & Common Language
Skilled Team and Training / Education
Commitment
Organizational Culture
Enterprise Architecture Work Challenges

Organizational Culture
- Commitment supports EA work
- Number of challenges identified

Scoping and Purpose

IT Investment and Acquisition Strategies

Business-Drivenness

Governance

Assessment / Evaluation

EA Models and Artefacts

Project Management

Development Methodology, Framework and Tool Support

Commitment

Communication & Common Language

Skilled Team and Training / Education

Maturity levels

0 Undefined
1 Initial
2 Incomplete
3 Defined
4 Managed and measured
5 Optimizing

http://www.titu.jyu.fi/aisa/
Enterprise Architecture Work Challenges

Scoping and Purpose

Organizational Culture

Commitment
- Management commitment & awareness
- IT organizations committed
- EA compliance guidelines unfinished

IT Investment and Acquisition Strategies

Business-Drivenness

Governance

Assessment / Evaluation

EA Models and Artefacts

Project Management

Communication & Common Language

Skilled Team and Training / Education

Development Methodology, Framework and Tool Support

Maturity levels
- Undefined
- Initial
- Incomplete
- Defined
- Managed and measured
- Optimizing

http://www.titu.jyu.fi/aisa/
Enterprise Architecture Work Challenges

Scoping and Purpose

Organizational Culture

Commitment

Business-Drivenness

Governance

Assessment / Evaluation

EA Models and Artefacts

Project Management

Development Methodology, Framework and Tool Support

Communication & Common Language

- Communication established
- Room for improvement
- Number of EA concepts defined
- Communication challenges discussed

Maturity levels

0 Undefined
1 Initial
2 Incomplete
3 Defined
4 Managed and measured

http://www.titu.jyu.fi/aisa/
Enterprise Architecture Work Challenges

Maturity levels
- 0 Undefined
- 1 Initial
- 2 Incomplete
- 3 Defined
- 4 Managed and measured
- 5 Optimizing

Skilled Team and Training / Education
- Full-time EA team with defined roles
- Chief and business architects not named
- Needs not thoroughly charted
- Training and education available

Scoping and Purpose
Organizational Culture
Commitment
Communication & Common Language
Business-Drivenness
Governance
Assessment / Evaluation
EA Models and Artefacts
Development Methodology, Framework and Tool Support
IT Investment and Acquisition Strategies
Enterprise Architecture Work Challenges

Maturity levels
- 0 Undefined
- 1 Initial
- 2 Incomplete
- 3 Defined
- 4 Managed and measured
- 5 Optimizing

Project Management
- Established practices
- Coordination works well
- Best practices collected

http://www.titu.jyu.fi/aisa/
Enterprise Architecture Work Challenges

- Scoping and Purpose
- Organizational Culture
- Commitment
- Communication & Common Language
- Skilled Team and Training / Education
- Development Methodology, Framework and Tool Support
- EA Models and Artefacts
- Assessment / Evaluation
- Governance
- IT Investment and Acquisition Strategies

Maturity levels:
0 Undefined
1 Initial
2 Incomplete
3 Defined
4 Managed and measured
5 Optimizing

Development Methodology, Framework and Tool Support
- Framework defined and documented
- No defined EA development methodology
- Multiple tools used

http://www.titu.jyu.fi/aisa/
Enterprise Architecture Work Challenges

- Scoping and Purpose
- Organizational Culture
- Commitment
- Communication & Common Language
- Skilled Team and Training / Education
- Project Management
- IT Investment and Acquisition Strategies
- Business-Drivenness
- Governance
- Assessment / Evaluation

Maturity levels
- 0 Undefined
- 1 Initial
- 2 Incomplete
- 3 Defined
- 4 Managed and measured
- 5 Optimizing

EA Models and Artefacts
- Descriptions deficient
- Documentation plans done
- Documentation rarely systematic

http://www.titu.jyu.fi/aisa/
Enterprise Architecture Work Challenges

Scoping and Purpose

Organizational Culture

Commitment

Communication & Common Language

Skilled Team and Training / Education

IT Investment and Acquisition Strategies

Business-Drivenness

Governance

EA Models and Artefacts

Project Management

Development Methodology, Framework and Tool Support

Assessment / Evaluation
- Possibilities not extensively charted
- Evaluations occasionally made
- Rarely defined work

Maturity levels
0 Undefined
1 Initial
2 Incomplete
3 Defined
4 Managed and measured
5 Optimizing
Enterprise Architecture Work Challenges

Scoping and Purpose

- IT Investment and Acquisition Strategies
- Business-Drivenness
- Organizational Culture
- Commitment
- Communication & Common Language
- Skilled Team and Training / Education
- Project Management
- Development Methodology, Framework and Tool Support
- EA Models and Artefacts
- Assessment / Evaluation

Governance

- EA governance partially defined and documented
- Not implemented
- Connection between business and EA not fully established
- Use of existing practices

Maturity levels

- 0 Undefined
- 1 Initial
- 2 Incomplete
- 3 Defined
- 4 Managed and measured
- 5 Optimizing

http://www.titu.jyu.fi/aisa/
Enterprise Architecture Work Challenges

Business-Drivenness
- EA work mostly driven by business requirements
- Collecting requirements & ensuring traceability are a challenge

Maturity levels
0 Undefined
1 Initial
2 Incomplete
3 Defined
4 Managed and measured
5 Optimizing
IT Investment and Acquisition Strategies
- Connection between IT investment planning and EA established or being established
Summary and Development Suggestions

- EA work incomplete or at the initial state
- Challenges identified -> basis for improvement
- Development suggestions
  - Defining the benefits and objectives of EA and EA work
  - Charting & tracing business requirements
  - Carrying out business-driven EA projects
  - Displaying EA benefits to management & business
  - Charting evaluation needs and possibilities
  - Increasing interaction between business and IT
Further Research

- Prioritizing EA work areas
- Charting connections between areas
- Producing more generalizable results
- Longitudinal research