Long-Term and Sort-Term Architecture Decisions
AISA - Quality Management of Enterprise and Software Architectures

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Motivation For Study

• Challenge in Architecture Decision Making
  – Far-sighted architectural decisions are difficult to justify in the quarterly thinking.

• Open Questions:
  – What are short-term and long-term architecture decisions?
  – Why should it be done long-term architecture decisions?
  – How could it be argued for long-term architecture decisions?

• Exist a need
  – To understand what distinguish long-term and short-term decisions
  – To find ways to argue for long-term solutions
  – To identify metrics that can be used in arguing for long-term architecture solutions
Research Description

• A prestudy for research of architecture decision making (AISA-project’s 3rd year).
• Aims:
  – To define concepts: short-term and long-term architecture decision
  – To define features relating short-term and long-term architecture decisions
• Research phases and sources:
  – Literature review, concept definition
  – Some discussions with practitioners
• Results:
  – Aspects on long-term and sort-term architecture decisions and decision making
Decision, Solution - Concepts

• **Decision**
  judgment, arbitration, conclusion, finding, outcome, resolution, result, ruling, sentence, settlement, verdict

• **Solution**
  answer, clarification, elucidation, explanation, key, resolution, result, solving, unfolding, unravelling

• MOT Collins Compact Thesaurus 1.0
Short-term vs. Long-term - Concepts

- **Short-term:**
  1. of, for, or extending over a limited period.
  2. *Finance.* extending over, maturing within, or required within a short period of time, usually twelve months: *short-term credit; short-term capital.*

- **Long-term:**
  1. lasting, staying, or extending over a long time: *long-term prospects*
  2. *Finance.* maturing after a long period of time: *a long-term bond*
Architecture Planning and Decision Making Levels in Organisations

• EA Planning: Architecture visioning, road map development, principles development
  – Are we building right capabilities? Are we preparing for business changes?
  – Long-term planning

• Portfolio planning: decision of projects to be carried out and how projects link to each other
  – Are we leveraging synergies and avoiding redundant business solutions?
  – Near-term planning

• Project: solution design – design of architecture solutions
  – What is the best practical solution for in-scope business needs?
  – Current

Source: FORRESTER August 2006, Best Practices “Requirements For Long-Term Architecture”
## Decisions in Architecture Planning / Decision Making Levels

<table>
<thead>
<tr>
<th>Architecture Planning / Decision Making Level</th>
<th>Decisions</th>
</tr>
</thead>
<tbody>
<tr>
<td>EA Planning</td>
<td>• Decisions made in enterprise scope</td>
</tr>
<tr>
<td></td>
<td>• Architectural guidelines and principles, Roadmap, Architecture Visio,</td>
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<tr>
<td></td>
<td>Target architecture, etc.</td>
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<tr>
<td></td>
<td>• EA development tasks to be carried out</td>
</tr>
<tr>
<td>Portfolio planning</td>
<td>• Decisions made in enterprise / unit scope</td>
</tr>
<tr>
<td>- Choosing of the projects</td>
<td>• Projects to be carried out, prioritization of projects</td>
</tr>
<tr>
<td>Project – Solution Design</td>
<td>• Decisions made in project / system scope</td>
</tr>
<tr>
<td></td>
<td>• System’s key structural elements, relationships between elements, used</td>
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<tr>
<td></td>
<td>patterns, fitting to the context etc.</td>
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</tbody>
</table>
Short-Term vs. Long-Term Architecture Decision

• Commonly used concepts in industry: Clear definitions for these lacks.

• Suggestion on based previous concepts and definitions for these definitions:

Sort-term decision / solution
• Decision /solution is expected to have limited life span.
• It is known already in decision making that decision has to be changed in future or in solution planning that solution has to be replaced in future.
• Financial benefits are expected to be achieved quickly.

Long-term solutions
• Decision/solution is expected to have long life span.
• Decision is not expected to be changed or solution is not to be expected to be replaced.
• Financial benefits are expected to be achieved over a long time.
## Short and Long-Term Architecture Decisions in Architecture Planning Levels

<table>
<thead>
<tr>
<th></th>
<th>Short-term architecture decision</th>
<th>Long-term architecture decision</th>
</tr>
</thead>
<tbody>
<tr>
<td>EA planning:</td>
<td>Suitable for near-term strategy, near-term business environment change and near-term business trends and forecasts</td>
<td>Suitable for long-term strategy, business environment change and business trends and forecasts</td>
</tr>
<tr>
<td>Architecture visioning,</td>
<td>• Suitable for current business plans, drivers and needs BUT</td>
<td>• Suitable for current business plans, drivers and needs AND</td>
</tr>
<tr>
<td>road map development,</td>
<td>• Do not support long-term architecture visio and roadmap</td>
<td>• Support long-term architecture visio and roadmap</td>
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<tr>
<td>development,</td>
<td></td>
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<tr>
<td>development of</td>
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<tr>
<td>principles</td>
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<tr>
<td>Portfolio planning</td>
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<tr>
<td>- Choosing of the projects</td>
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<tr>
<td>Project</td>
<td>Suitable for the defined business requirements for project BUT</td>
<td>Suitable for defined business requirements for project AND</td>
</tr>
<tr>
<td>– solution design</td>
<td>• Do not support the long-term plans</td>
<td>• Supports long-term architecture plans</td>
</tr>
</tbody>
</table>
Argumentation: Short-Term Architecture Decisions (examples)

**Arguments For**
- Requires less resources (e.g. money, time and manpower) initially
  - Only acquisition/project resources required
  - Fasten time-to-market
- Yields benefits quickly
- Fulfills project/investment requirements

**Arguments Against**
- Greater costs in long-term (e.g. maintenance, standardization and integration)
- Do not typically support long-term requirements
Argumentation: Long-Term Architecture Decisions (examples)

Arguments For e.g.
- Less life cycle costs (e.g. maintenance, integration and standardization)
- Greater quality of solutions in long-term (e.g. maintainability, less complexity, agility in changes)
- Less IT costs at company level (e.g. maintenance, integration and standardization)
- Greater level of standardization and integration at company level

Arguments Against e.g.
- Requires more resources (e.g. money, time and manpower) initially
- Yields benefits in long-term
- More difficult to justify
Good Architecture Decision?

- Short-term or long-term architecture decision can be a good decision.
- Good Architecture Decision:
  - Suitable for situation
  - Arguments for decision exist
  - Consequences of decisions are identified
Summary

• This study define concepts: long-term and short-term architecture decision
• This study will be continued in the project’s 3rd year
• Future research :
  – What architecture decisions are and what kind of architecture decisions may exist?
  – In which levels architecture decisions can be done?
  – How can decisions be done and managed?
  – How architecture decisions relate to other decision making processes?