Vision on Architecture

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Abstract

Architecture is a term that is used with various meanings. This presentation shows the broader view on architecture as used at Gaudisite.nl. This vision includes customer value proposition and business proposition as part of the architecture.
Architecting Playing Field

organizational context
- customer organization
- business organization
- developing organization
- supplying organizations

operational and lifecycle context
- customer value proposition
- business proposition
- system requirements

system design

technology

 다르고 문제를 설명해보자. 

customer organization

business organization

developing organization

supplying organizations

customer value proposition

business proposition

system requirements

system design

technology

.drives

enables

.drives

enables

enables

drives
Market and Business Context

- continuously changing competitive landscape
- fast changing needs
- variation in needs

Consequence: uncertainties and unknowns

Objective of Architecture is to achieve Technical Leadership (e.g., a winning competitive position)

A good architecture facilitates fast creation of solutions, fitting the needs, and coping with uncertainties and unknowns
Our Primary Interest

developing organization

architect

system of interest
Context, Zoom-out and Zoom-in

- Customer organization
- Developing organization
- Architect
- Supplier organization

Super system
System of interest
Subsystems
Adding the Time Dimension

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past current future

customer organization
past super system
super system
future super system

developing organization
past system of interest
system of interest
future system of interest

architect
knowledge
innovation

supplier organization
past subsystems
subsystems
future subsystems

based on TRIZ

version: 0.3
September 1, 2020
SEMABentitlesInTime
Vision on Architecture

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SEMABarcitecting
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ARCVArchitectureDescription

Architecture Description

supersystem

system of interest

subsystems

past current future

characteristics
dynamics
parts

rationales
explanations
guidelines
rules

supporting evolution

prescriptive – descriptive
Example Context

- Owner
- Tenant
- Inhabitants
- Government
- Facility Management
- IT Management
- Contractor
- Installer
- Commissioner
- Suppliers
- Light Designer

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ARCVlightingContext
Example Aspects in Office Lighting

- **Customer Value Proposition**: Energy star compliance, proper lighting, information for facility management.
- **Business Proposition**: Standard solution, ease of installation and commissioning, broad application.

**System Requirements** drives:
- Compliance with network standards.
- Compliance with green star.
- Integrated in IT and facility management.
- Secure against intruders.
- Respecting privacy.
- Form compatible fixtures.
- Light quality and stability.
- Presence sensing.

**System Design** drives:
- Network topology.
- Function allocation.
- Network protocol.
- Power supply.
- Electronics integration.
- Presence sensors.
- Light sensors.
- Intelligent control.
- LED lighting.

**System Design** enables:
- Authentication.
- Encryption.
- Location information.
- Persistency.
- Synchronization.
- Lighting performance.
Design = Structure + Dynamics + Quantification

- parts
- characteristics
- dynamics
- interact
- results in
- prime interest of organization
- prime interest of customer
- functionality
- prime system responsibility

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Structure = Parts + Interfaces + Configuration

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<td>• fast creation of solutions</td>
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<td>• well-defined interfaces</td>
<td>• concurrent engineering</td>
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<td>• independent testable</td>
<td>• logistics and production</td>
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<td>• variations and changes</td>
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ARCVpartitioning
Designing Desired Qualities and Behavior

- How do parts interact to create desired dynamic behavior?
  - allocate functions
- How do desired qualities and performance emerge from the interaction?
  - dimension and configure parts and functions