Abstract

Software and System Architects frequently use the building architecture as metaphor. The maturity and visibility of building architecture makes it an attractive vehicle for illustrations.

This presentation at the formal opening of the new IST (Information and Software Technology) building, identified by ”WDC”, shows the similarities between building architectures and product architectures. One of the main areas of research of the IST is architecture, ranging from Silicon architectures to Software architectures.
The product
What is Architecting?

Understanding
Why

Describing
What

Guiding
How

Do the right things

Stakeholders
with Needs and Concerns

Requirements

Construction Constraints and Opportunities

Do the things right
Philips management objectives w.r.t. Campus

Campus Doelstellingen
* Stimulerende werkomgeving voor synergie en innovatie
* Duurzame ontwikkeling van de organisatie
* Efficiënte huisvesting

Sub-doelen:
+ Open relatie met omgeving
+ Innovatieve werkomgeving
+ Bevorderen van synergie d.m.v. gemeenschappelijke faciliteiten
+ Integratie van werken en privé
+ Blijvende positie van Philips onder de eerste elektronica concerns
+ Versnelling van innovatie-processen
+ Aantrekkingskracht toptalent
+ Opheffen versnippering
+ Versterken imago
Objectives (English translation)

- Stimulating working environment for synergy and innovation
- Enduring development of the organization
- Efficient accommodation
Subgoals (English translation)

- Open relation with environment
- Innovative working environment
- Encouraging synergy by sharing facilities
- Integration of professional and private life
- Consolidation of position of Philips as one of the leading electronic companies
- Acceleration of innovative processes
- Remove fragmentation
- Improve image
The architects vision

open
spacious
flexible
mind mapping
rooms
Wishes and concerns of the inhabitants

- Comfortable
- Concentration
- Communication
- Practical
Room for 2 persons
Concentration
Open
Spacious
The technical side of the architecture

**infrastructure**
- power
- telecom and computer network
- climate control
- light
- fire detection and prevention

**design aspects**
- maintenance
- safety
- security
- flexibility
- campus style

**construction aspects**
- legislation
- material properties
- weight, size, strength
- cost, effort
- tools

**facilities**
- sanitary
- catering
- meeting
WDC architecting mapped on "CAFCR"

What does Customer need in Product and Why?

Customer objectives
Application
Functional
Realization

Customer
What
How

Philips Management objectives
Philips Research way-of-working
Facilities Infrastructure Quality requirements
Design aspects
Construction aspects

Product
How

Customer
Application
Functional
Conceptual
Realization
Example product: Digital Video Recorder

20:00 21:00 22:00 23:00

start movie broadcast end movie

view record play view

talk

phone rings pause viewing finish conversation resume viewing

architecture; the building as a product
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Consumer Objectives

- **Time independent** entertainment and other video content
- Convenience, no hassle
- Fits in family environment
The technical side of the architecture

- **features**
  - + recording
  - + play
  - + programming (EPG?)
  - + navigation

- **design aspects**
  - + reliability
  - + safety
  - + security
  - + content protection
  - + brand style

- **infrastructure**
  - + power
  - + analog and digital network

- **construction aspects**
  - + performance
  - + physical properties
  - + weight, size
  - + cost, effort
  - + tools
Product architecting mapped on "CAFCR"

What does Customer need in Product and Why?

Customer
What
Customer objectives

Application

Product
What
Functional

Conceptual

Realization

Product
How

What
Customer

How
Application

What
Product

Why
Time independence

Home environment

Features
Infrastructure
Quality requirements

Design aspects

Construction aspects

Customer
objectives

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WDCannotatedCAFCRproduct
Architecting dynamics

Architecture; the building as a product

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WDCarchitectingDynamics
Bridging 2 worlds

Architecture; the building as a product
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WDCconclusion