Model Based IS Life Cycle management
the Case of a Defence Acquisition ERP system

Original Paper
CoreEAF – a Model Driven Approach to Information Systems
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Talk Scope
FMV Core, an ERP system Case with several technological and scientific aspects. (First version in 1994)

• Scope of the case, FMV Core

• Sustainable Business Alignment, through separations of concerns

• Enterprise modelling philosophy and architecture, without processes

Philosophical background in the Scandinavian School of Object Orientation (Kristen Nygaard, Oslo) and original ideas of the MVC concept (Tryggve Reenskaug, Oslo/Trondheim)
Organisational Scope

1500 users, 60 integration points, 1000 active projects worth 6 Billion Euros

Organisation Scope

FMV - Defence Material Administration
- Planning
- Project
- Purchasing
- Administration

FMV-Core
ProduktionsLedningsSystem

FMV Knowledge Model

Perspective
Material flow
Administration

Armed Forces

PRIO-SAP

IT-Supplier

Agile and Sustainable Life Cycle Management

Through Separation of Information from Technology, since 1994

CoreEAF Model
- about 60 versions
- System engine
- 5 generations
Model for IT based Information Systems

Philosophy: In order to provide information about “reality”, it is a good idea to make a model of “reality”, to define what the “reality” is.

- **Mission**: To provide meaningful information to people in organisations
- **Meaningful information**: Data about the reality of the people in the organisation.
- **Reality**: Perceived reality as collective phenomena knowledge and perspectives (Perception of reality is a model, of a perspective of a collective reality)
- **Phenomena knowledge**: Abstractions of: Which phenomena “exist”. How are they distinguished. How are they related to each other. Which rules apply. What should be accomplished with them. (not how)
- **Description tool**: A language for describing meaningful information, is a domain language for phenomena knowledge
Phenomena Model
Declarative Expressional Object Oriented Language
(Event Driven Parallel Data Flow Execution)

Philosophy:
Simplification/Complexity Reduction
Professional Language Compatibility
(semantic interoperability with the users)

Rules are expressions without side effects

Model of professional knowledge
First model and system 1994
About 30 business phenomena
Gradually absorbed information and functionality from several ageing and decommissioned systems
New system 3 times/year
Today 2017
5th generation information engine
230 business phenomena
10 levels of type abstraction
400 relations
3,000 data attributes
5,600 rules and calculations