Abstract

The Product Creation Process is described in its context. A phased model for Product Creation is shown. Many organizations use a phased model as blueprint for the way of working. The operational organization of the product creation process is discussed, especially the role of the operational leader.
The Product Creation Process in Business Context

Customer

Policy and Planning Process

Customer Oriented Process

Product Creation Process

People and Technology Management Process

Customer Roadmap

Business Drivers

Product roadmap

Budget, plan

Product Requirements and feedback

Presales, sales, logistics, production, service

Information

Order

Product

Support

material

Requirements and feedback

Technical Product Documentation

Product related processes

People Technology Process

Budgets

Technology, Process and People roadmaps

Product Requirements and feedback

Technical Product Documentation

Product related processes

People Technology Process

Budgets

Technology, Process and People roadmaps

Product Requirements and feedback

Technical Product Documentation

Product related processes

People Technology Process
Phasing of the PCP at Business Level

0. feasibility
1. definition
2. system design
3. engineering
4. integration & test
5. field monitoring

sales
logistics
production
service

development & engineering: marketing, project management, design
Phasing the Design Control Process

The Product Creation Process

Legend:
- [ ] core information in draft
- [ ] 50%
- [ ] most information available in concept
- [ ] information is stable enough to use heavier change control
- full under development
- preparing or updating work

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PCPdesignPhases
Advantages and Disadvantages of a Phased Process

**benefits**
- blueprint: how to work
- reuse of experience
- employees know *what* and *when*
- reference for management

**disadvantages**
- following blueprint blindly
- too bureaucratic
- transitions treated black and white
Characteristics of a Phase Model

The Product Creation Process

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PCPcharacteristics
Decisions and Phase Transitions

Define a minimal set of *large-impact* decisions.

Define the mandatory and supporting information required for the decision.

Schedule a decision after the appropriate phase transition.

Decide explicitly.

Communicate the decision clearly and widely.
Evolutionary PCP model

test and evaluate  
requirements specification

build  
design

2% of budget (EVO)  
2 weeks (XP)  
up to 2 months per cyclus
Decomposition of the Product Creation Process

Operational Management
- specification
- budget
- time
- planning
- progress control
- resource management
- risk management
- project log

Design Control
- technical
  - needs: what is needed
  - specification: what will be realized
  - design: how to realize
  - verification: meeting specs following design
  - engineering: how to produce and to maintain

Marketing
- profitability
- saleability
  - customer input
  - customer expectations
  - commercial structure
  - product pricing
  - market introduction
  - introduction at customer
  - feedback
Operational Organization of the PCP

- **Entire Portfolio**
  - Operational Manager
  - Portfolio Architect
  - Portfolio Marketing Manager

- **Product Family**
  - Family Operational Manager
  - Family Architect
  - Family Marketing Manager

- **Single Product**
  - (Single Product) Project Leader
  - Product Architect
  - Product Manager

- **Subsystem**
  - Subsystem Project Leader
  - Subsystem Architect

- **Module**
  - Developers
Prime Responsibilities of the Operational Leader

Specification

Quality

Resources

Time
The Rules of the Operational Game

- define project
- update project

specification, resources, time
accept or reject

assess risks
determine feasibility

accept

execute project
within normal quality rules

project leader

business management
Operational Teams

- Operational Leader (project leader)
- Operational Support (project manager)
- Marketing or Product Manager
- Application Manager
- Requirements Analyst
- Test Engineer
- Technology-Specific Architects
- Subsystem Architects
- Architect
- Quality Assurance
- Operational Leaders
- Subsystem Operational Leaders
- Logistics
- Sales Manager
- Service
- Manufacturing
- Development support
- The Product Creation Process

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