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 Oriented Process

Policy and Planning Process

Product Creation Process

People and Technology Management Process

Customer

Business Drivers

Product Roadmap

Budget, Plan

Product Requirements and Feedback

Presales, Sales, Logistics, Production, Service

Product

Support

Information

Order

Product

Requirements and Feedback

Technical Product Documentation

Product Related Processes

People Technology Process

People Technology Management Process

Customer Roadmap

Technical, Process and People Roadmaps

Budgets

Material

Product Requirements and Feedback

Product related processes

Support

Technical Product Documentation

Product Creation Process

People and Technology Management 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

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

The Product Creation Process
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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

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

large impact
decisions

order
long-lead
items
order product
high-cost
items

phase transitions
check points

concurrency

PCP characteristics
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

The Product Creation Process

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

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

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PCP Operational Organization

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Prime Responsibilities of the Operational Leader

The Product Creation Process

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The Rules of the Operational Game

- business management
  - define project
  - update project
- project leader
  - assess risks
  - determine feasibility
  - accept or reject
  - execute project within normal quality rules

Accept specification, resources, time