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
- Material
- Sales
- Logistics
- Production
- Service
- Presales

Product Creation Process
- Information
- Order
- Product
- Support
- Budget, plan
- Product roadmap
- Technology, Process, and People roadmaps

Policy and Planning 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

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

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

needs

specification

design

verification

engineering

The Product Creation Process
Gerrit Muller
version: 2.2
July 31, 2014
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

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

- large impact decisions
- phase transitions check points
- needs
- specification
- design
- verification
- engineering

iteration

- concurrency
- order long-lead items
- order high-cost items
- product announcement

The Product Creation Process

version: 2.2
July 31, 2014
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
- Design
- Build
- Test and evaluate

2% of budget (EVO)
2 weeks (XP)
Up to 2 months per cycle
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

The Product Creation Process

version: 2.2
July 31, 2014
PCPOperationalOrganization
Prime Responsibilities of the Operational Leader

The Product Creation Process
11 Gerrit Muller

version: 2.2
July 31, 2014
PCPOperationalTriangle
The Rules of the Operational Game

- Define project
- Update project
- Assess risks
- Determine feasibility
- Accept or reject
- Execute project within normal quality rules

Business management

Project leader
Operational Teams

The Product Creation Process
13  Gerrit Muller

version: 2.2
July 31, 2014
PCPconcentricTeams