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Software Product Management

Supplier Contracting and Product Development

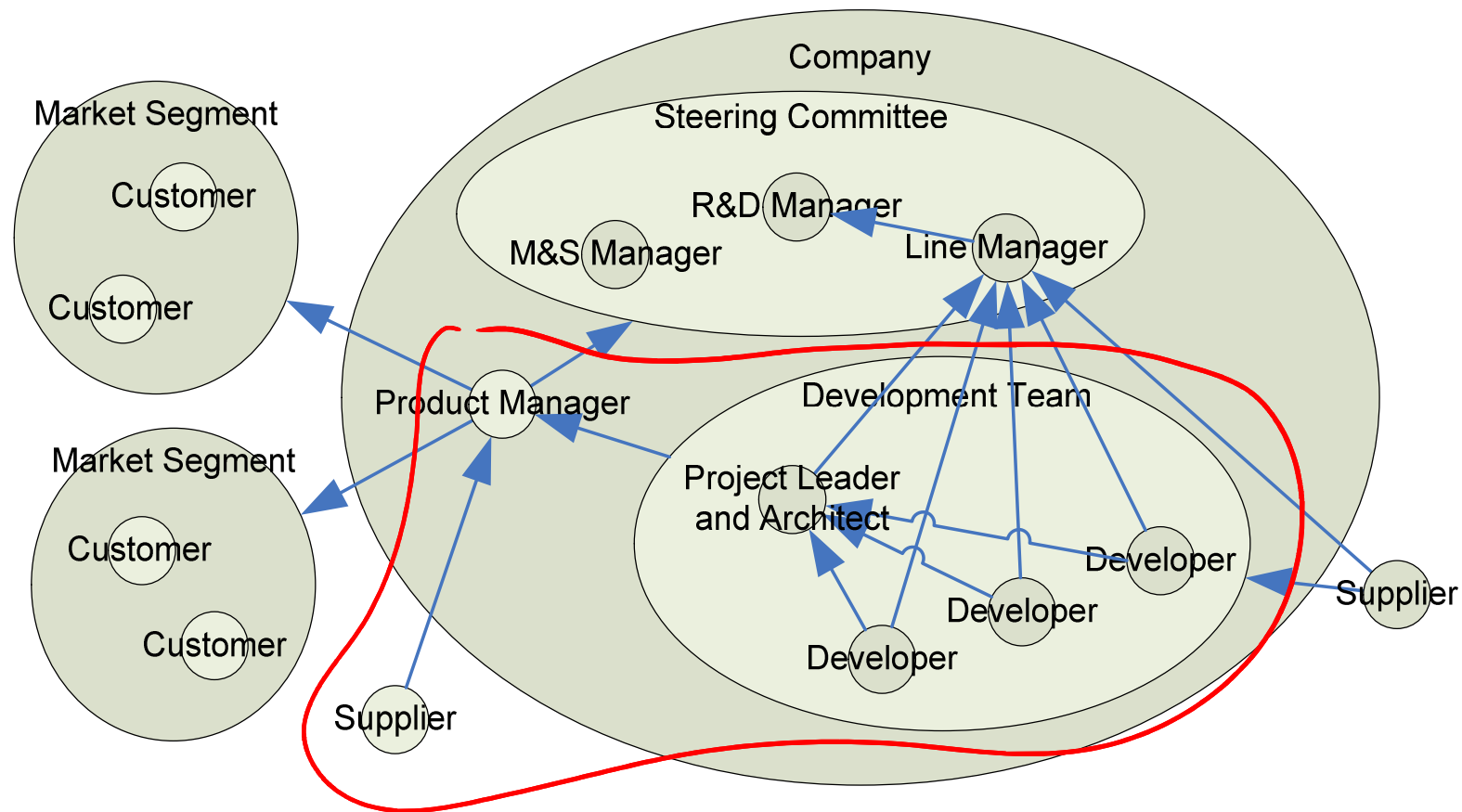
Nov 23, 2010

Samuel Fricker
(fricker@ifi.uzh.ch)

Simplified and Stylized SPM Context



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Focus

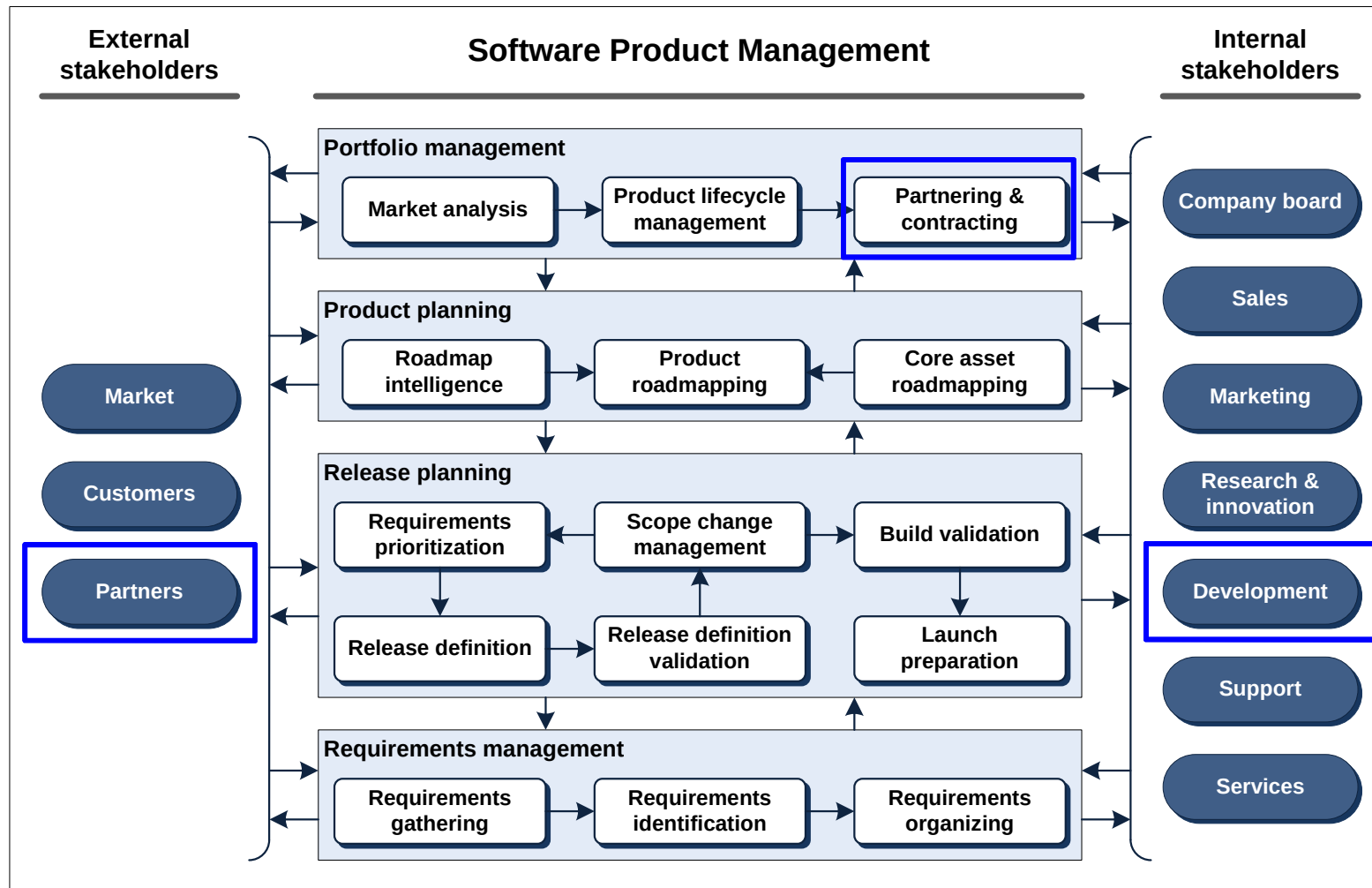


	Market Analysis	Product Analysis	Product Strategy	Product Planning	Development	Marketing	Sales and Distribution	Support and Services
Often on corporate level			Portfolio Management	Resource Allocation	Resource Allocation	Marketing Strategy and Plan	Sales Strategy and Plan	
Product (family) level	Market Research Market Sizing Market Problems Technology Assessment Competitive Analysis	Product Performance Customer Satisfaction Win/loss Analysis Opportunities	Positioning Delivery Model Pricing Model Pricing Business Case Make or buy Ecosystem Legal terms Protection of Intellectual Property	Roadmap Release Plan Requirements Management Functional Specification	Project Plan	Launch Plan	Channel Preparation	Customer Support
					Technical Specification	Customer Analysis	Operational Sales	Technical Support
					Project Requirements Management	Partner Management	Operational Distribution	Marketing Support
					Implementation	Operational Marketing	Material	Sales Support
					Quality Assurance	Material		Services Preparation
					Technology Innovation			Operational Services Provision

Focus



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Contents

Learning Objectives

- Understand tendering and contracting with a supplier
- Understand the interface between PM and development along a development project

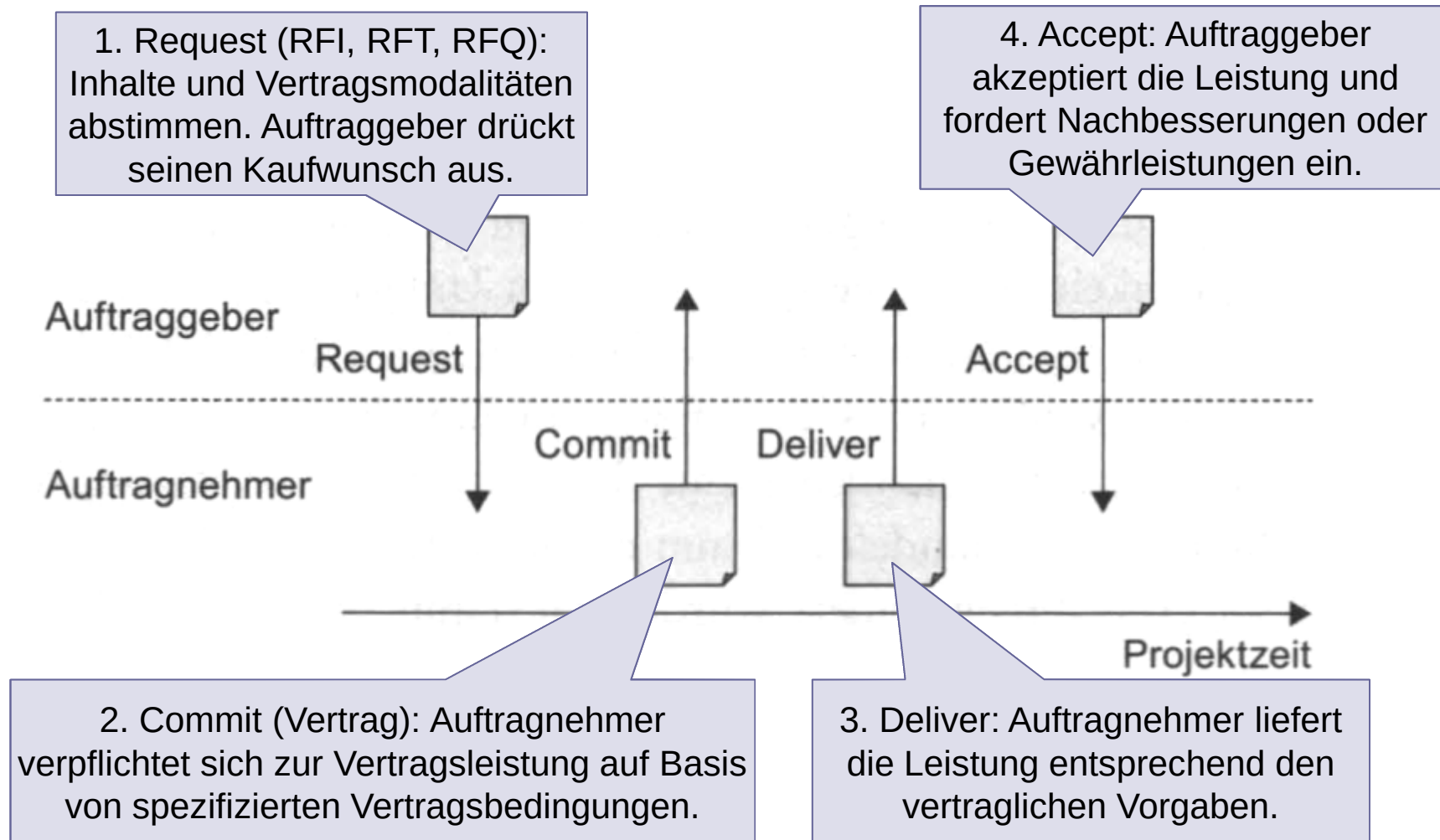
Agenda

- Tendering and Contracting
 - Contracts with Suppliers
 - Tender Process
- Development Processes
 - StageGate Decision Process
 - Development Processes
 - Requirements-based Controlling

RCDA-Prinzip der Vertragspartnerschaft



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Tender Process

- Goals
 - Economic: high system value, good user acceptance
 - Efficiency: efficient process
 - WTO (only if tender in a government-regulated context): non-discrimination, transparency
- Phases
 - Customer publishes Request for Quotation
Governments in Switzerland: www.simap.ch
 - Suppliers submit Tenders (Offers)
 - Customer and winning supplier establish Contract





Système d'information sur les marchés publics en Suisse
Informationssystem über das öffentliche Beschaffungswesen in der Schweiz
Sistema informativo sulle commesse pubbliche in Svizzera

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[Bidder](#) | [Contractor](#) | [Support](#) | [Legal bases/Informations](#) | [Association simap.ch](#)

[A](#) | [A](#) | [A](#)

User guidelines

Actual situation of the public procurement in Switzerland

- [Invitations to tender \(521\)](#)
- [Awards \(240\)](#)
- [Other publications \(17\)](#)

Overview according to local or curatorial origin

- [Confederation \(235\)](#)
- [Foreign country \(5\)](#)
- [Aargau \(20\)](#)
- [Appenzell i.Rh. \(1\)](#)
- [Appenzell A.Rh. \(6\)](#)
- [Berne \(76\)](#)
- [Basel-Landschaft \(7\)](#)
- [Basel-Stadt \(19\)](#)
- [Fribourg \(39\)](#)
- [Geneva \(57\)](#)
- [Graubünden \(1\)](#)
- [Jura \(5\)](#)
- [Lucerne \(5\)](#)
- [Neuchâtel \(6\)](#)

You are here: [Home](#)

Search in simap.ch

Search here free of charge on-line for the current legal publications in simap.ch :

- [Running procedures](#)
- [Advanced search](#)

simap.ch: The modern platform of public procurement

Simap.ch is an **electronic platform** shared by the federal government, cantons and communes for public procurement purposes. It offers a simple procedure for **public contract-awarding authorities** to post their tenders and, if need be, any relevant tender documents. **Bidders and companies** interested are given an overview of all existing contracts across Switzerland and can download both the tenders and tender documents. They can ask any questions they may have directly on a question/answer forum on the portal.

The modernisation contains furthermore the following process steps:

- Modern technology and customer-friendly user interface
- The entire process from the issue of an invitation to tender to the announcement of contract award is seamless, no media discontinuity
- Advanced search functions for publications

LOGIN

For authority of procurement, offerers and subscribers

User name

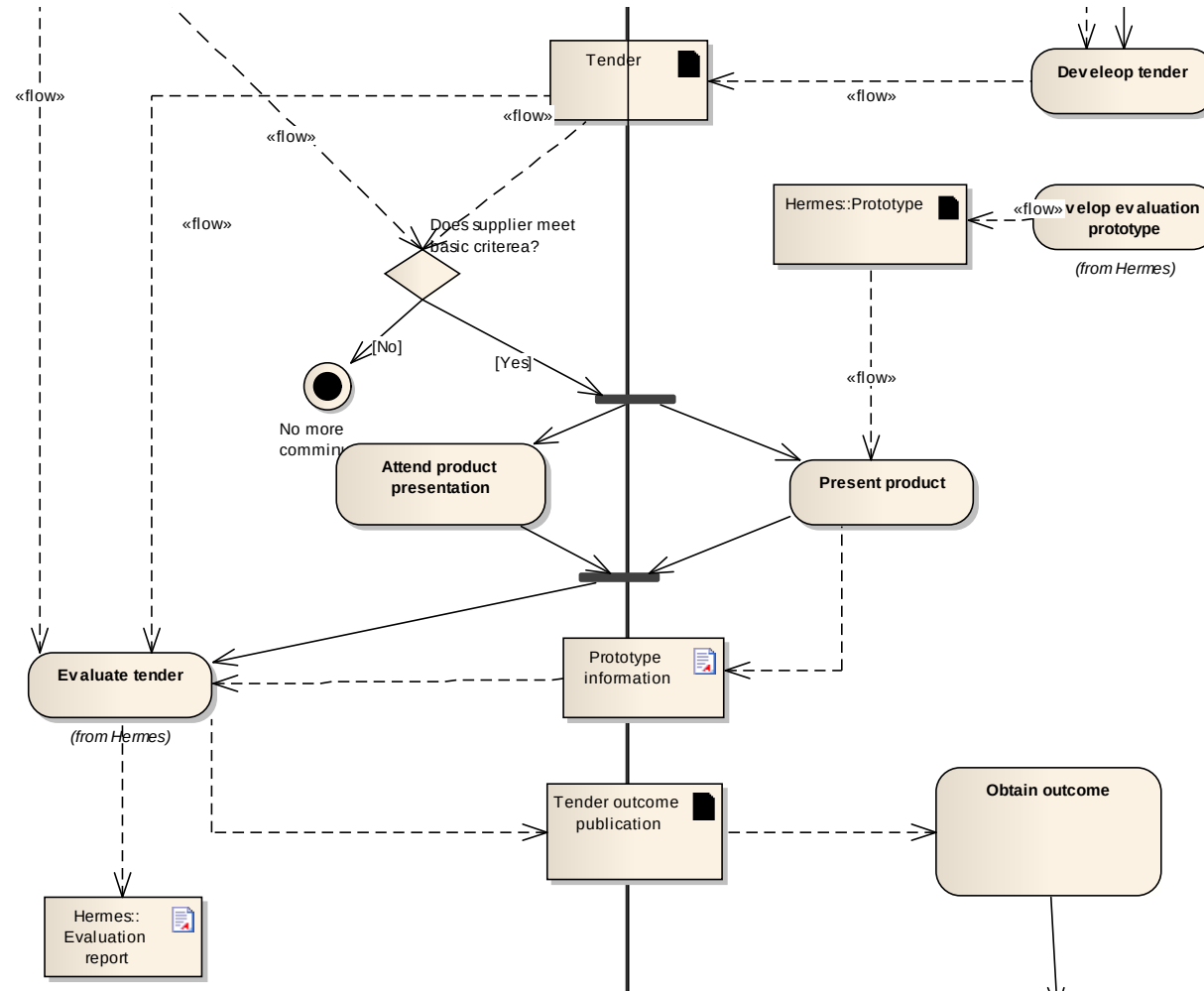
Password

[Did you forget your password?](#)

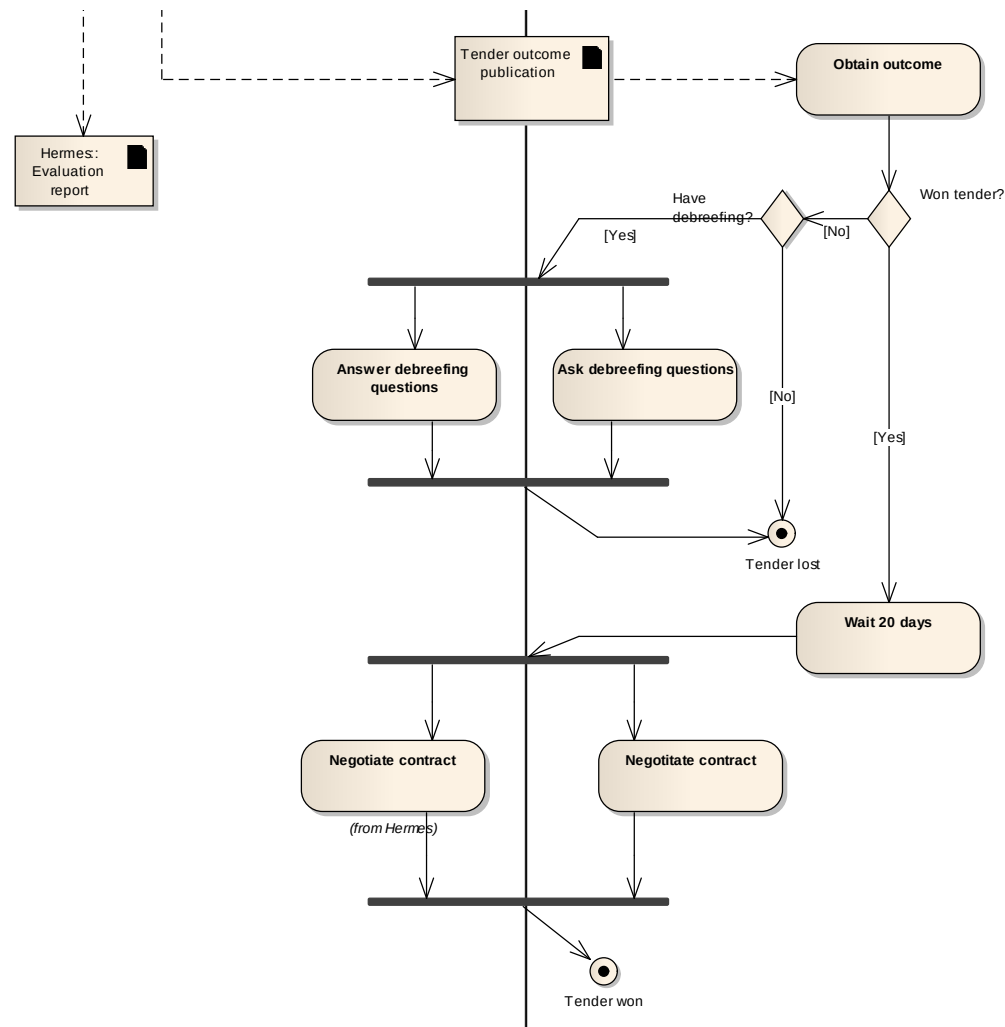
Oostvogels (2010): Requirements Communication in Public Tenders, BSc Thesis, University of Zurich.



Public Tender Process



Public Tender Process





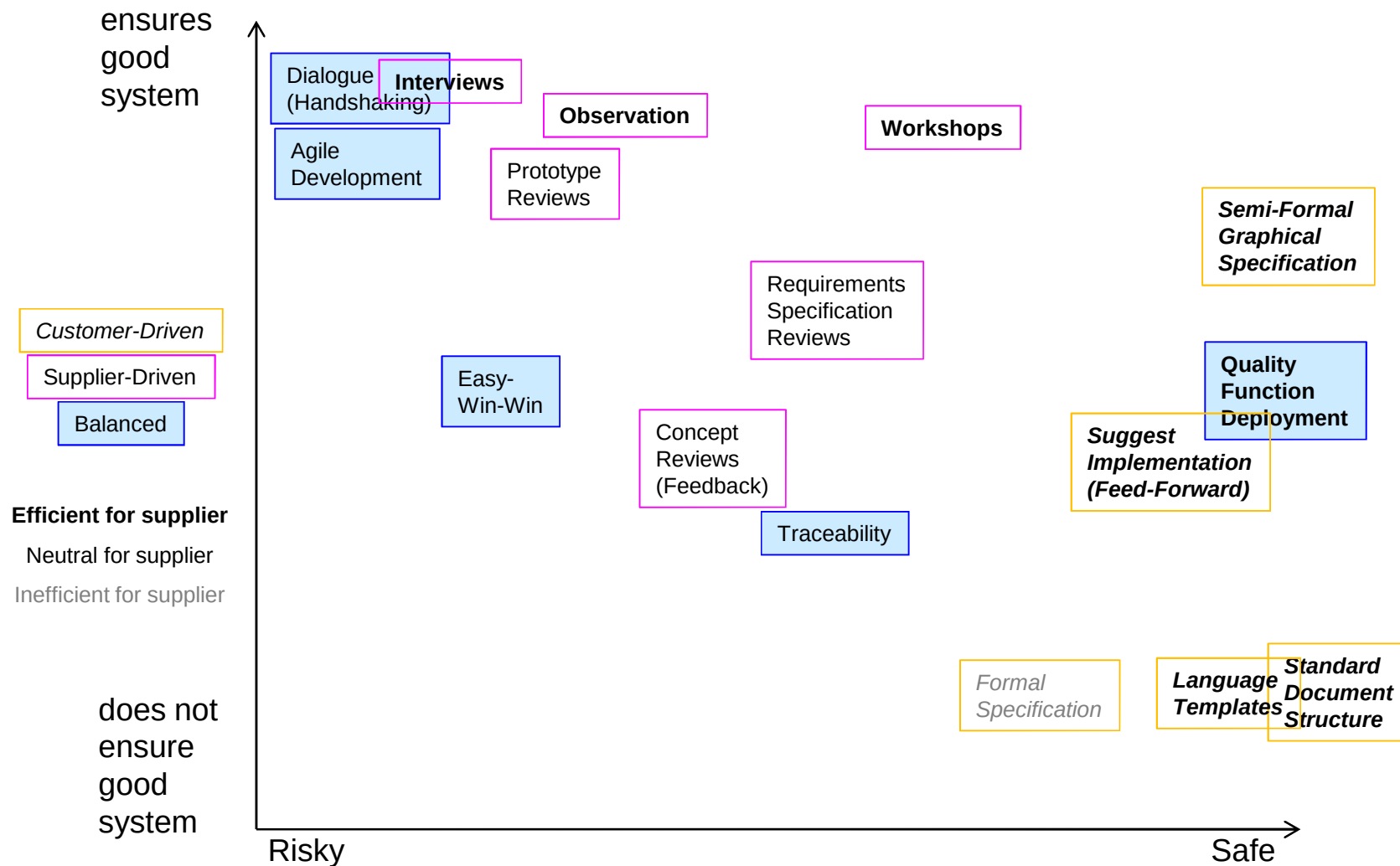
Tender Challenges

- Customer often does not master adequate requirements specification techniques.
- Requirements too close to „as-is“: hard to see what the procured system should improve.
- Goals and problems hidden: hard to see what the procured system should achieve.
- Requirements too vague: specification leaves too much room to identify an adequate solution.
- Inadequate process: from excessive user involvement to prevented communication

Desired Communication Means: Legal (WTO) vs. Economic



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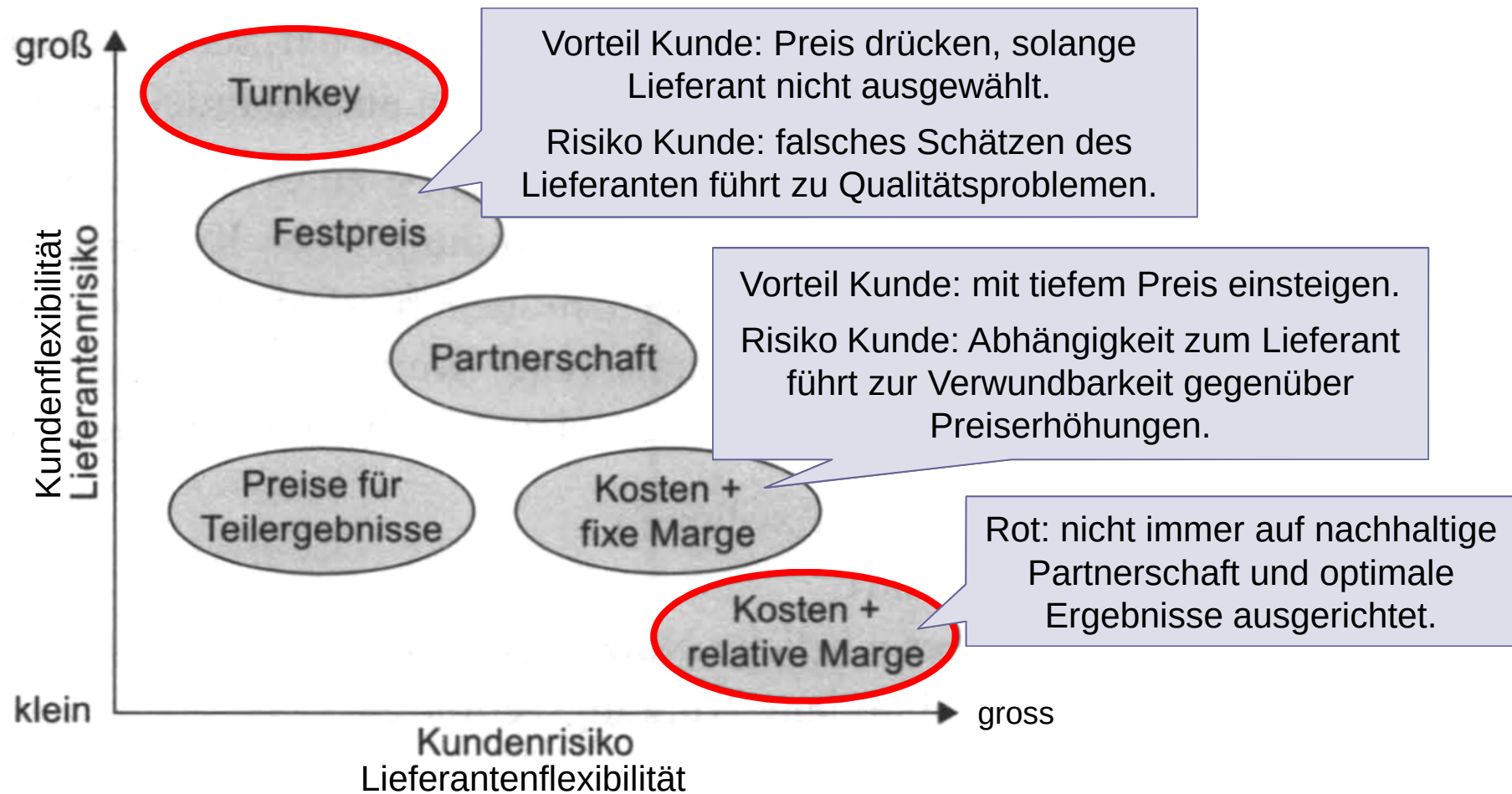


Verträge für Softwareprodukte

- Software wird in der Regel als Sache verkauft oder im Rahmen eines Werkvertrags erstellt.
- §433 BGB: Kaufvertrag
 - Käufer erwirbt das Eigentum an der Software
 - Verkäufer übergibt Software frei von Sach- und Rechtsmängeln
 - Käufer übergibt vereinbarten Verkaufspreis
- §631 BGB: Werkvertrag
 - Käufer und Verkäufer einigen sich auf die Herstellung einer Software
 - Vertragsgegenstand: Nutzungsrechte einer Software und evtl. weitere Rechte (zB Urheberrechte).
- In der Schweiz:
<http://www.rwi.uzh.ch/elt-lst-huguenin/orbt/allgemeines/de/html/index.html>



Vertragsmodelle





Mängel

- Es geht bei einem Softwarekauf nicht um Fehlerfreiheit der Software, sondern um die erwartete Qualität und Gebrauchstauglichkeit.
- Mängel, welche geahndet werden können:
 - Sachmangel: zB zu klein ausgelegte Dimensionierung
 - Beratungsmangel: zB zu grosse Dimensionierung
 - Rechtsmangel: zB Verletzung des Urheberrechts
- Durch RE sorgfältig prüfen, was der Bedarf des Kunden ist, um ein machbares Angebot darauf abstimmen.



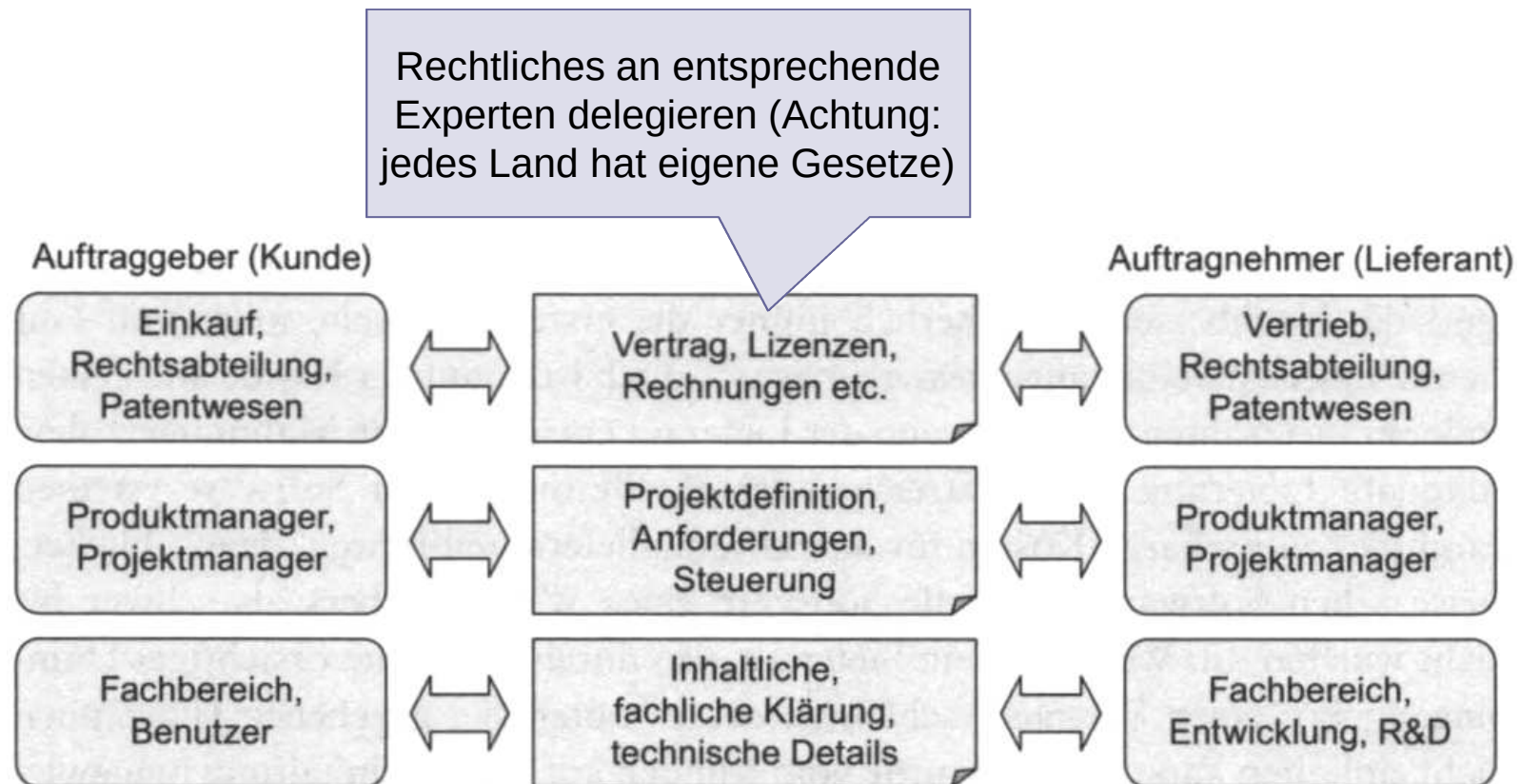
Folgen von Mängeln

- Der Kunde kann...
 - eine Nacherfüllung des Vertragsinnerhalb angemessener Frist verlangen.
 - Mängel selbst beseitigen (oder anderen Lieferanten wählen) und Ersatz für Aufwendungen verlangen.
 - vom Vertrag zurücktreten.
 - Vergütung mindern.
 - Schadenersatz verlangen.
- Haftungsfragen werden auf Basis folgender Aspekte beurteilt:
 - Gebrauchstauglichkeit der Software (Gemäss Werbebotschaften, Ankündigungen und Veröffentlichungen)
 - Sorgfaltspflicht bei der Entwicklung

Im RE immer konkret und nie zu oberflächlich und allgemein sein.



Rollenverteilung in der Praxis





Win-Win Partnerschaften

- Annahme: Kunde und Lieferant an Erfolg interessiert
- Wen einer sich übervorteilt vorkommt, wird er alles daran setzen, zumindest mittelfristig die Situation wieder zu „bereinigen“.
 - Qualitätsdefizite
 - Unzureichender Service
 - Überteuerte Serviceverträge
 - Rücktritt, Verzug oder unvollständige Lieferung
- Gut und fair verteilte Risiken helfen die Gesamtkosten für den Kunden deutlich zu reduzieren.
 - Frage bei Vertragsunterzeichnung für beide Parteien:
Kann man sich vorstellen, mit dem Partner weitere Projekte durchführen?



Collaboration with a Supplier

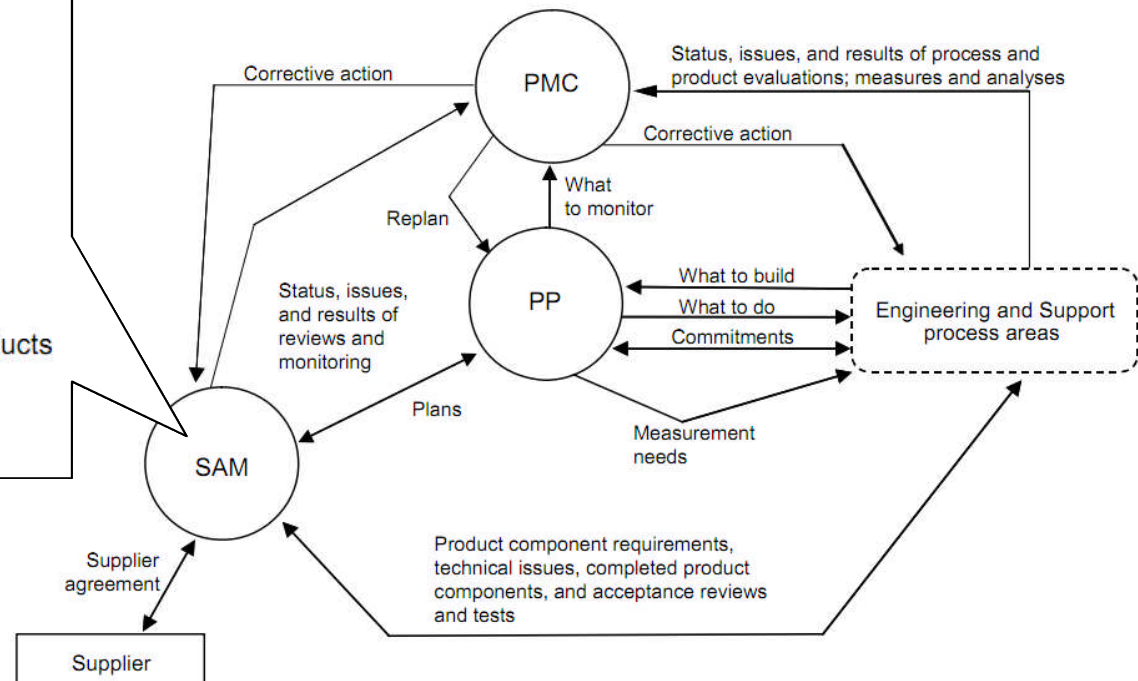
Supplier Agreement Management (SAM)

SG 1 Establish Supplier Agreements

- SP 1.1 Determine Acquisition Type
- SP 1.2 Select Suppliers
- SP 1.3 Establish Supplier Agreements

SG 2 Satisfy Supplier Agreements

- SP 2.1 Execute the Supplier Agreement
- SP 2.2 Monitor Selected Supplier Processes
- SP 2.3 Evaluate Selected Supplier Work Products
- SP 2.4 Accept the Acquired Product
- SP 2.5 Transition Products





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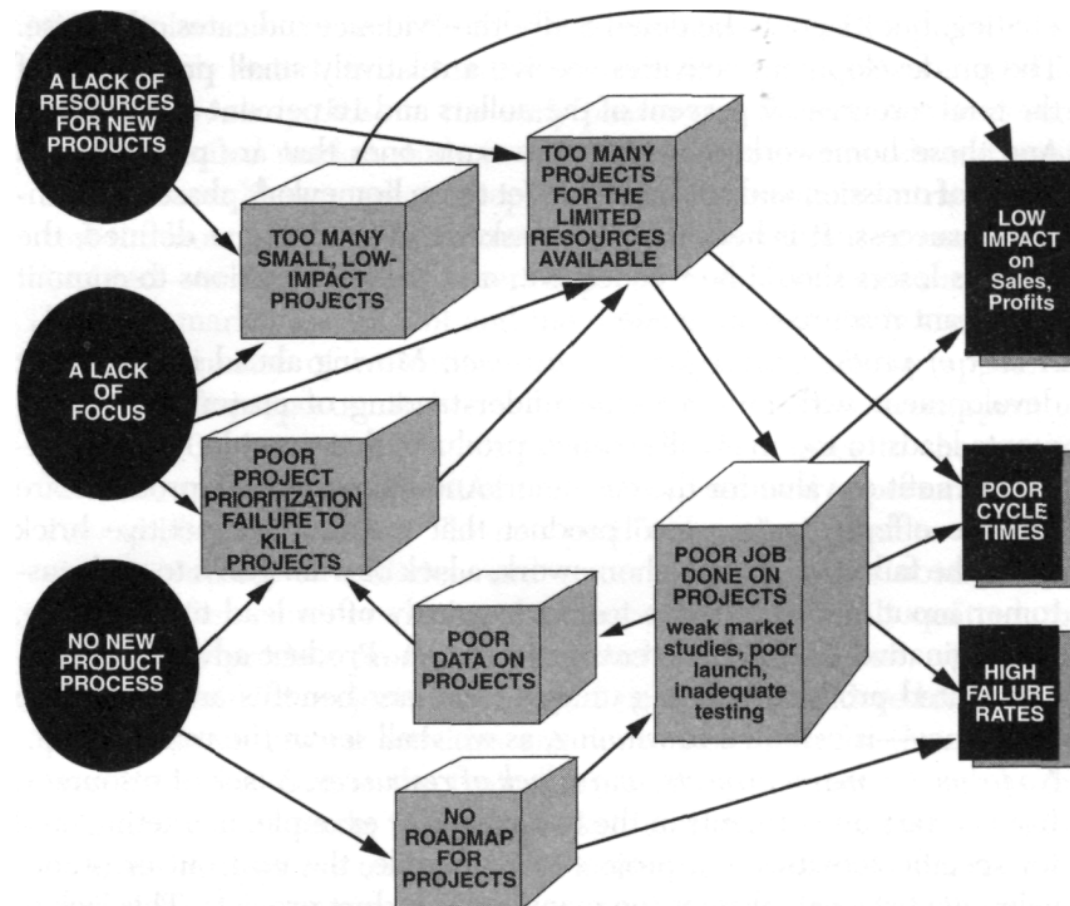
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Major New Product Development Problems



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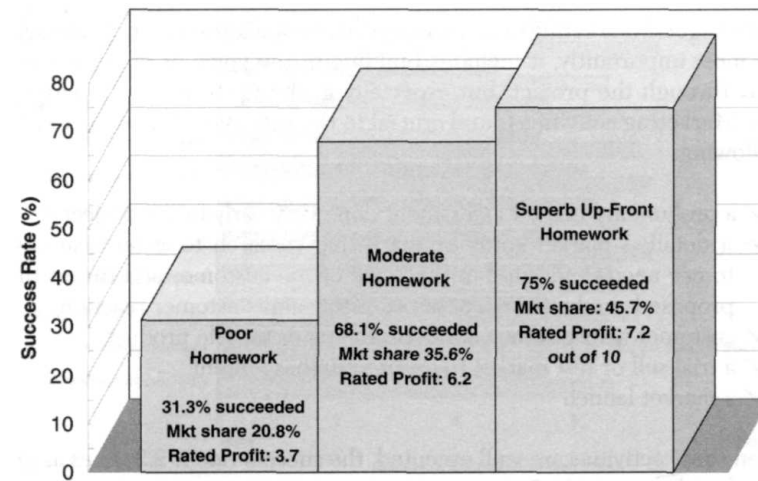
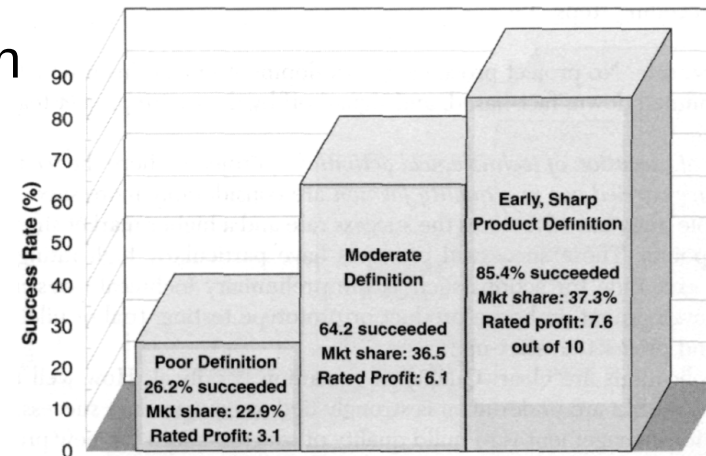
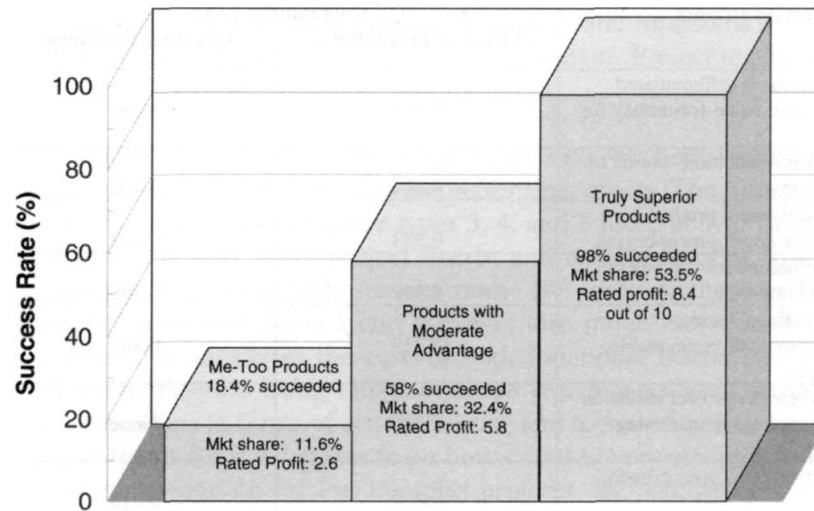
Success Factors for New Product Development Initiatives



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- What makes the difference between successful and unsuccessful initiatives?
 - ~2000 projects
(2/3 successful, 1/3 unsuccessful)



Stage Gate Process: Goals and Concerns



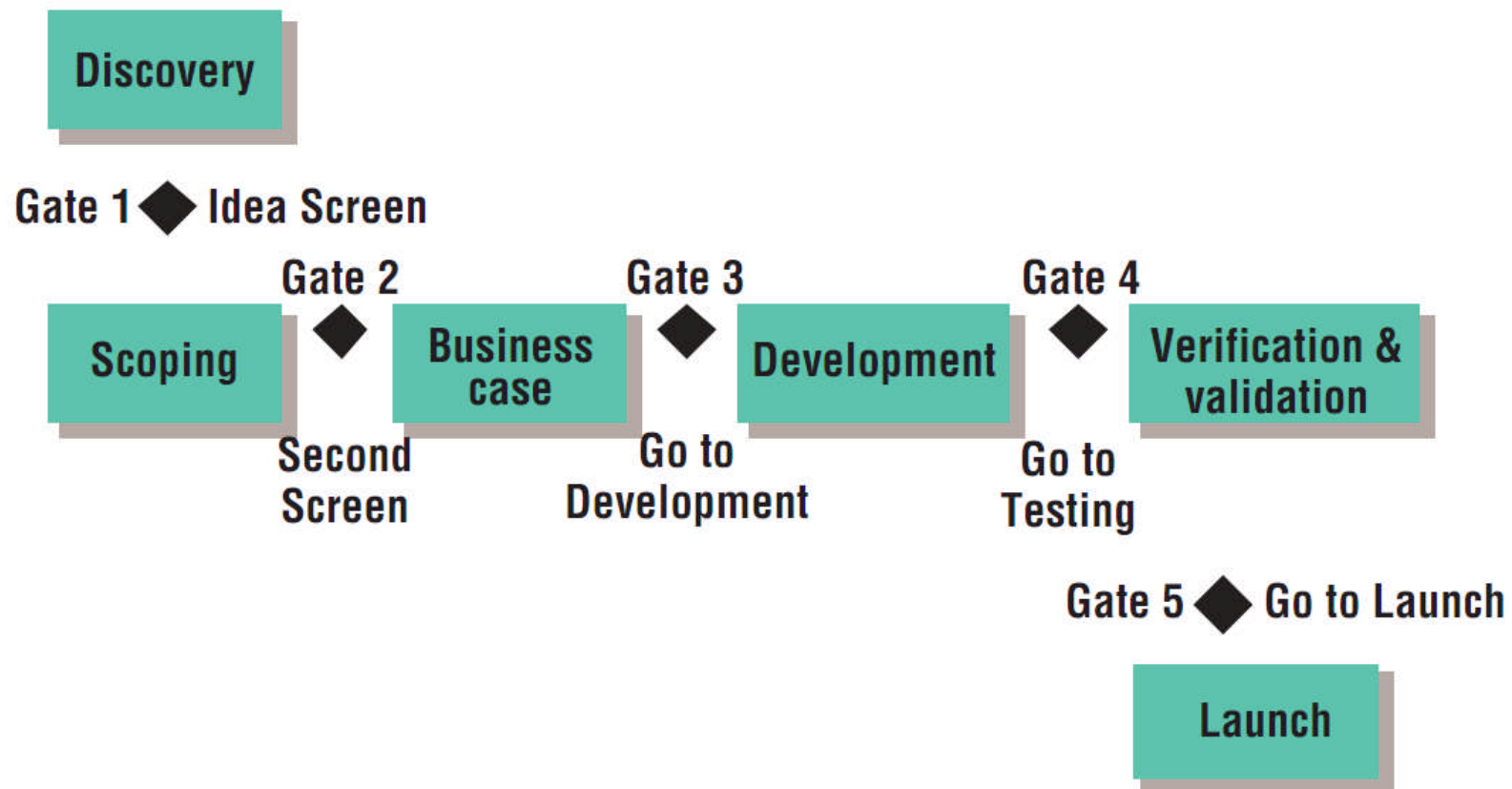
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- Goals
 - Transform ideas to products
 - Bring new products to the market
- Concerns
 - Quality of execution
 - Focused resources (prioritization)
 - Fast-paced parallel processing
 - Cross-functional team approach
 - Market orientation with voice of customer
 - Better homework up-front
 - Products with competitive advantage

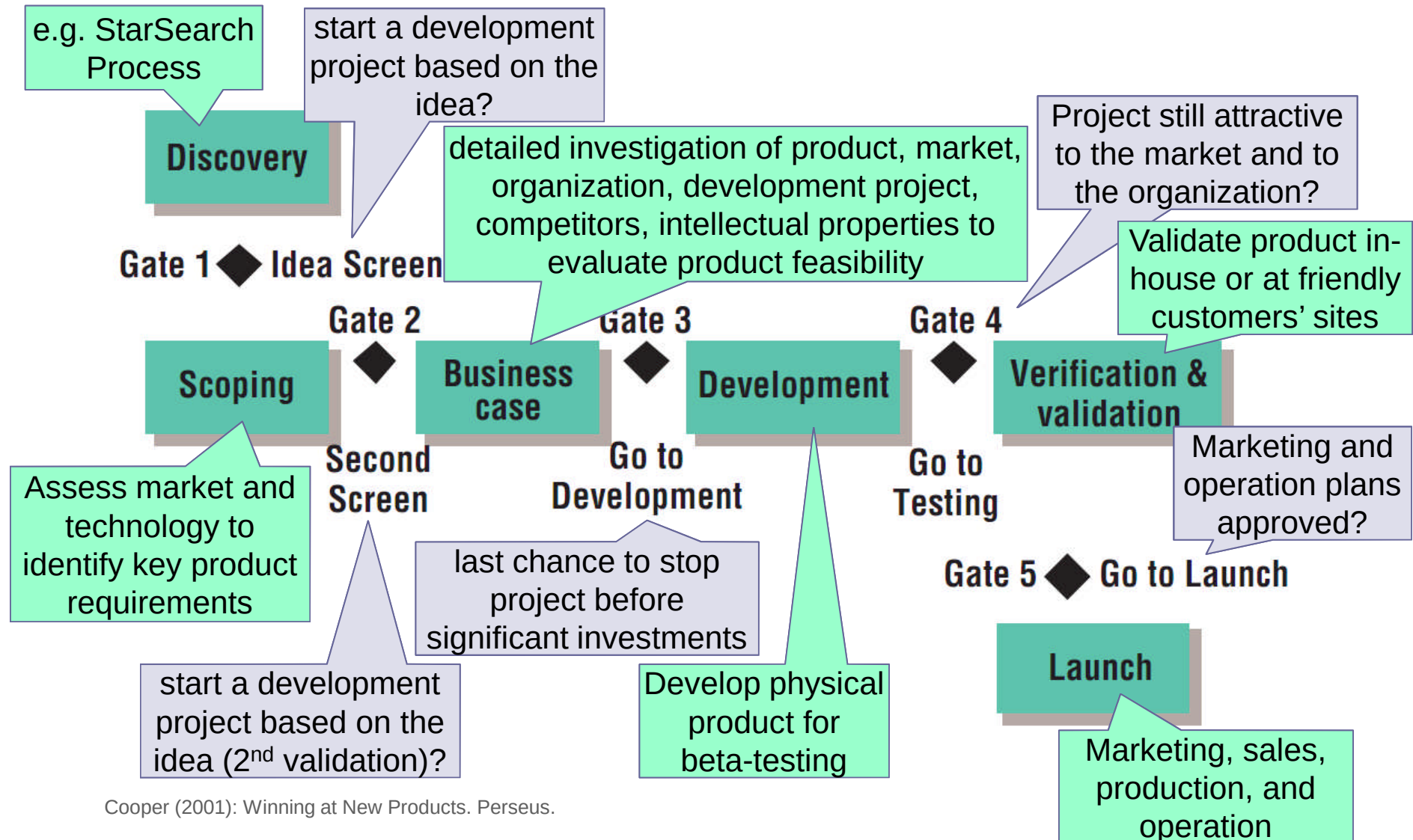


Stage Gate Process





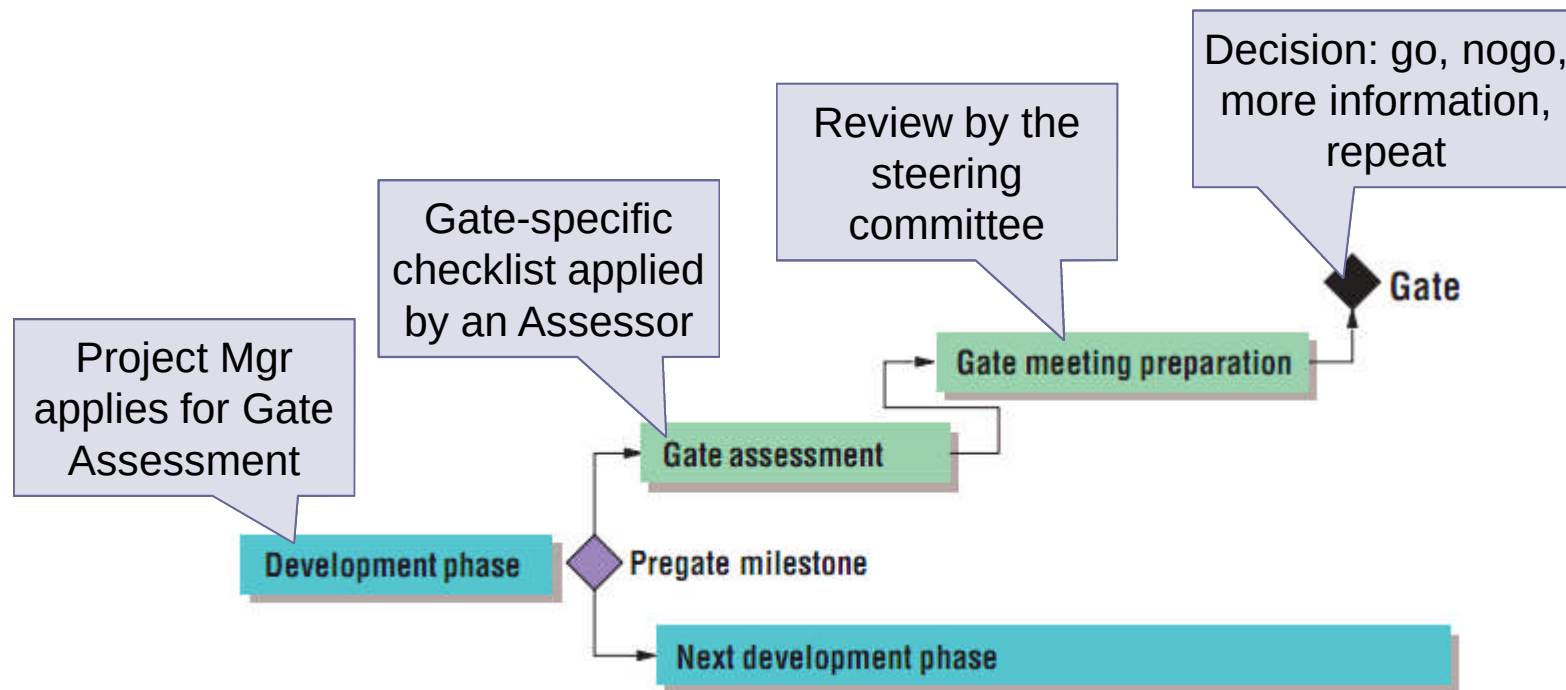
Stage Gate Process



Gates

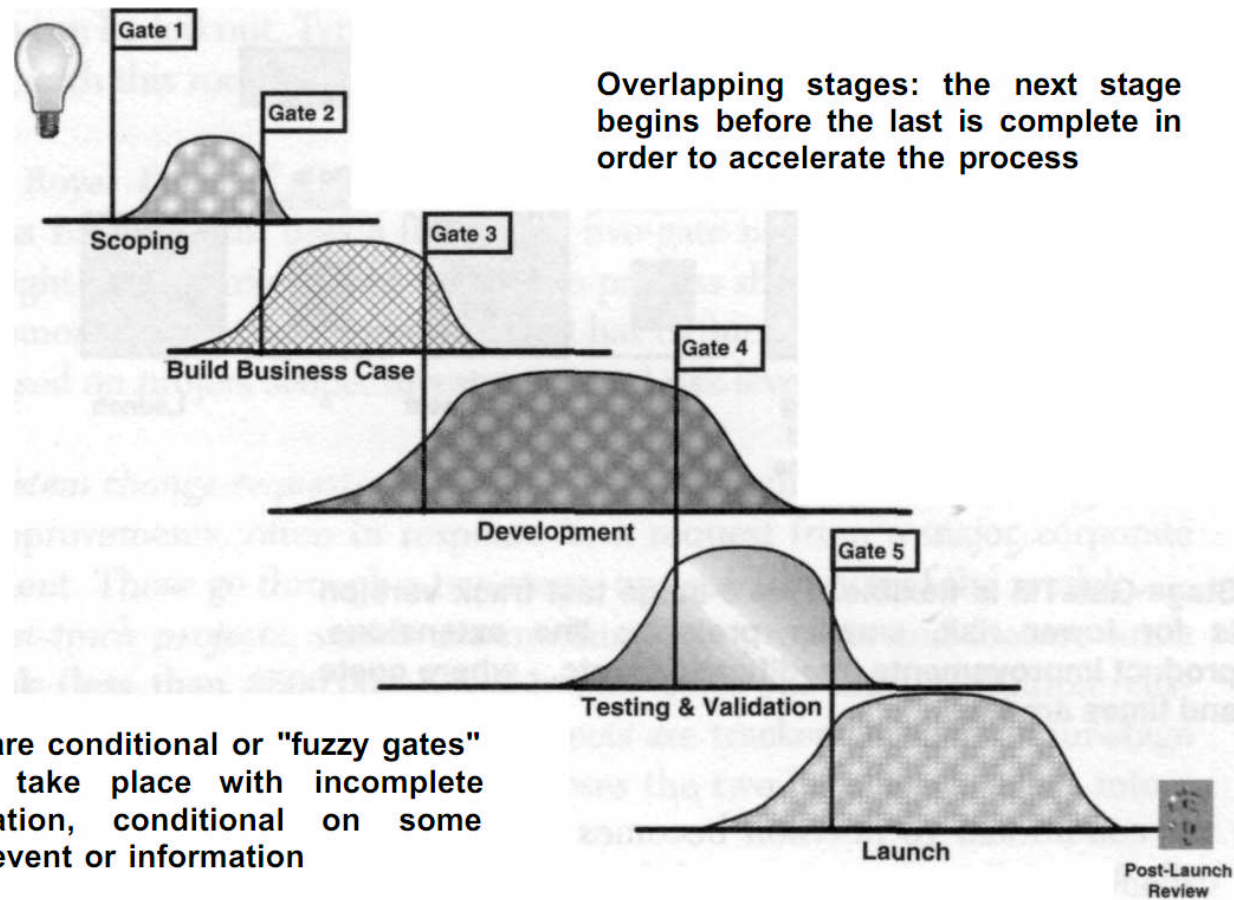


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Overlapping Activities



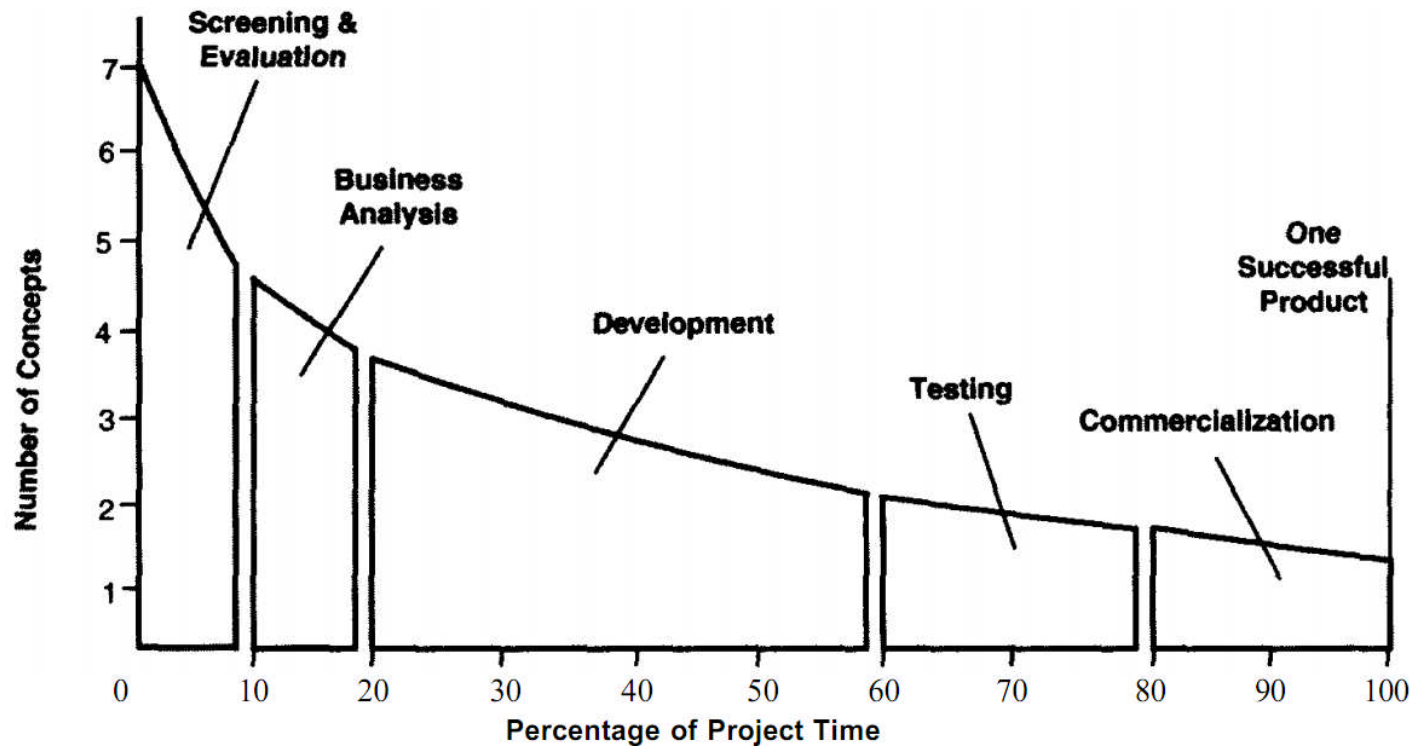
Attrition Rate of New-Product Initiatives



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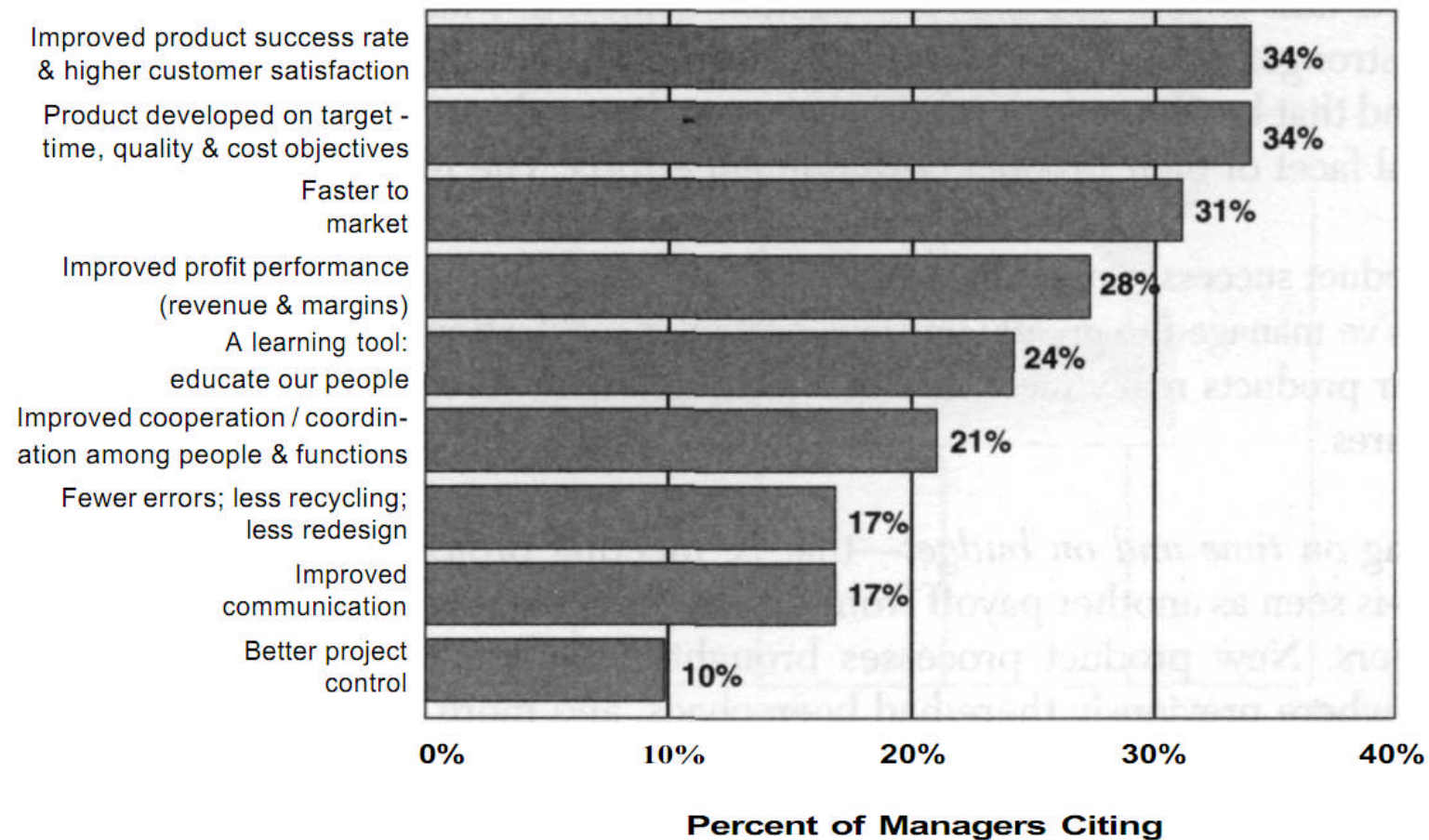


For every 7 concepts, one succeeds
For every 4 development projects,
one becomes a commercial winner!





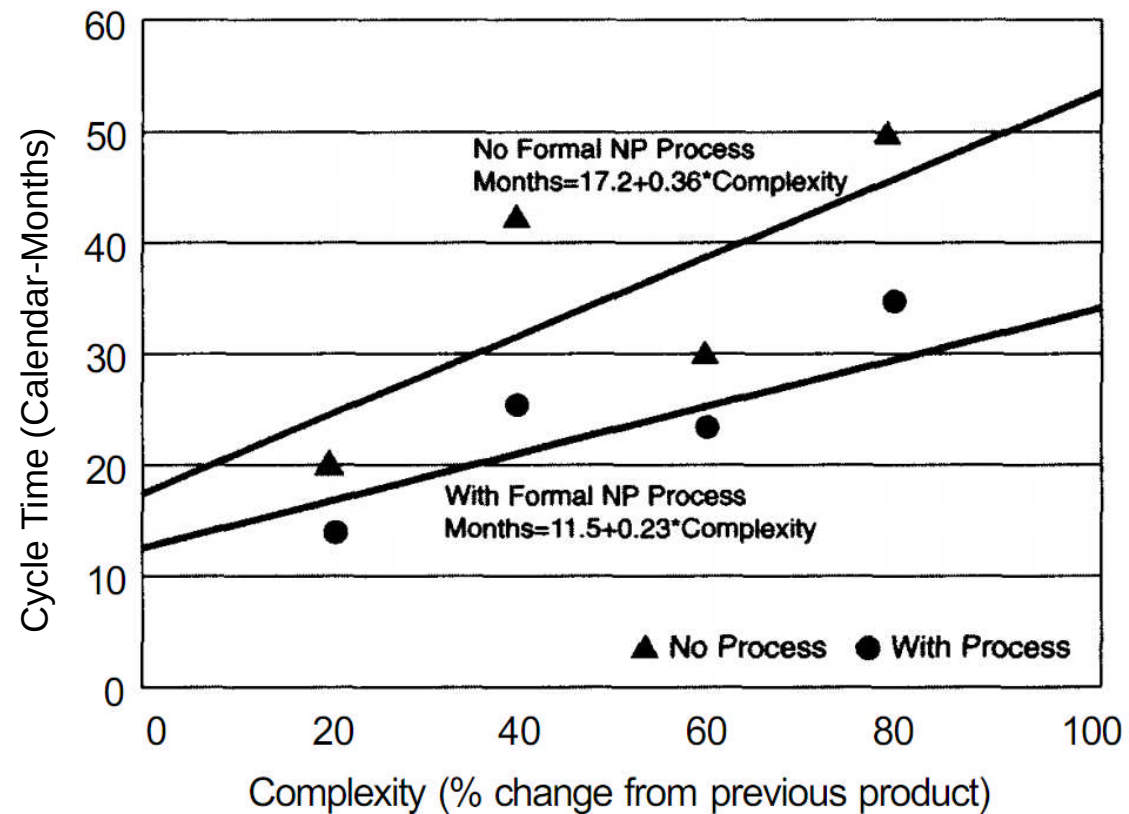
Effect of the Stage Gate Process





Effects of the Stage Gate Process

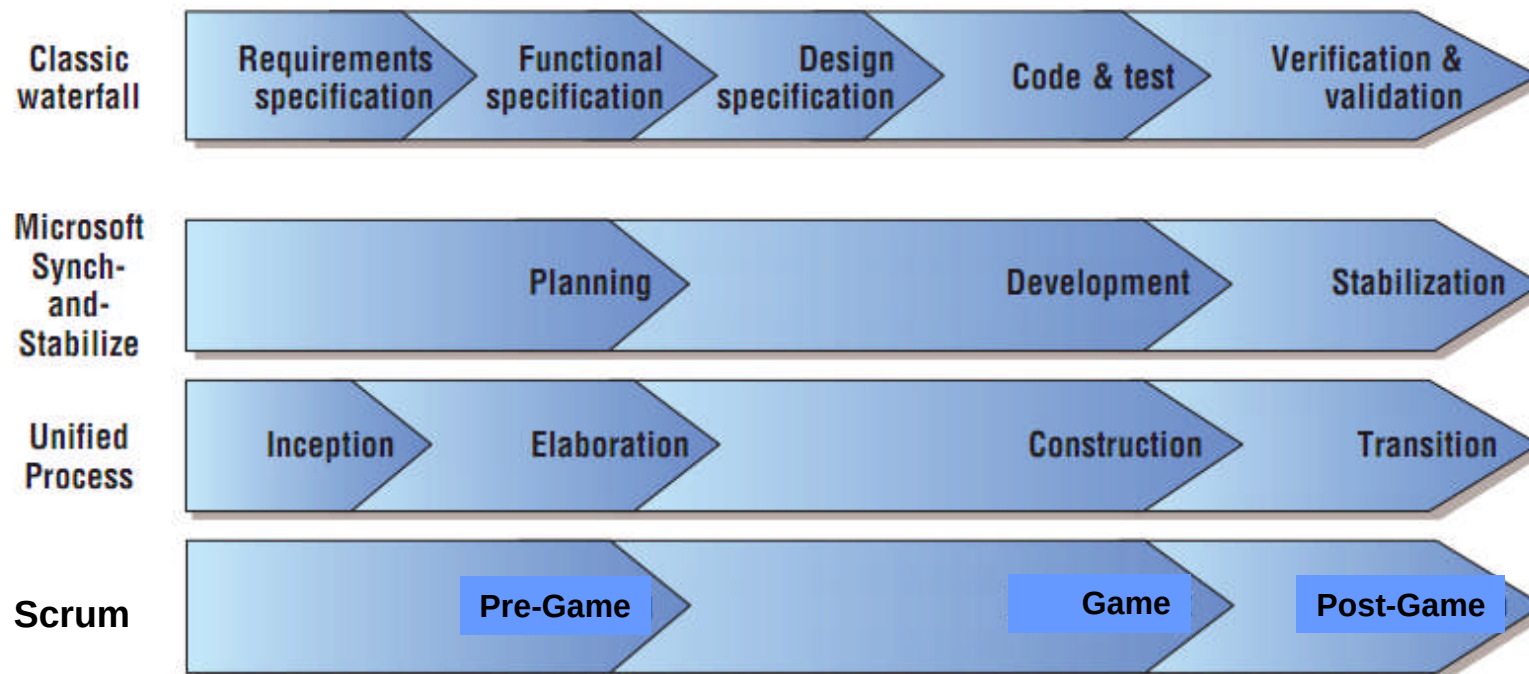
The use of a Stage-Gate process reduces time to market by about 35%.
It also reduces the "scatter of points" on the chart - predictability of cycle time is much better!



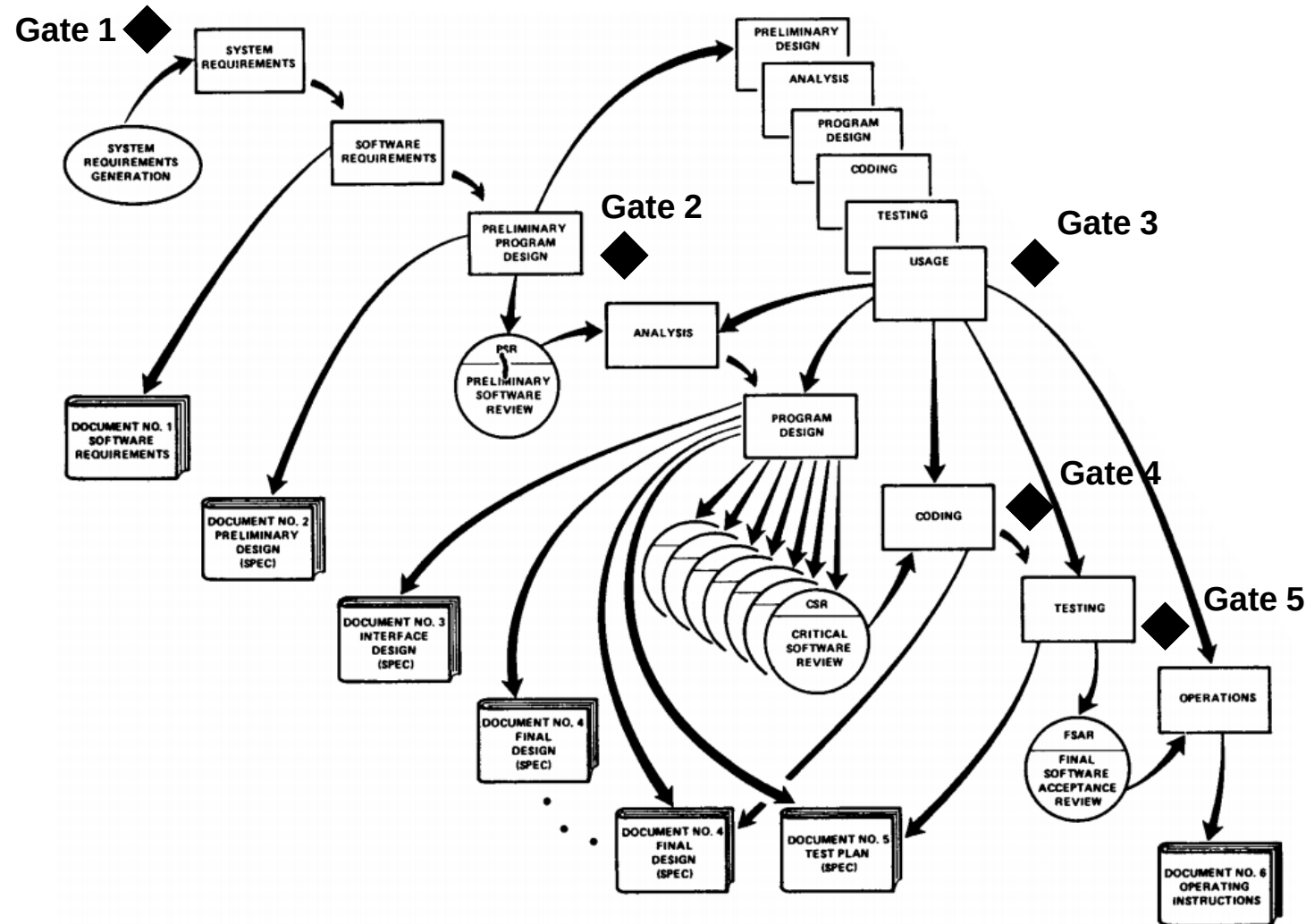
Phases in Software Development Life-Cycle Models (SDLC)



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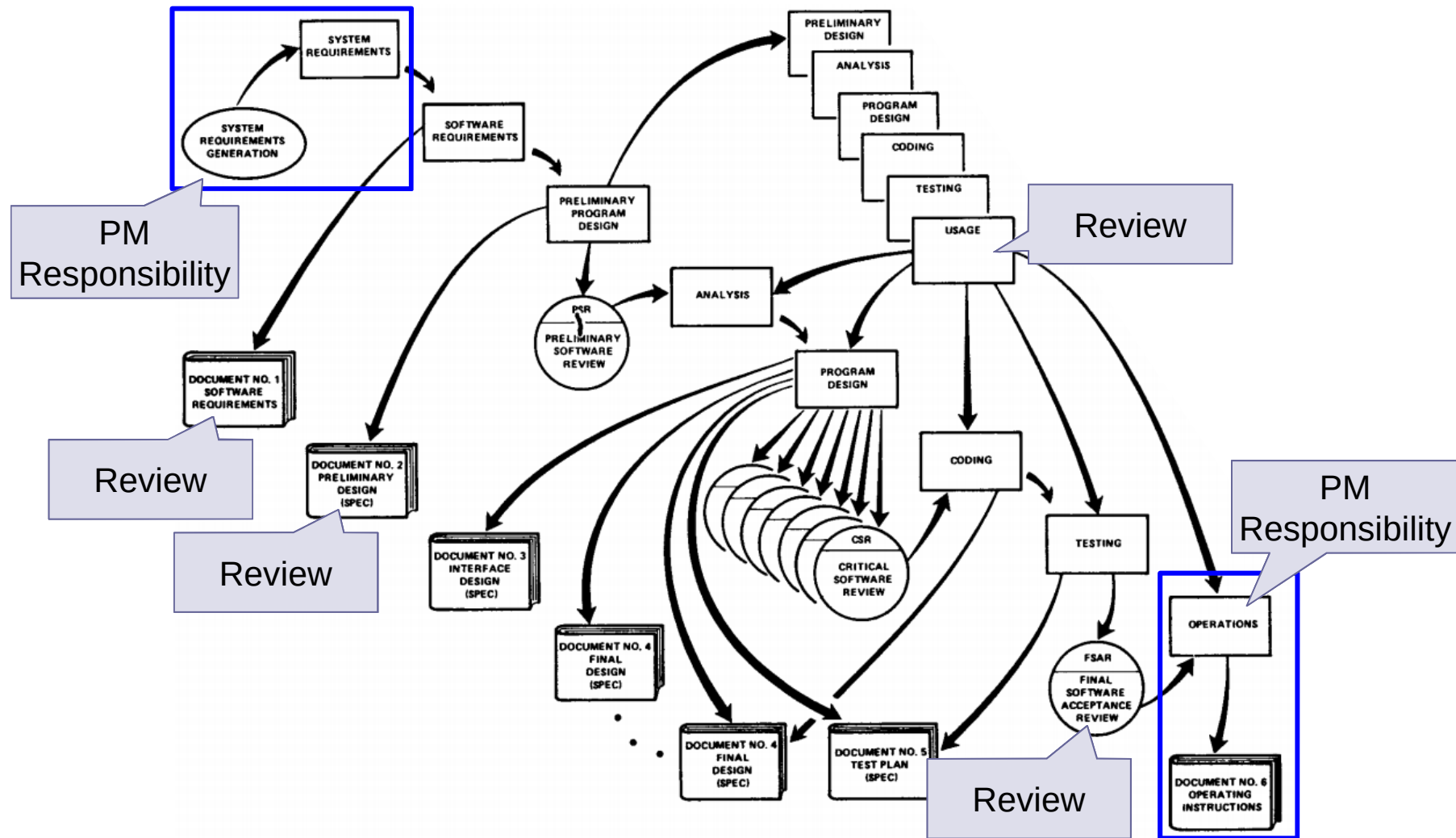
Waterfall



PM Interfaces in a Waterfall Project

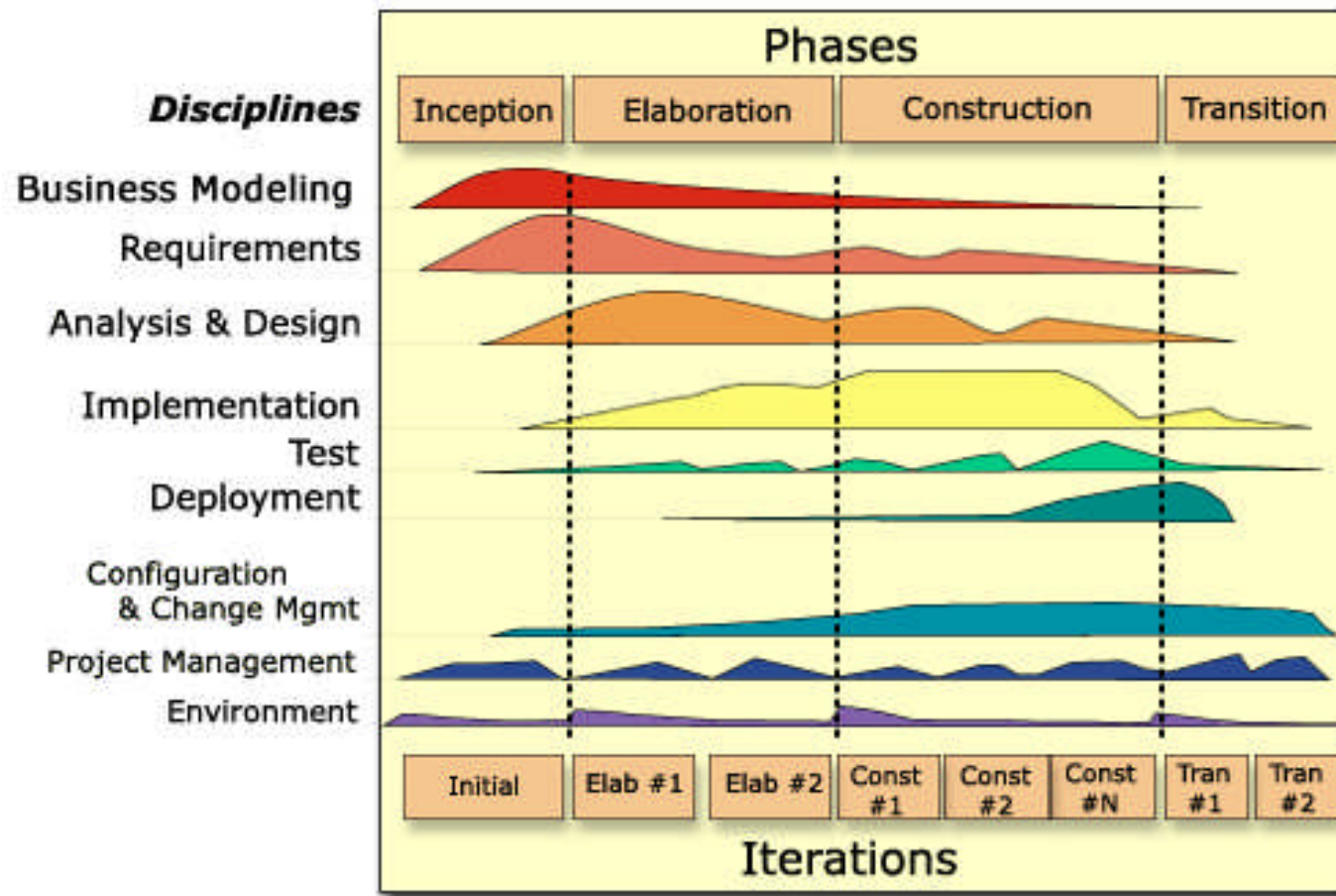


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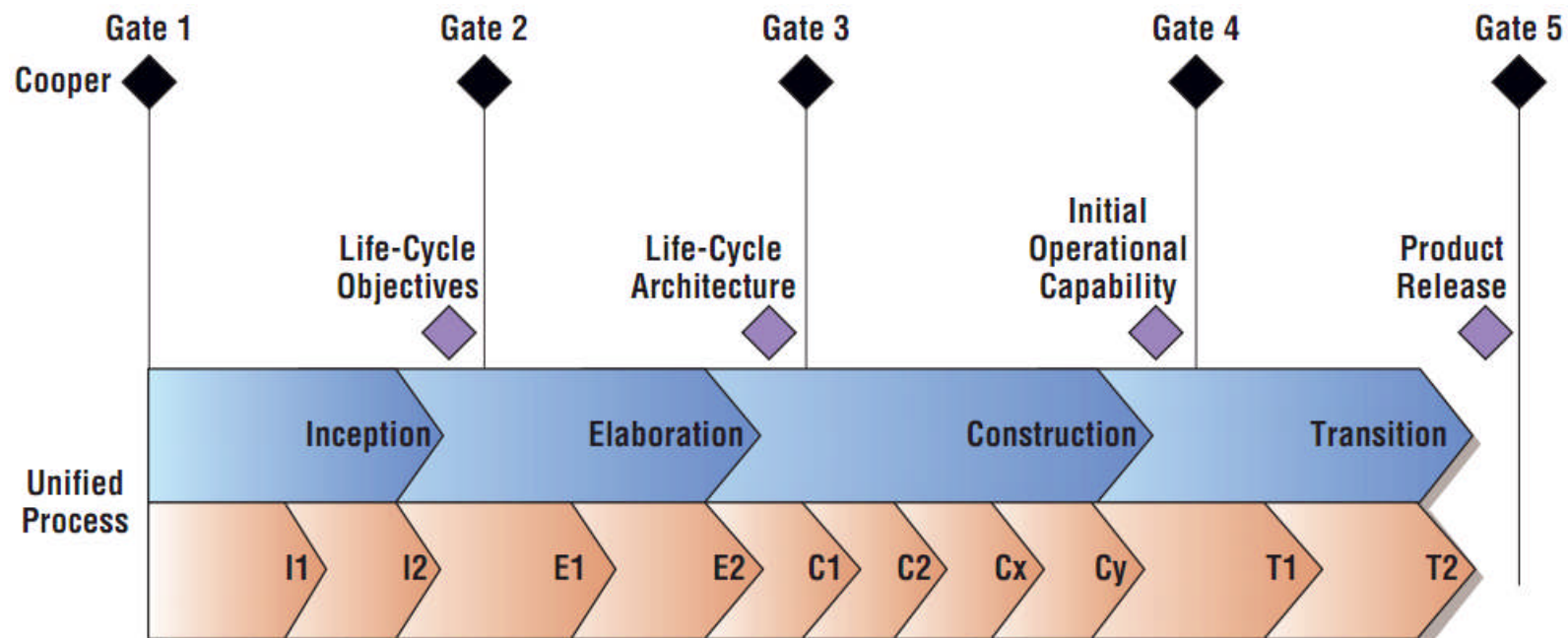


Rational Unified Process (RUP)

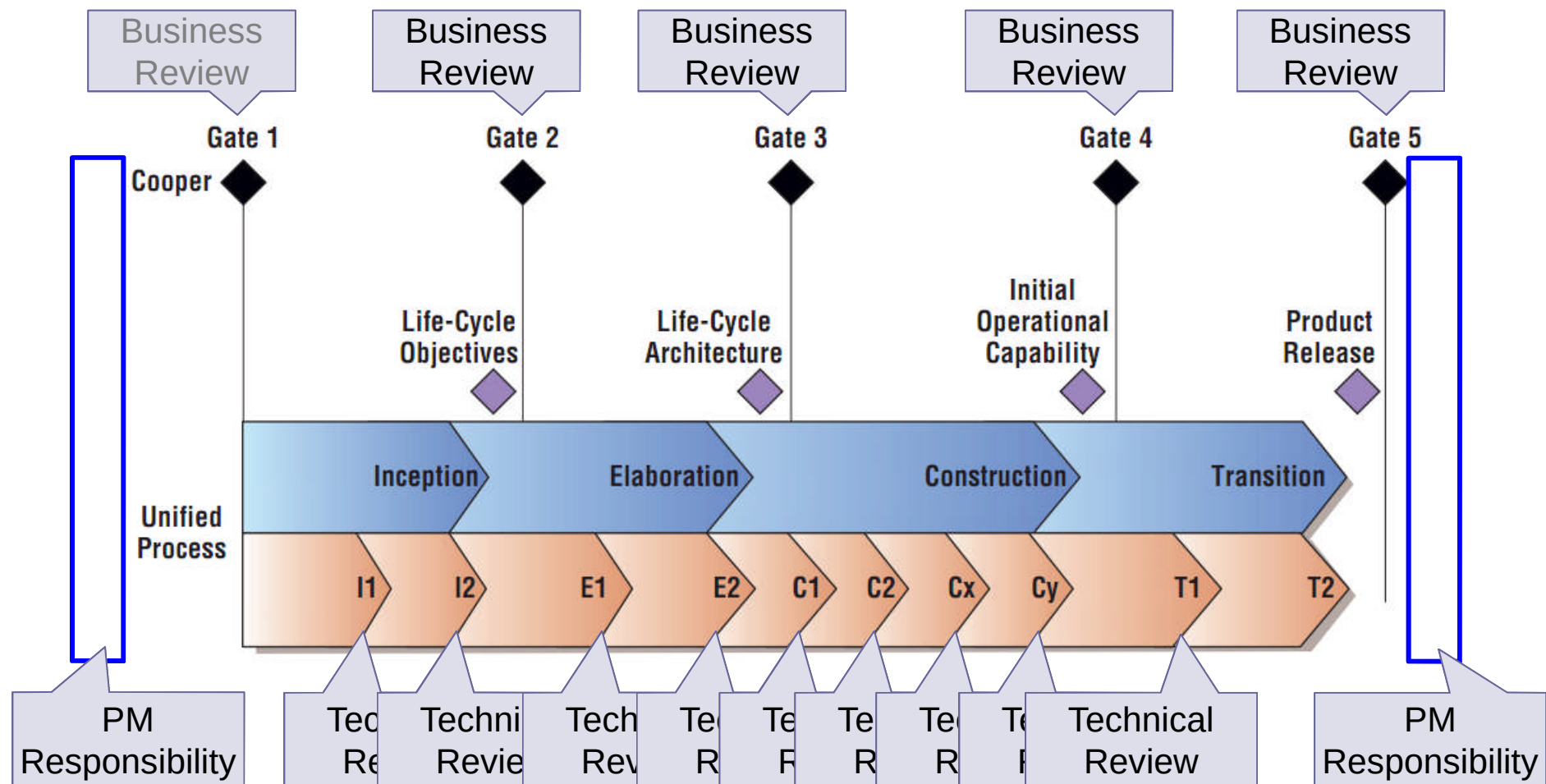




Mapping of RUP to StageGate

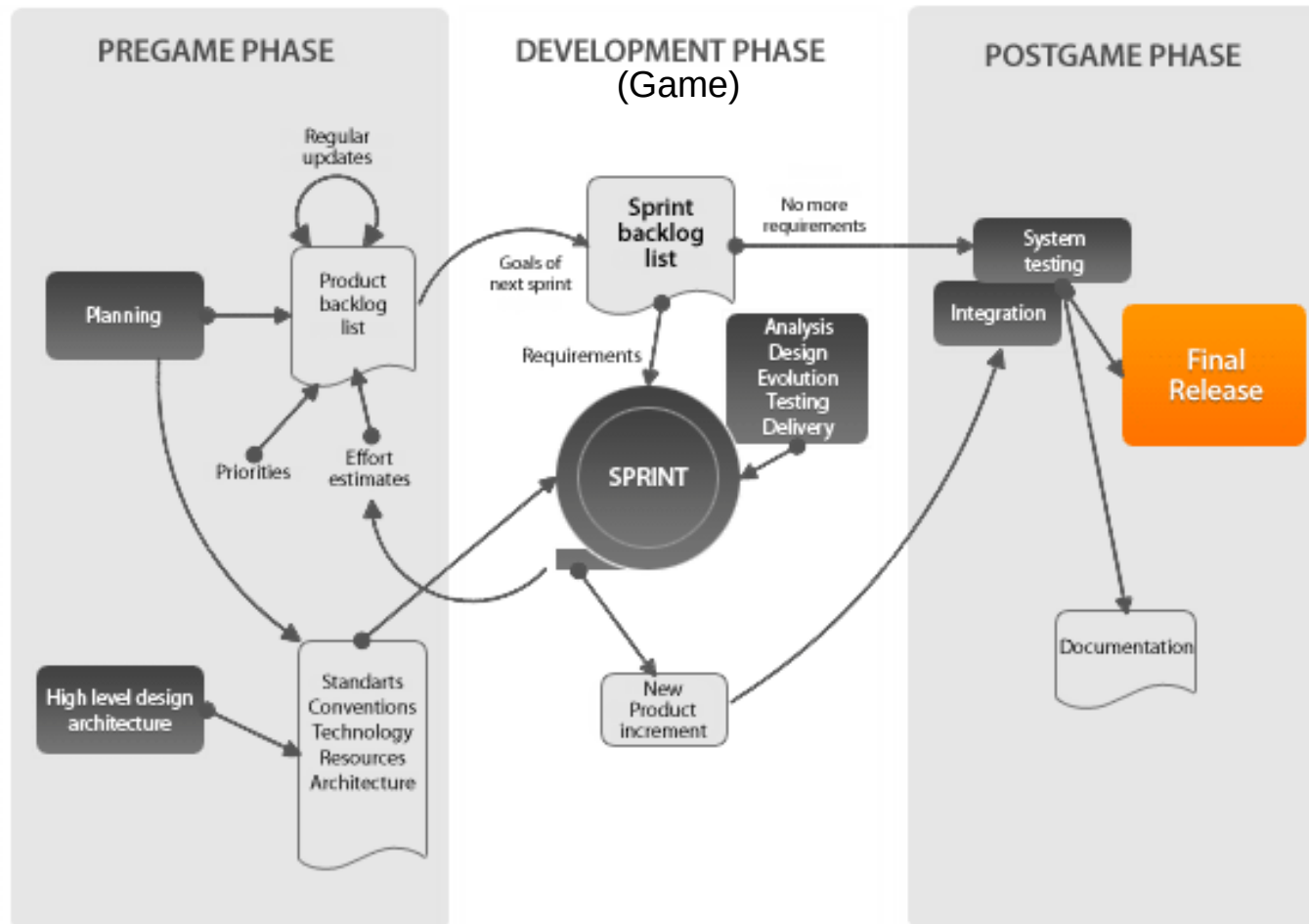


PM Interfaces in a RUP Project

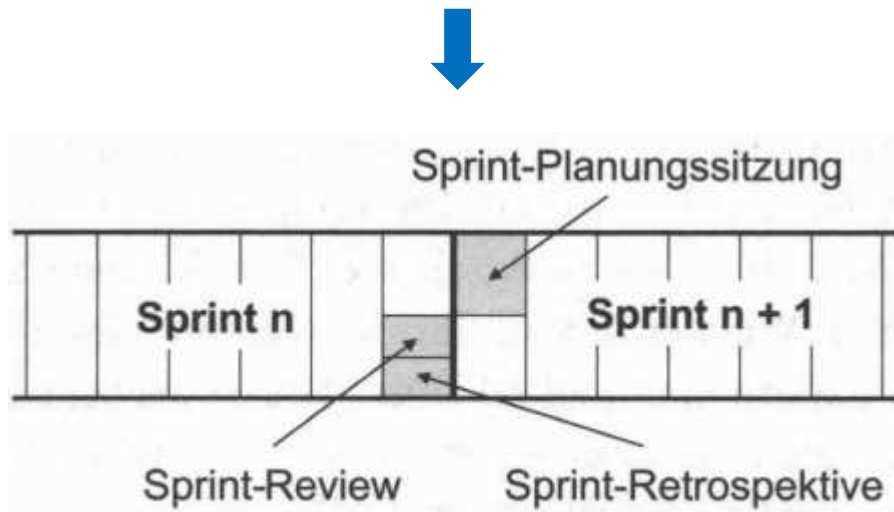
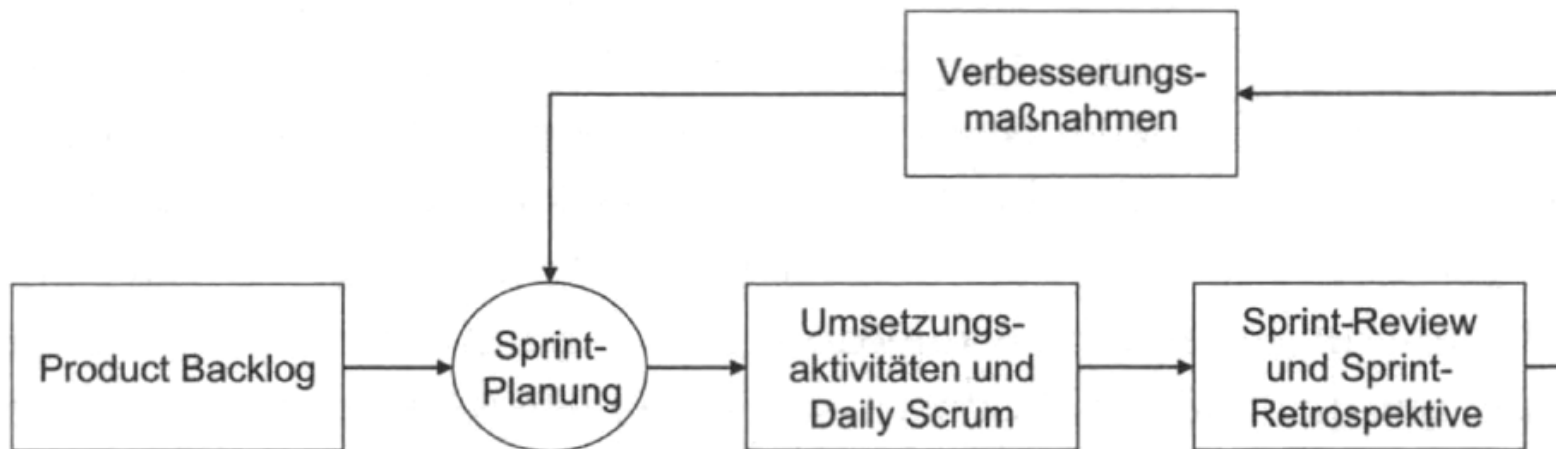




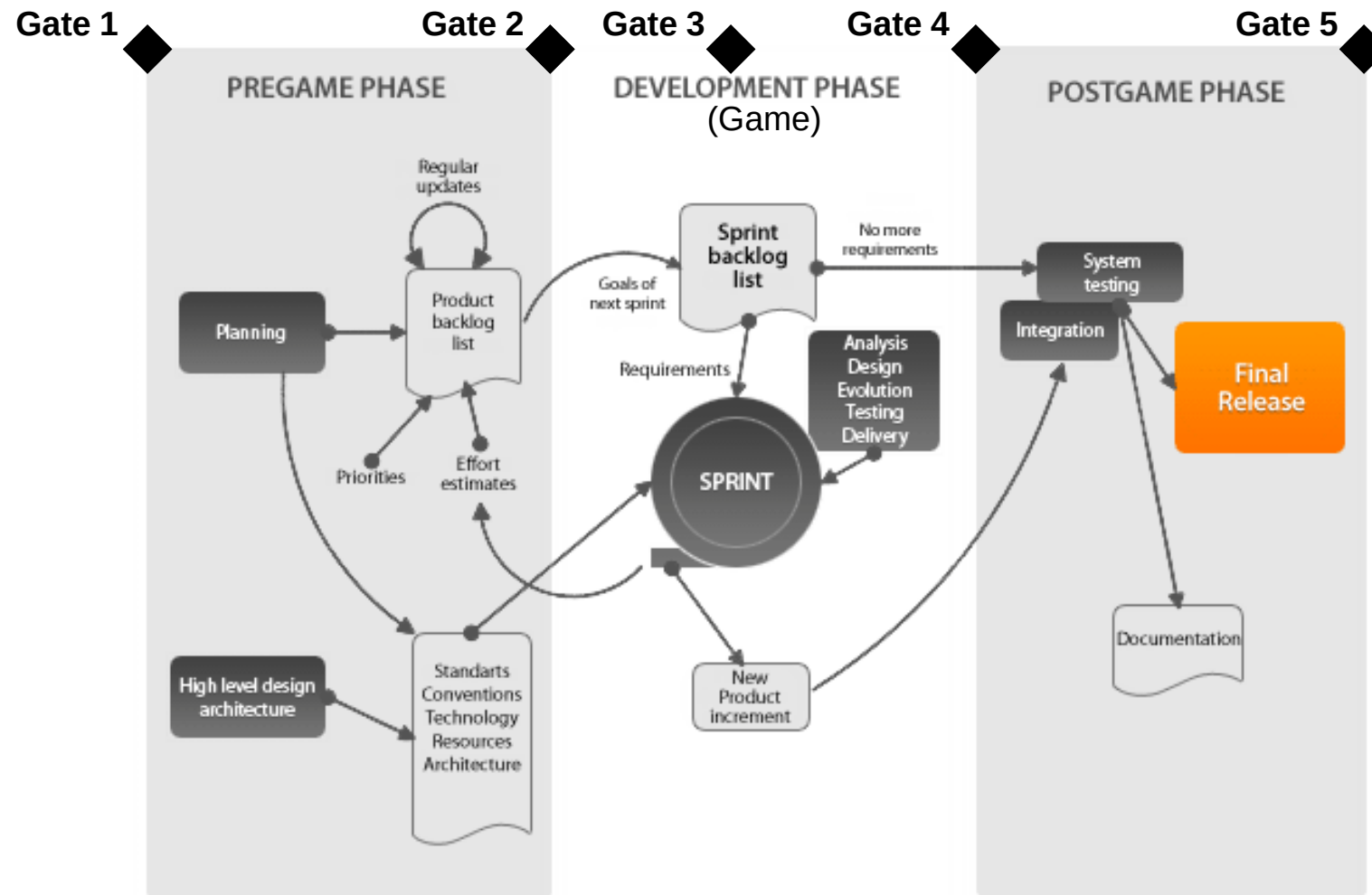
SCRUM



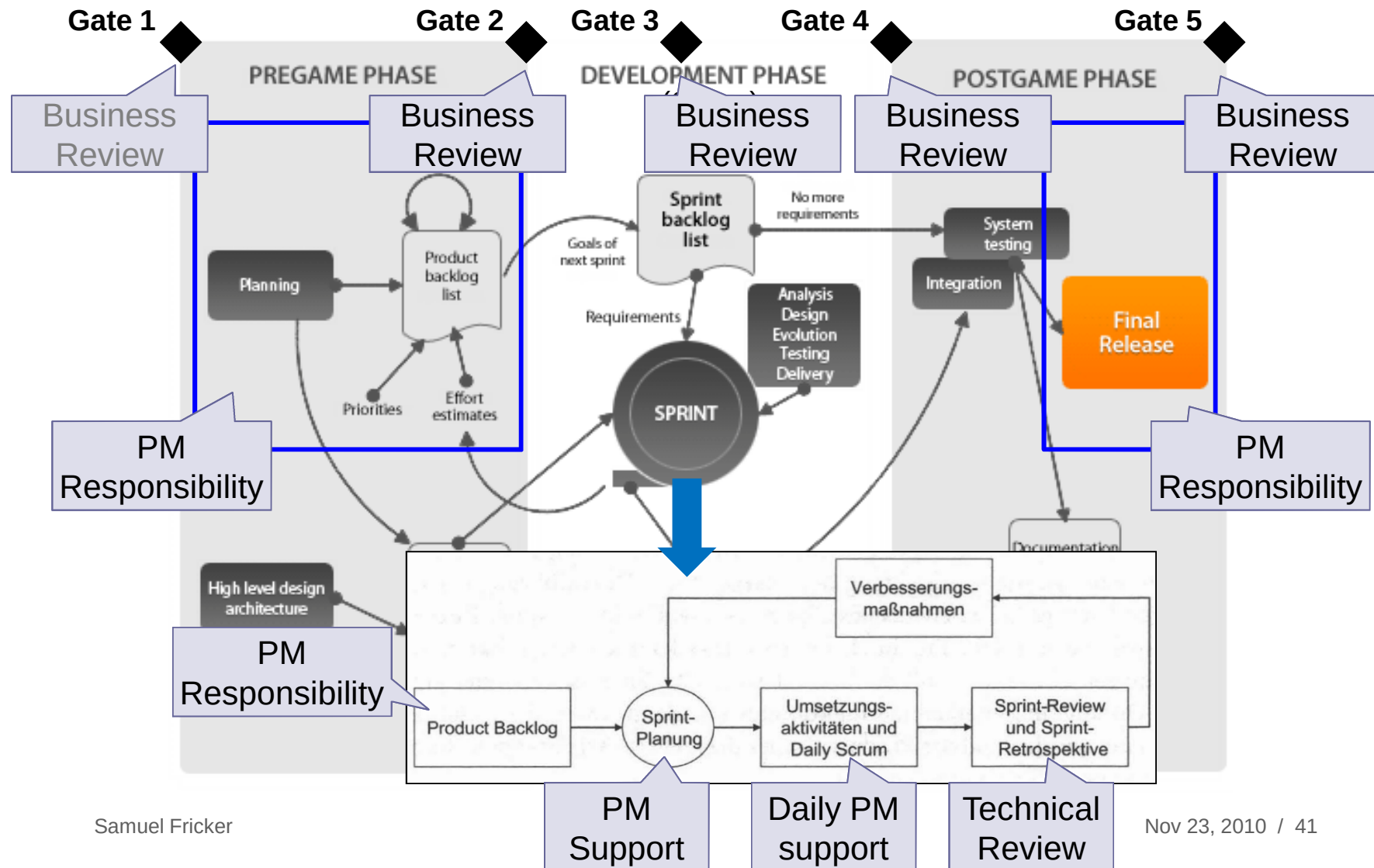
Structure of a Sprint



Mapping of SCRUM to StageGate



PM Interfaces in a Scrum Project



Release Plan

Development capacity
(not shown here)

Release timing

Release scope

ID	Title	Description	Start Date	End Date	Scope
003	0.1	Early stage draft as from prototyping	15.09.08	20.10.08	025:Start-Schirm 026:Hauptmenü Mechaniker 027:Hauptmenü Magaziner 028:Hauptmenü Werkstattleiter 029:Hauptmenü Techniker
005	0.5 (Alpha)	First functional release, may contain bugs and lack of functionality.	20.10.08	24.11.08	031:Bestellvorschlag 033:Export von Lagerstand 021:Domänendiagramm 017:System parallel nutzbar 013:Listen generieren
006	0.9 (Beta)	Second runnable Version with full functionality. May contain minor bugs.	24.11.08	15.12.08	007:Inventur durchführen
007	0.9.1	beta version of the software until review 1	16.02.09	02.03.09	030:Werkstattauftrag 005:Artikel erfassen 008:Artikel löschen
008	1.0	final version that will be deployed to the customer.	03.03.09	20.04.09	032:Export von Fahrzeugkosten 014:Kosten für Fahrzeug exportieren
009	1.1	fixed end version after deployment. contains changes that came out in pr	21.04.09	08.06.09	019:System bedienbar mit wenig Aufwand 020:System lernbar durch Nutzerhandbücher 002:Auftrag erstellen 003:Auftrag durchführen

Example with IBM FocalPoint.

Nov 23, 2010 / 42

Controlling of Software Development



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- Goal: Supervise and improve software development.
 - Compare plans with emerging reality.
 - Establish corrective actions.
 - Learn from observation and improve future activities.
- Approach
 1. Maintain and version requirements.
 2. Review project with appropriate views.
 3. Utilize gained insights in meetings and own activities.



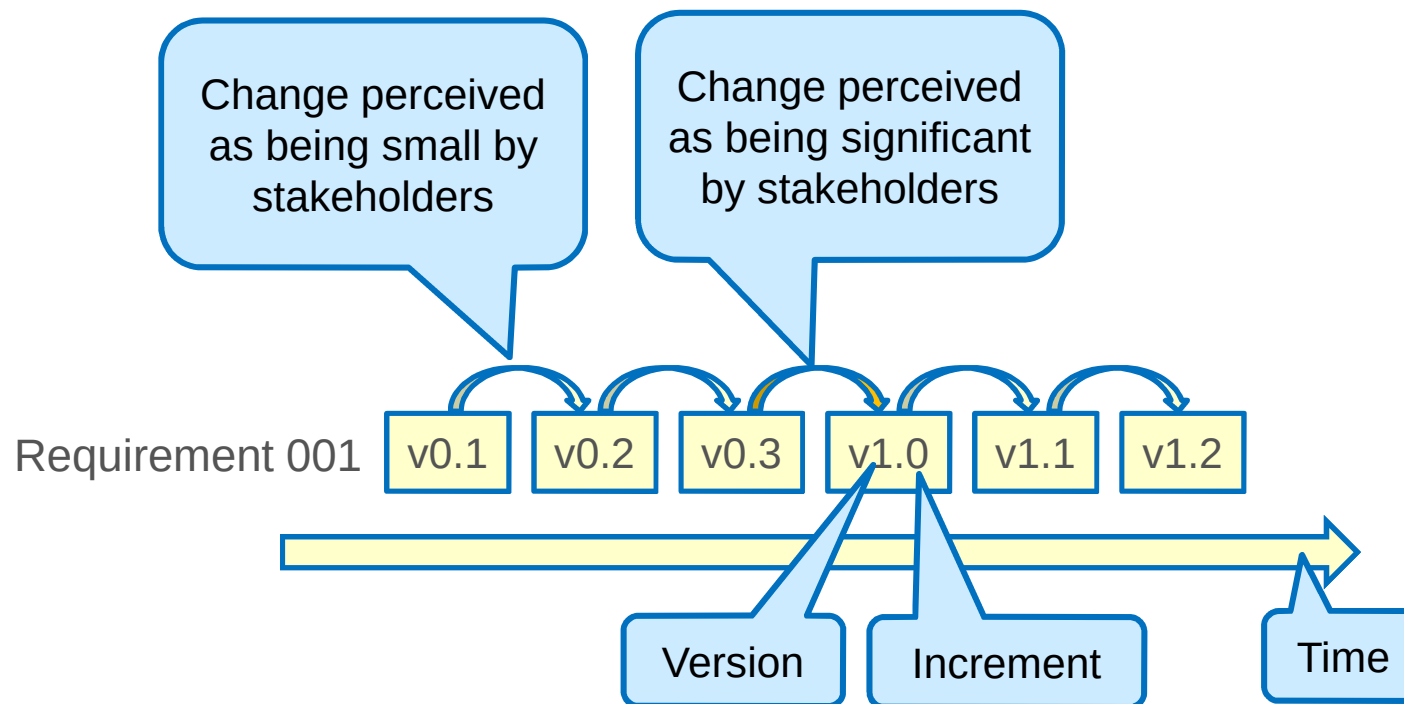
Track Requirements

- Requirements change over time.
 - The specification is created, refined, and changed
 - Responsibilities change.
 - Development progresses.



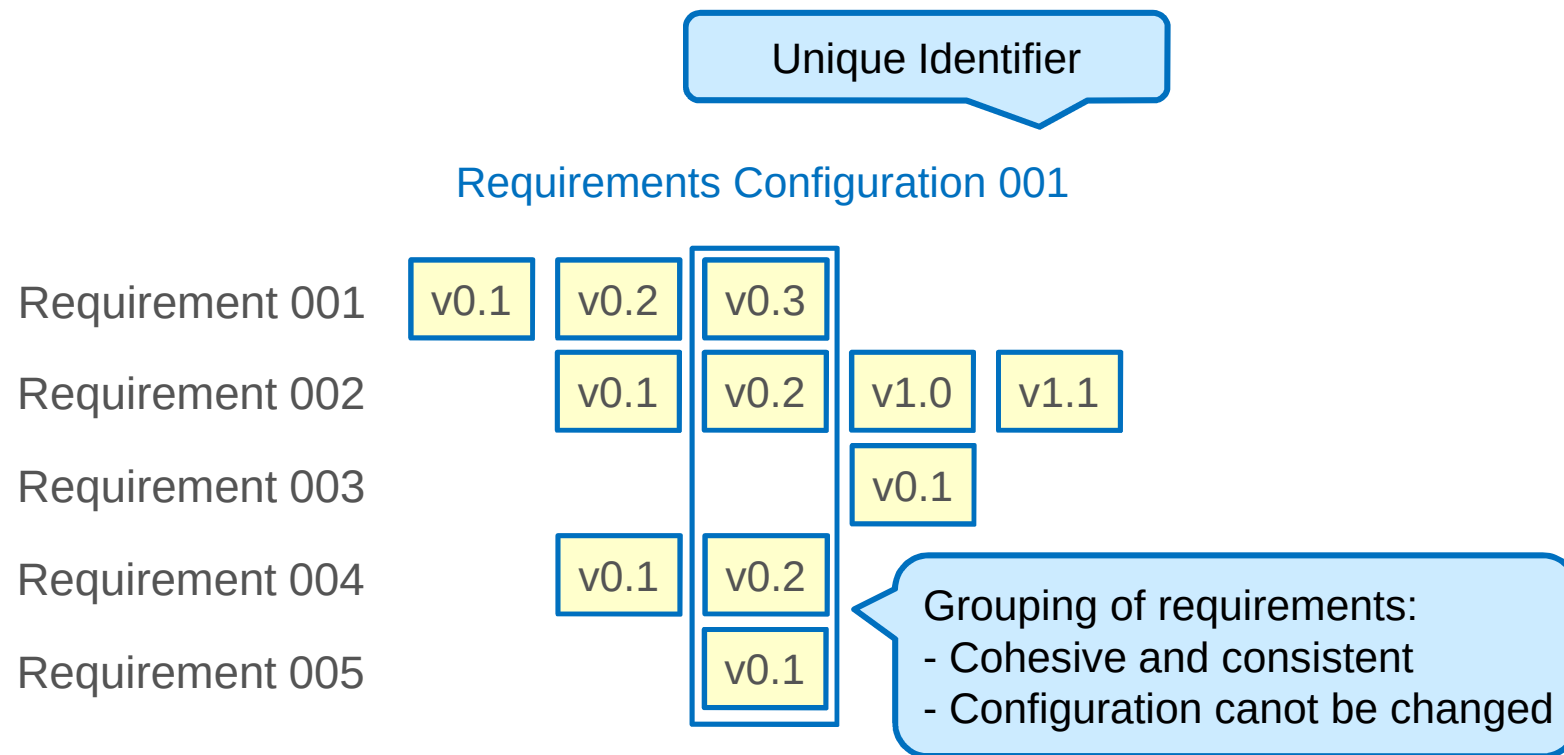
Requirements Versioning

- Each change of a requirements attribute leads to a change of the requirements version.



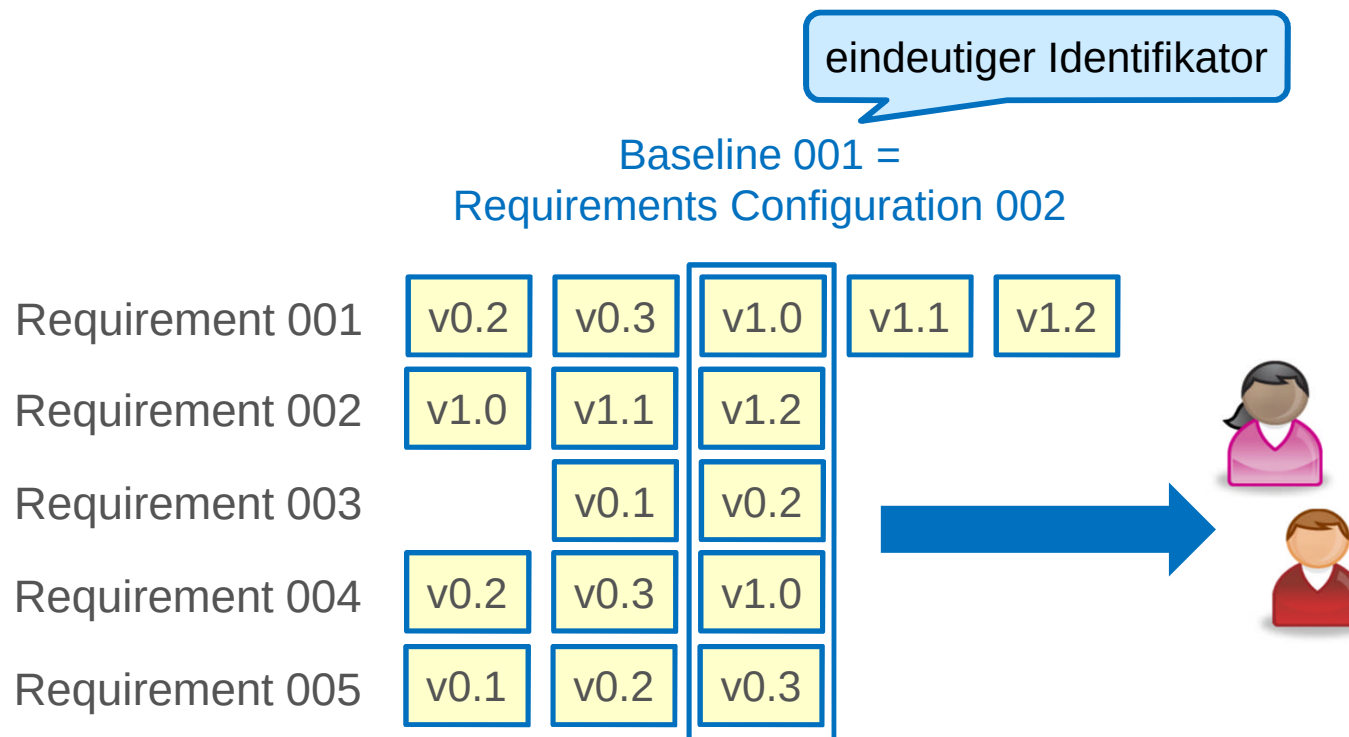
Requirements Configurations

- A configuration is a consistent requirements specification.

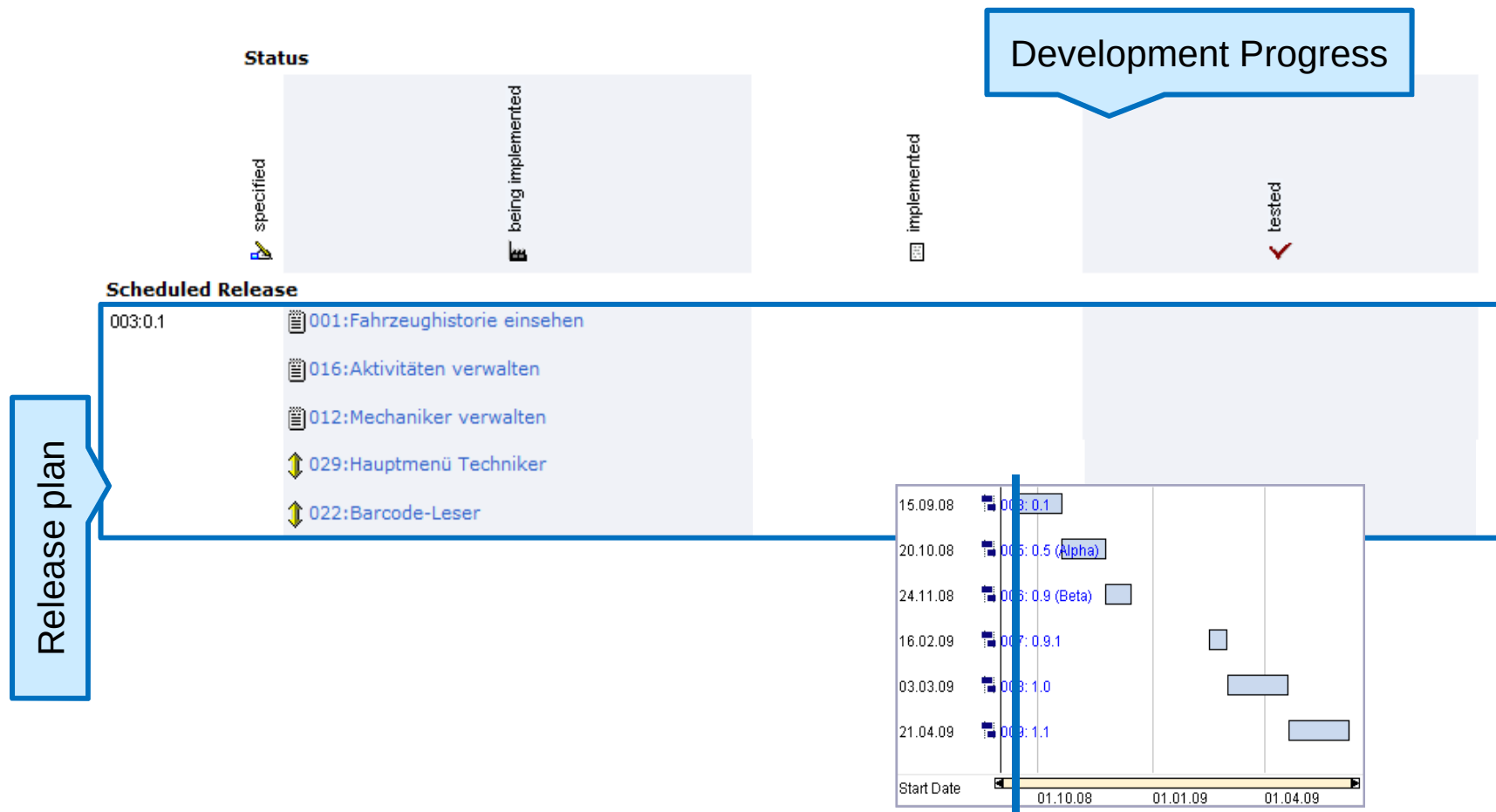


Baselines

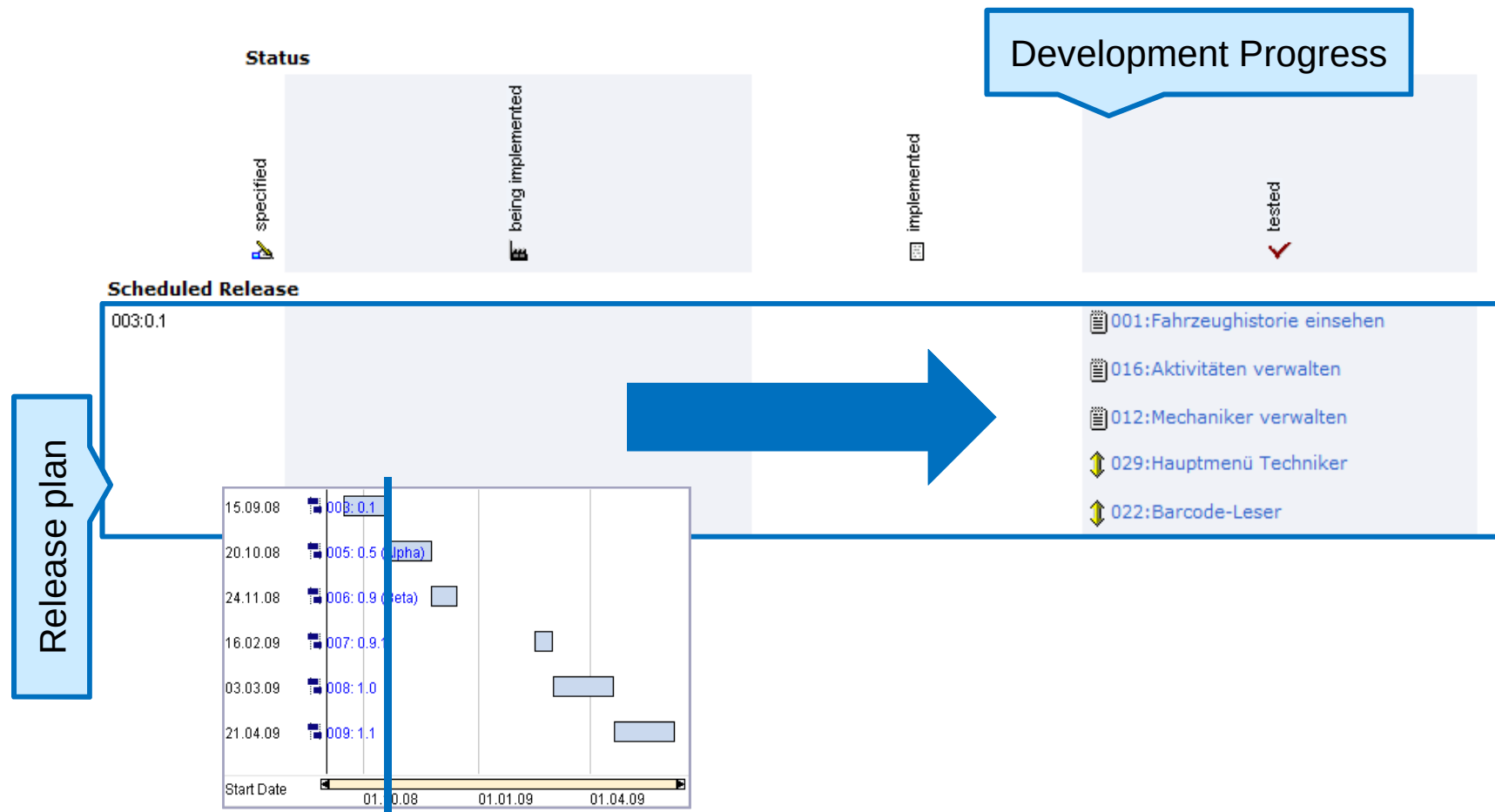
- A baseline is a published requirements configuration.



Requirements-Based Controlling



Requirements-Based Controlling



Example with IBM FocalPoint.



Requirements-Based Controlling



Development Progress

Status

specified

being implemented

implemented

tested

Scheduled Release

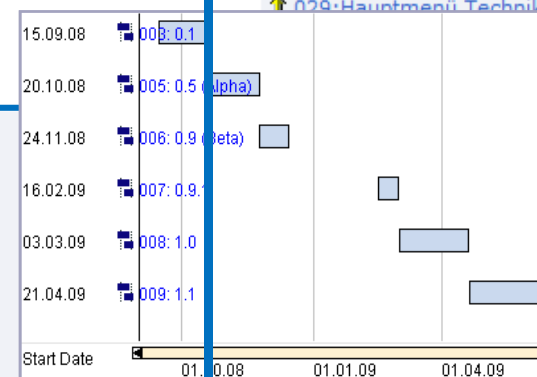
003:0.1

Release plan

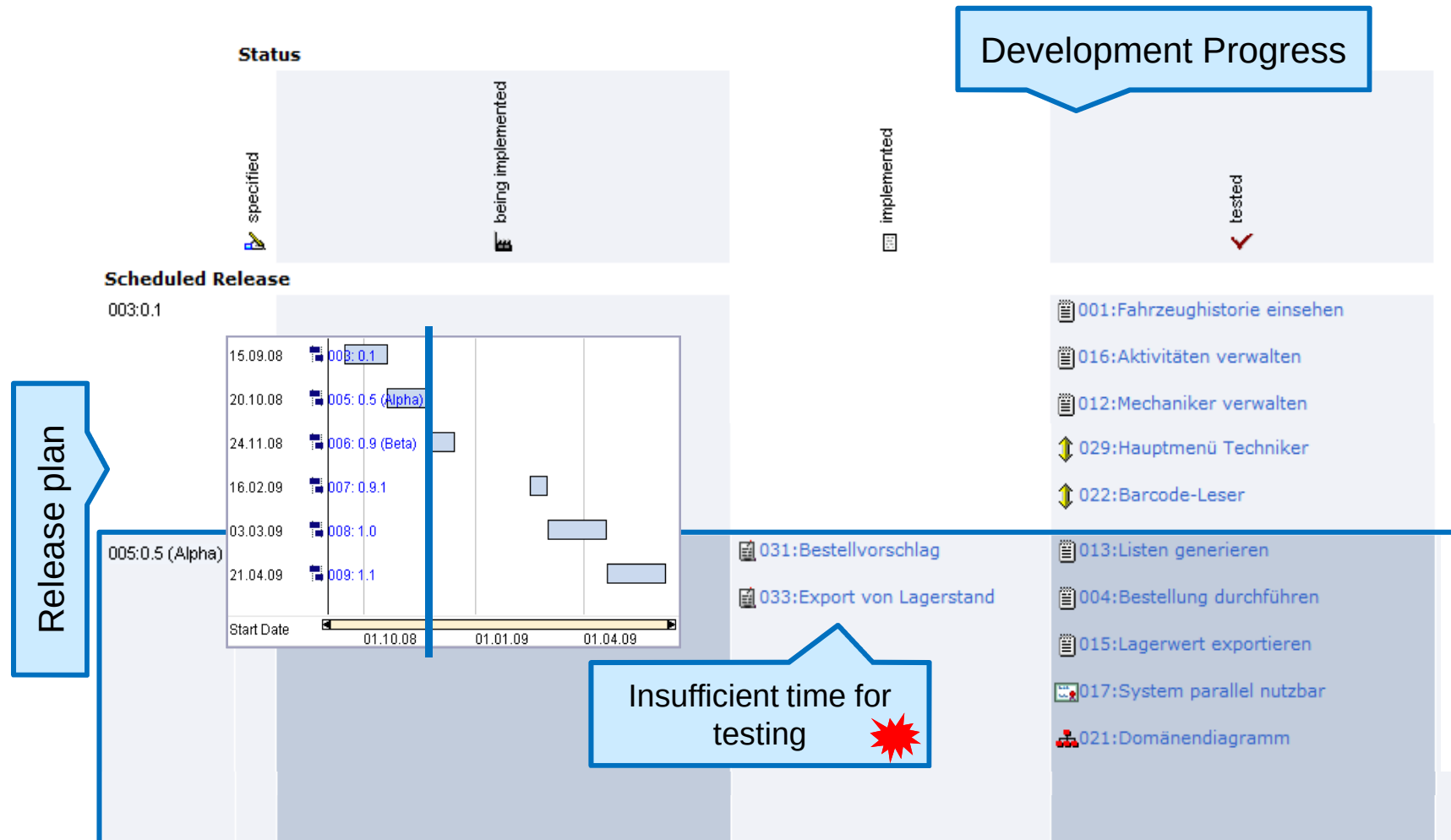
005:0.5 (Alpha)

- 013:Listen generieren
- 004:Bestellung durchführen
- 015:Lagerwert exportieren
- 017:System parallel nutzbar
- 021:Domänendiagramm
- 031:Bestellvorschlag
- 033:Export von Lagerstand

- 001:Fahrzeughistorie einsehen
- 016:Aktivitäten verwalten
- 012:Mechaniker verwalten
- 029:Hauptmenü Techniker



Requirements-Based Controlling



Kanban: Alternative Visualization for Controlling



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Requirements Catalogue

Development Progress

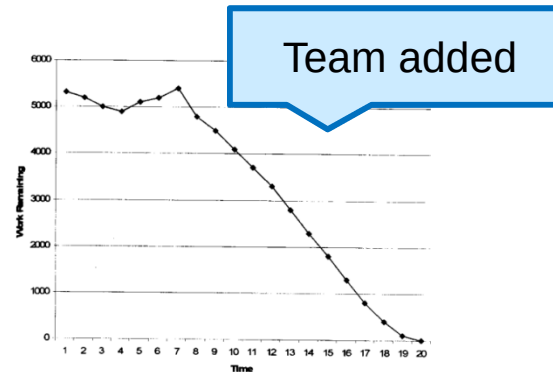
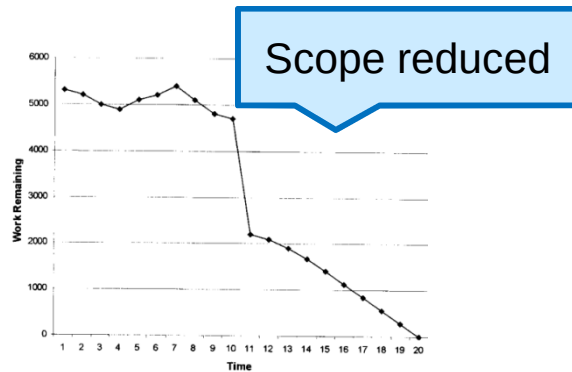
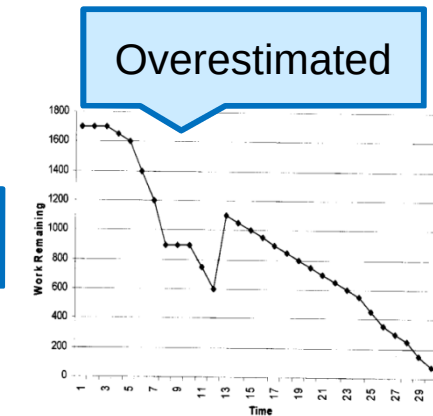
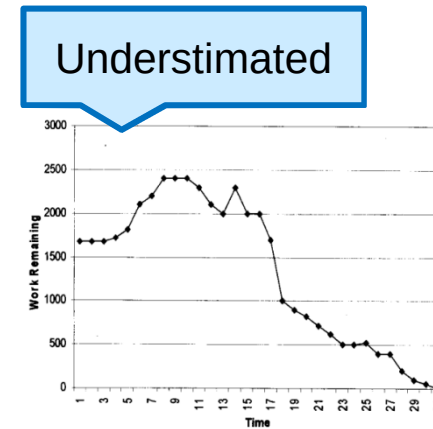
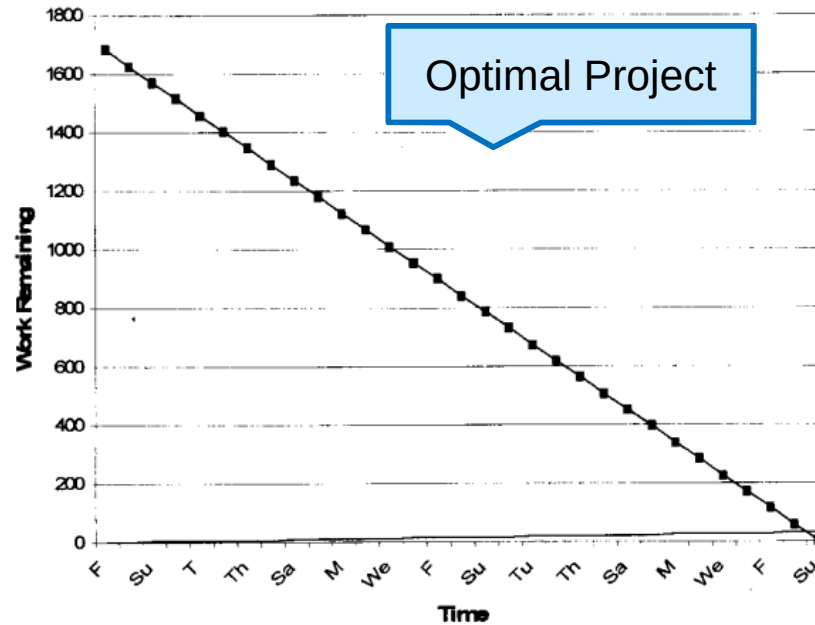


Source:
<http://www.derkdegeus.com>

Burndown Chart: Monitor Progress and Target Date



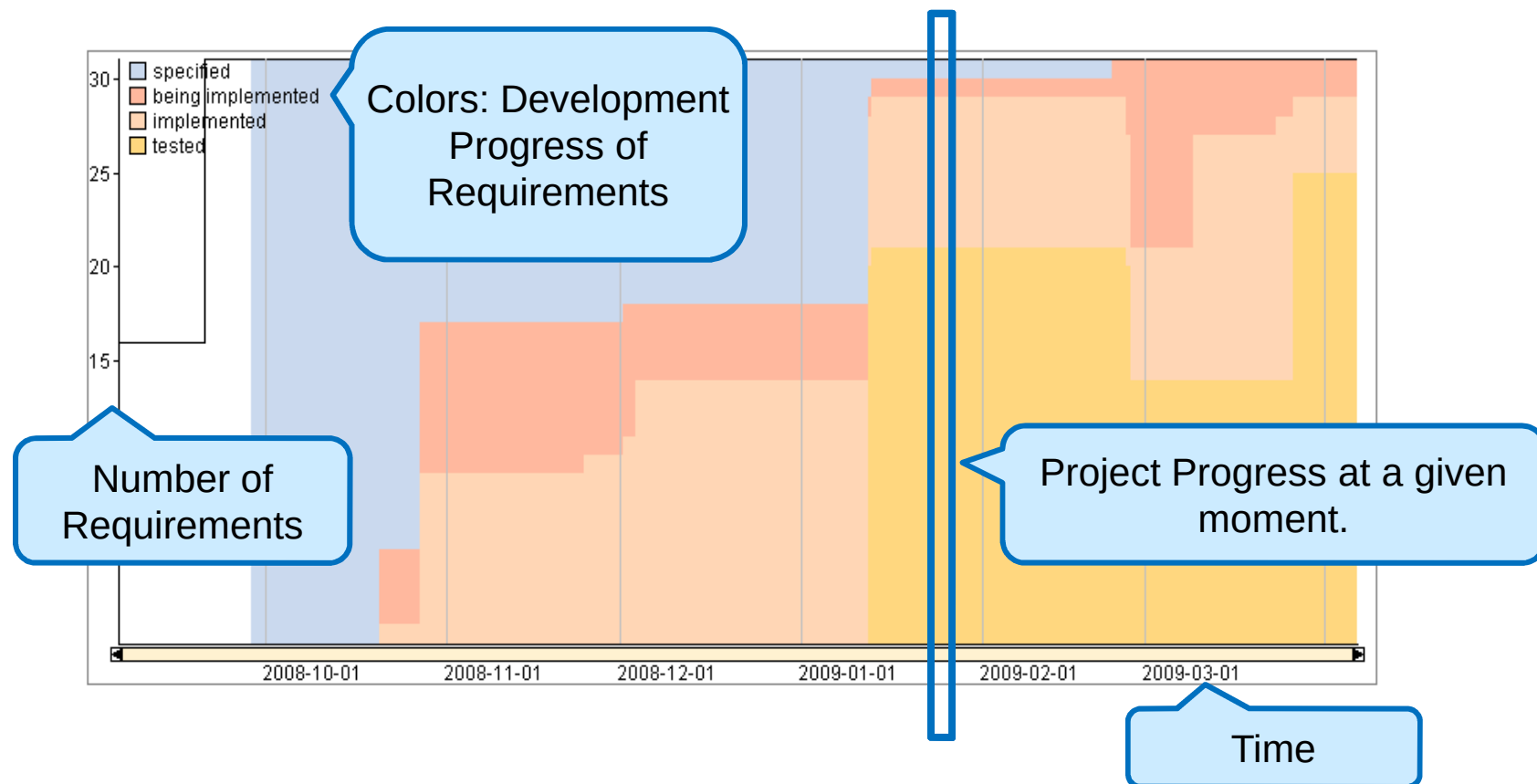
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Cumulative Flow Diagram: Observe Project Evolution



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