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Software Product Management Tooling

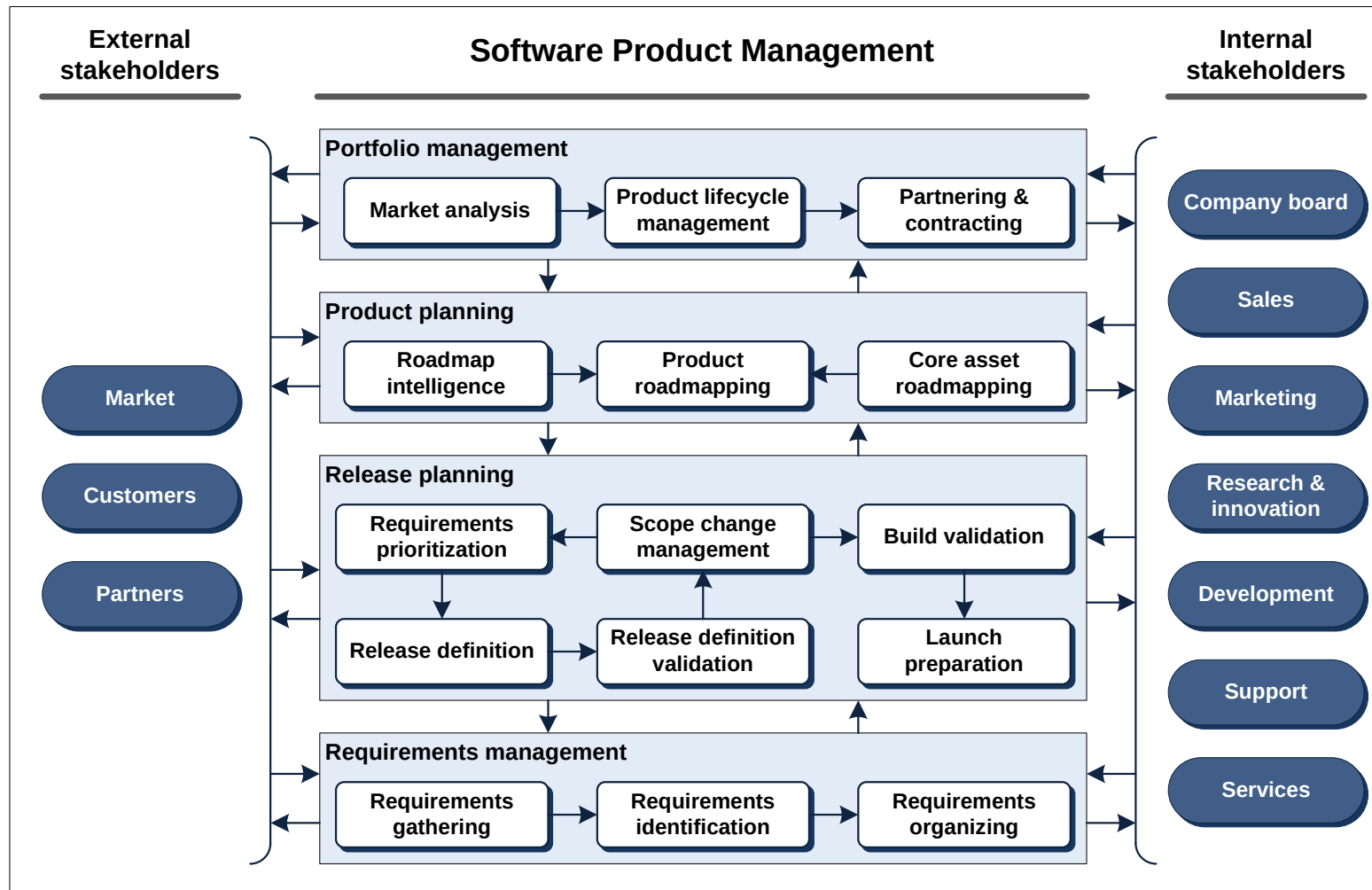
December 21, 2010

Samuel Fricker
(fricker@ifi.uzh.ch)

Reference Model for Process Improvement



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Reference Model for Education



	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 Technical Specification Project Requirements Management Implementation Quality Assurance Technology Innovation	Launch Plan Customer Analysis Partner Management Operational Marketing Material	Channel Preparation Operational Sales Operational Distribution Material	Customer Support Technical Support Marketing Support Sales Support Services Preparation Operational Services Provision



Contents

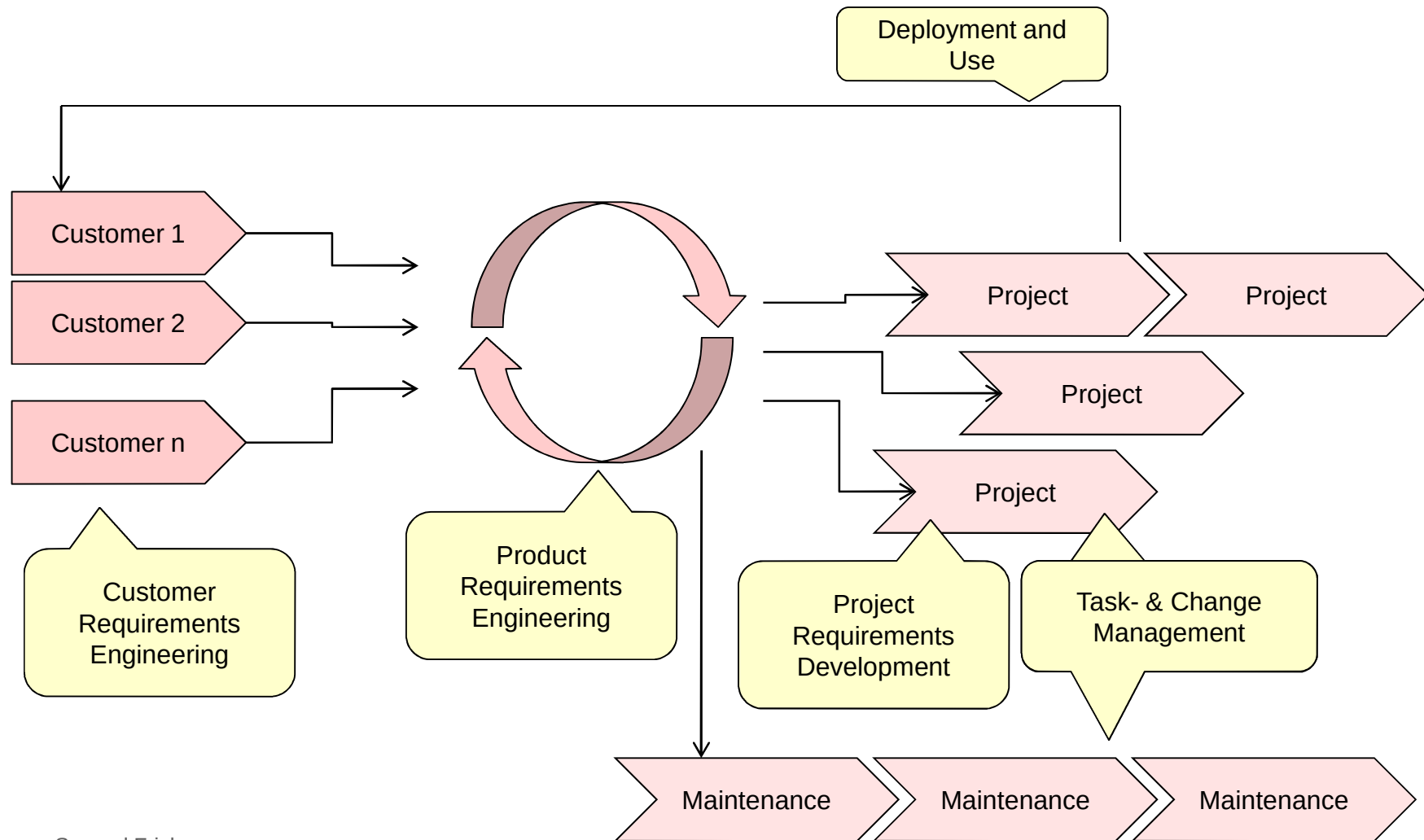
Learning Objectives

- Understand tool categories with examples of tools
- Understand tooling process

Agenda

- Tools
 - Requirements Engineering
 - Productization
- Tooling Process
 - Technology Transfer
 - Roll-Out Pitfalls

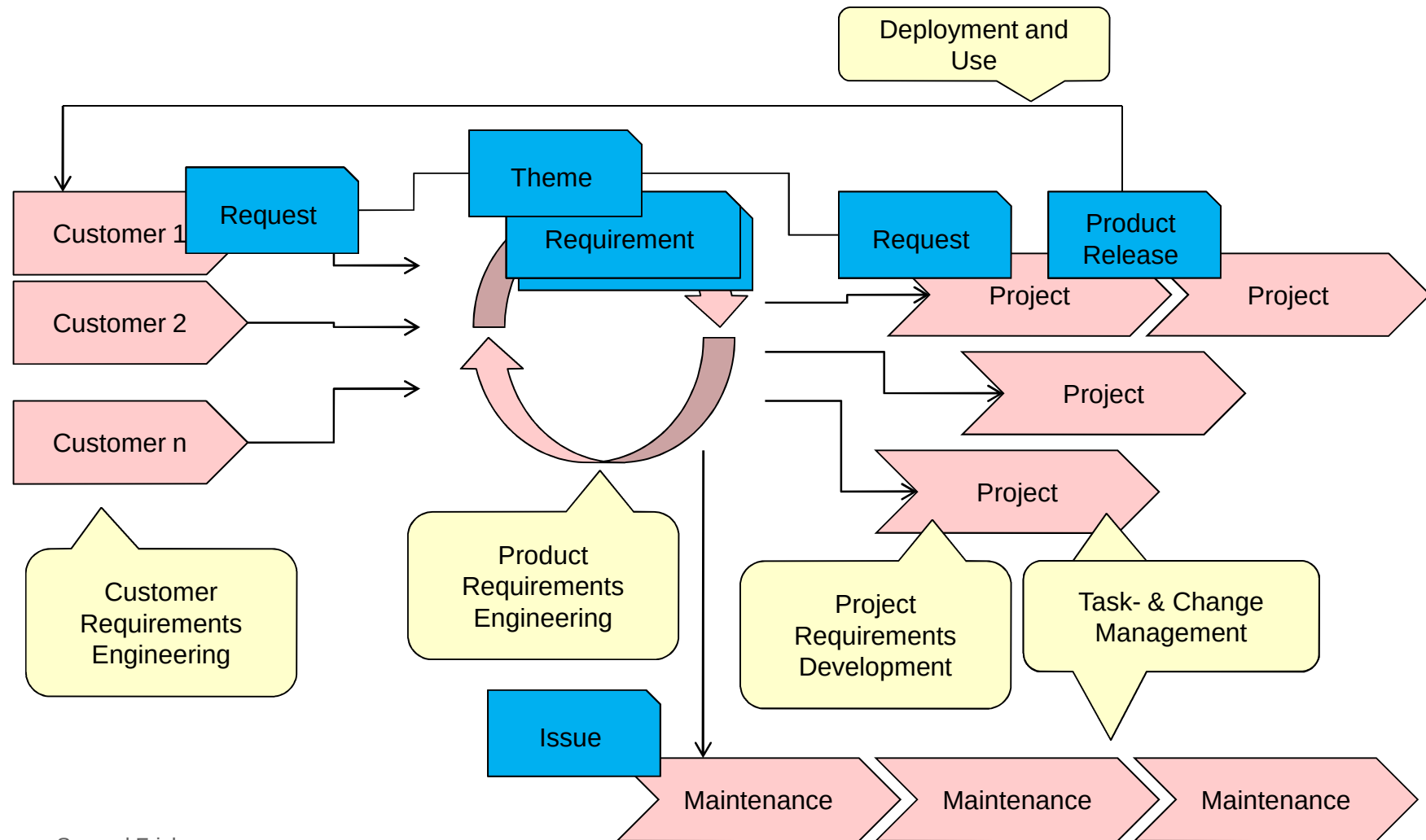
Process Landscape



Process Landscape: Information Model (Example)

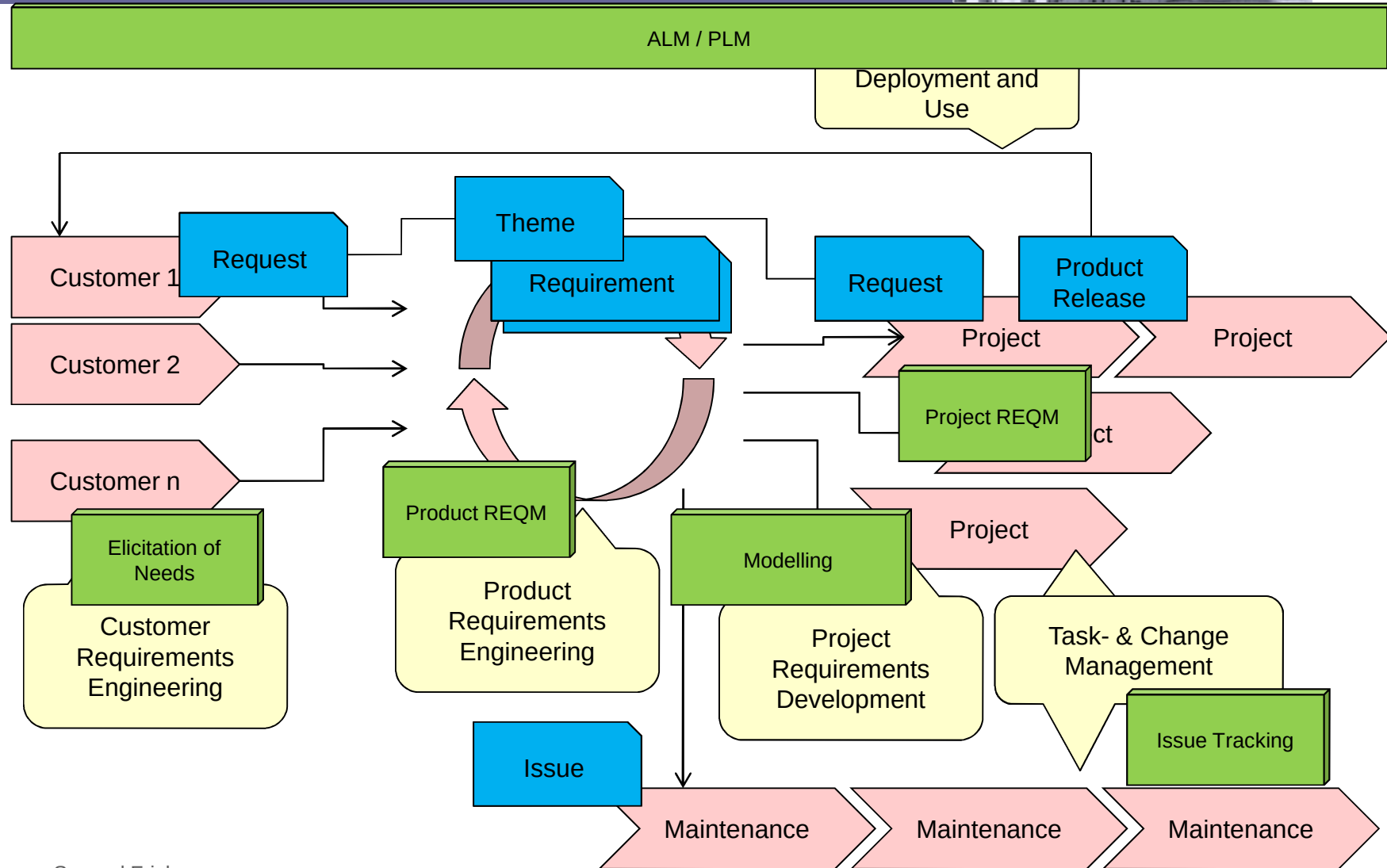


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Process Landscape: Requirements Engineering Tools



SurveyMonkey for Electronic Questionnaires



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SurveyMonkey™ [Sign In](#) | [Help](#)

[Home](#) [Take a Tour](#) [Plans & Pricing](#) [Customers](#)

Creating a Survey

- [Getting Started](#)
- [Question Types](#)
- [Survey Templates](#)**
- [Customization](#)
- [Response Validation](#)
- [Skip Logic](#)
- [Printable PDFs](#)

Get Responses

Analyze Results

See Use Cases

We did the work so you don't have to.

Overall, how would you rate this employee?

- ☐ Exceeds expectations
- ☐ Exceeds expectations
- ☐ Meets expectations
- ☐ Meets expectations
- ☐ Does not meet expectations

How satisfied are you with the product?

- ☐ Extremely Dissatisfied
- ☐ Very Satisfied
- ☐ Somewhat Satisfied
- ☐ Slightly Satisfied
- ☐ Not at All Satisfied

How likely are you to recommend our service to a friend?

- ☐ Extremely Likely
- ☐ Very Likely
- ☐ Somewhat Likely
- ☐ Slightly Likely
- ☐ Not at All Likely

Get Started Today!

BASIC Plan

[Sign Up FREE ▶](#)

All the essentials to get you started for FREE.

PRO Plan

[PRO Sign Up ▶](#)

Advanced features & customization for power users.
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Save time & ensure quality feedback with our pre-made survey templates. Here are a few of the most popular:

- Academic/Research- Course Evaluation, Faculty Satisfaction, Public School Survey
- General Business- Customer Service, Online Product Feedback, Business to Business
- Marketing- New Product Announcement, Software Evaluation
- Non-Profit- Fundraising, Volunteer Recruitment, Membership Survey
- Satisfaction- Customer Satisfaction, Client Satisfaction
- Services- Dental Care, Medical Patient, Travel
- Social/Political- Advocacy Workshop, Event Feedback, High School Clubs

Mobile Scenario Presenter for Eliciting User Needs



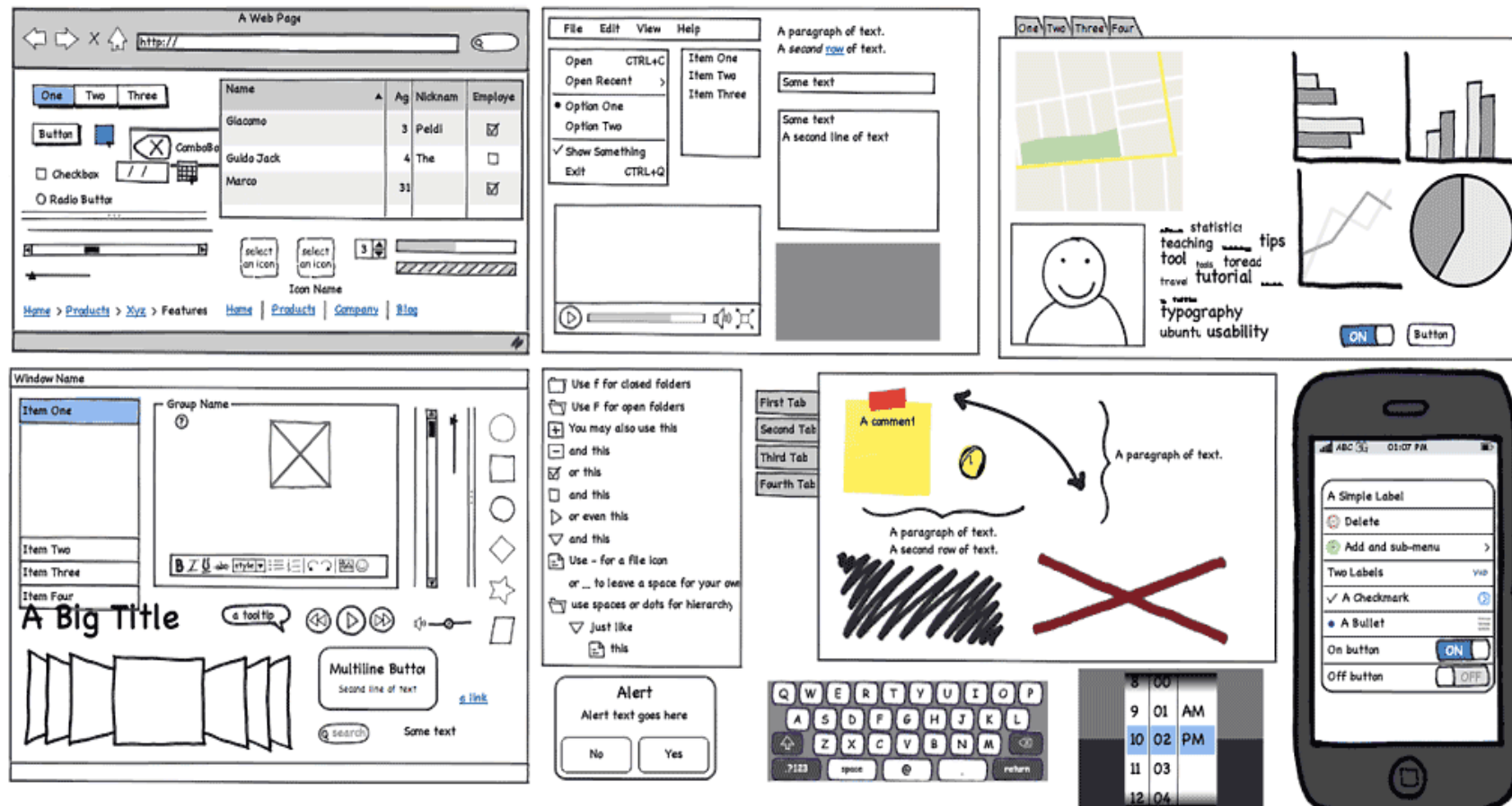
- Web-based tool for eliciting requirements based on scenarios and rich context.



Balsamiq for Functional GUI Design



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FocalPoint for Product Requirements Engineering



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The screenshot displays the Rational FocalPoint software interface. The top menu bar includes 'Workspaces', 'Home', 'Preferences', 'wd', 'Help', and 'Log Out'. The main window is titled 'Display > Anfragen' and features a sidebar with 'Add', 'Display', and 'Information' sections. The 'Display' section shows a tree view of requirements, with '005:Re-engineering News/Events' selected. The main pane shows the details for this requirement, including its ID, title, description, and comments. Three yellow callout boxes highlight specific features: 'Structure Information' points to the tree view, 'Attributes' points to the 'ID' and 'Title' fields, and 'Visualize Information' points to the 'Description' field.

Structure Information

- Anfragen(1/8)
 - 001:Individualisierung TopBild
 - 002:External Content
 - 003:Umbau Struktur Plone- Sites (
 - 004:Erweiterte Suchfunktion
 - 005:Re-engineering News/Events
 - 006:News/Events
 - 007:News/Events
 - 008:blabla

Attributes

Re-engineering News/Events	
ID	005
Title	Re-engineering News/Events
Description	Optimierung der php-Tools und der Integration ins WebCMS. Die gespeicherten Artikel sollten Siteübergreifend weiterverwendet werden können.
Ziel, Nutzen	
Kommentare	wd 11.06.10 16:41: My first comment
	wd 11.06.10 16:41: my second comment

Visualize Information

IBM Rational FocalPoint

Rational software

FocalPoint for Product Requirements Engineering



University of Zurich



Rational Focal Point

Workspaces | Home | Preferences | Doris Edelmann | Help | Log Out

Display > Themen

FHNW

Add

Display

- Anfragen
- Themen**
- Releases
- Anforderungen
- Projekte

Prioritize

Visualize

Plan

Configure

Members

Information

Advanced

ID	Title	Description	Anfragen	Nächste Schritte	Owner	Creator	Created Date	Last Changed By	Last Changed Date	Parent Folder
001	News/Events		005: Re-engineering News/Events 006: News/Events 007: News/Events 008: blabla	- Antrags-Ausarbeitung			27.05.10		27.05.10	Themen

Maximum number of elements per page

50

Export Themen. Update Themen. Tree View Sorting

IBM Rational FocalPoint

Rational software

Adapt to Process

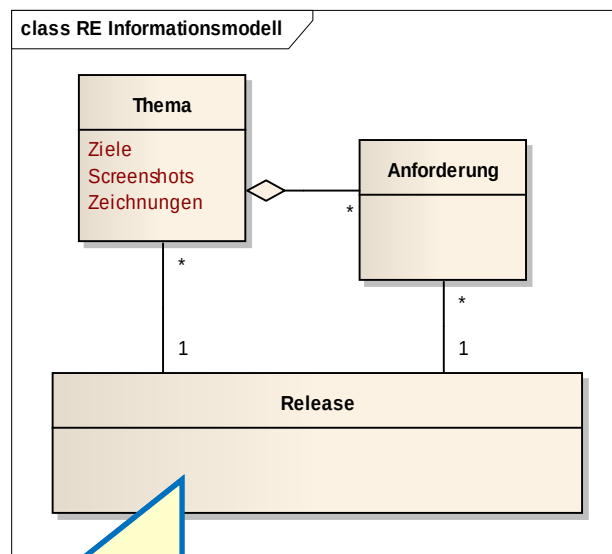
Manage Users

Generate Documents

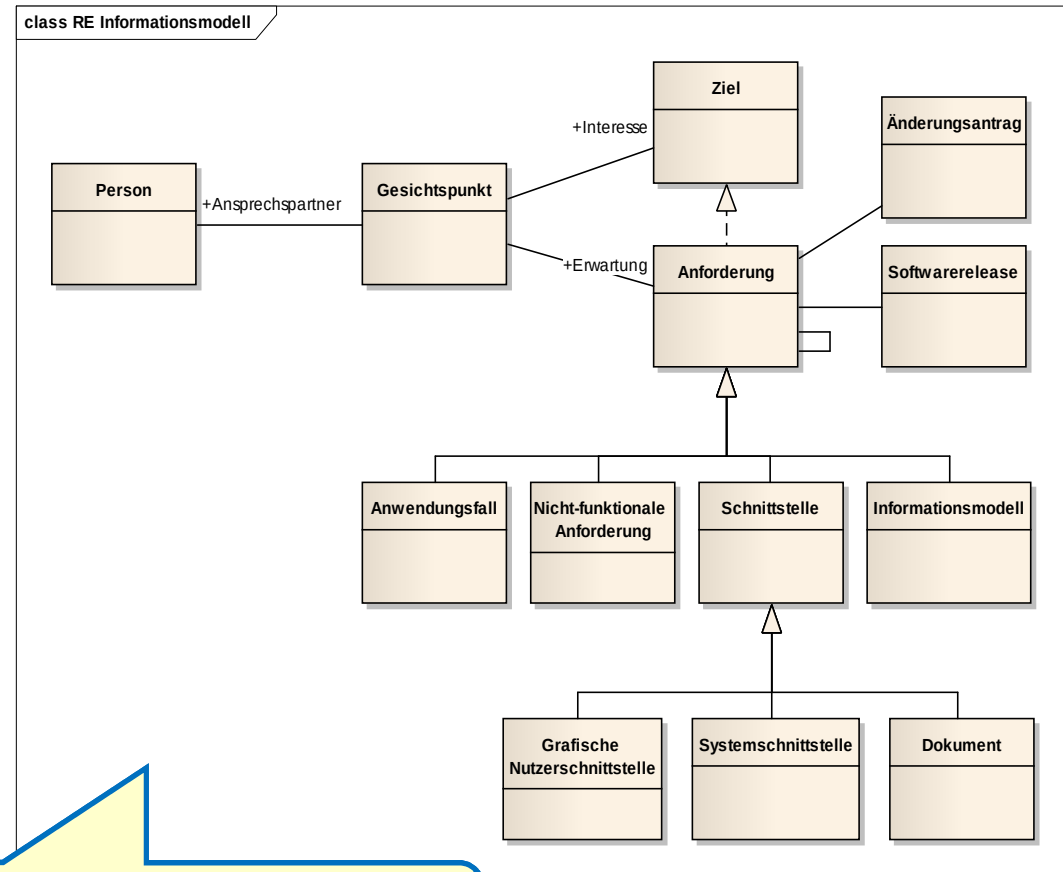
Beispiele von Requirements-Metamodellen



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Simple: Works for Agile Development

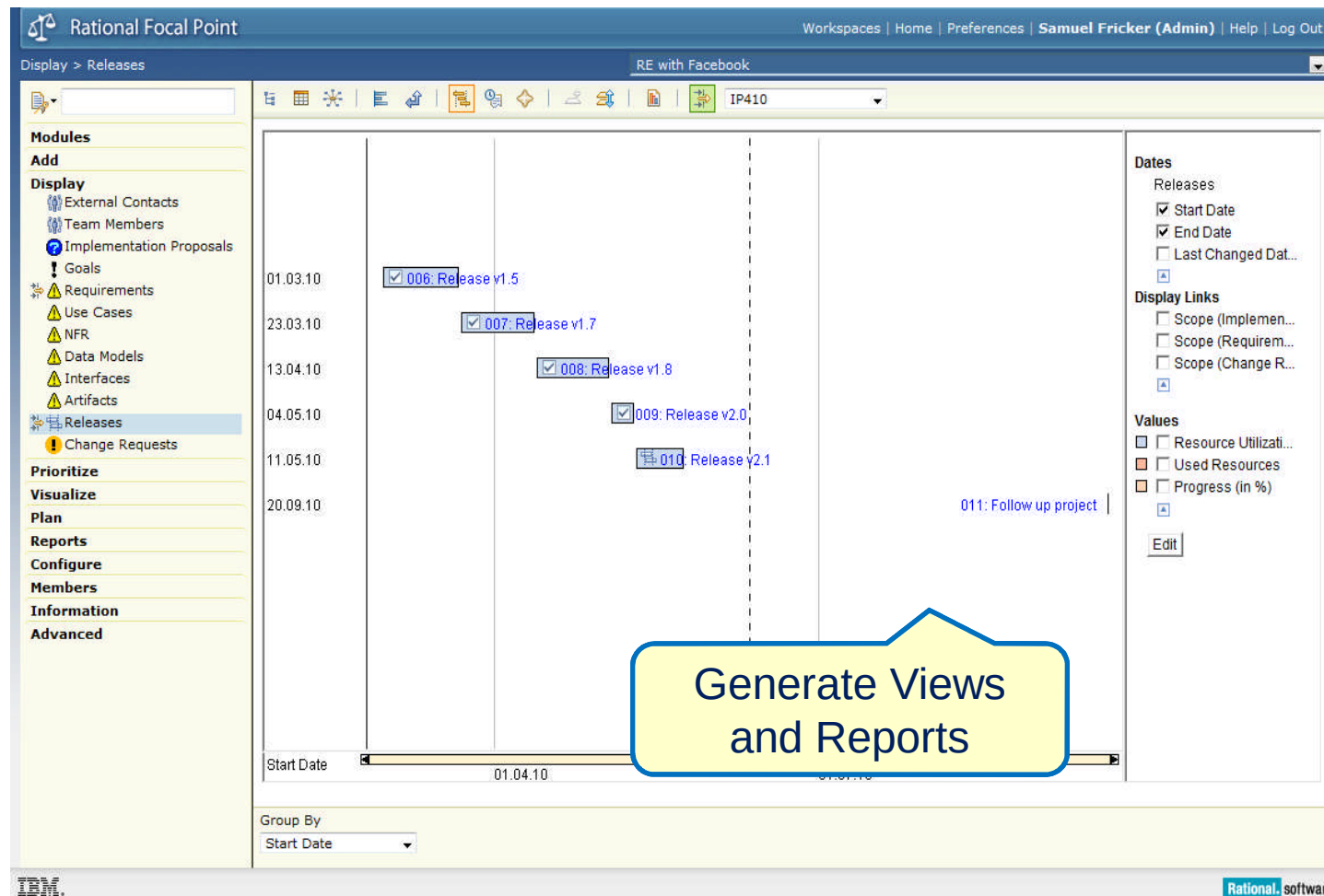


Complex: Works for IEEE 830-based Specs

FocalPoint for Product Requirements Engineering



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FocalPoint for Product Requirements Engineering



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Rational Focal Point

Workspaces | Home | Preferences | Samuel Fricker (Admin) | Help | Log Out

Display > Requirements

RE with Facebook

IP-410

Relationships

Team Members
Implementation Proposals
Goals
Requirements
Use Cases
NFR
Data Models
Interfaces
Artifacts
Releases
Change Requests

Prioritize
Visualize
Plan
Reports
Configure
Members
Information
Advanced

Status	Status					
	Draft	planned	to be implemented	to be tested	to be accepted	accepted
Scheduled Release						
006:Release v1.5			037:Grid with Drag&Drop		☒ 039:Container-Menu ☒ 043:Add/Remove Entity Types ☒ 044:Add/Remove Attributes ☒ 046:Simple Attributes	5
007:Release v1.7					☒ 040:Data Widget Menu ☒ 041:Data Widget Query Interface... ☒ 047:Advanced Attributes ☒ 050:Widget Dimensions ☒ 051:Tree Navigation ☒ 066:Add Entity Type ☒ 068:Basic User Entity	7
008:Release v1.8			076:Add Attribute		☒ 052:Context Menu Tree Navigation...	6

Row: Scheduled Release Column: Status Cell: Elements Plain text Refresh

IBM Rational software

Softwiki for Requirements Management



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Softwiki Hauptauswahl

softWIKI

Web-Plattform für verteiltes Anforderungsmanagement

Bitte zuerst anmelden

Themen

Suche nach Thema ...

Alle Themen

- Benutzerfreundlichkeit (7)
- Grundlegende und übergreifende Anforderungen (7)
- Informationsbeschaffung (7)
- Prozessintegration (2)
- Socialising (1)
- Sonstiges (2)
- Zusammenarbeiten und Wissenssicherung (1)

Schlagwörter

Suche nach Schlagwort ...

Account Antwortzeit Authentifizierung Benutzer Blech Button Buttongröße Crypto Customization Darstellung Database E-Mail Eindhoven GPG GUI IMAP-Protokoll Kontakt Posteingang Privatsphaere Rant Senden Suche Tagging noch ein Schlagwort owl zahlen,

Alle Themen

« Anfang « Zurück 1 2 Weiter » Ende »

Suche nach Anforderungen

18 Aktuellste E-Mail schnell lesbar
Die aktuellste E-Mail sollte nach 60s zur Verfügung ...

3 Blechbiegen statt Stechfliegen!
Blechbiegen statt Stechfliegen!...

11 Database for storing team members
We need it. Now....

14 Der Emailclient kann sich ü
IMAP-Protokoll...

27 Einbindung von End to End
Die Privatsphaere der Nutzer

1 Eindhoven
Eindhoven...

19 Erinnerung bei vergessenen
Der Client sollte den Nutzer

24 Filterung nach Schlagwörtern
E-Mails sollen nach Schlagw

6 Größe der Buttons
Die Buttons sollten mindeste

16 Look and feel
The email client shall suppo

7 Lorelei
Ich weiß nicht, was soll es b

22 Mehrere Absenderadressen

Sonstiges > Database for storing team members

Zurück

Database for storing team members

We need it.. Now.

Thema: Sonstiges

Schlagwörter: Database

Bearbeiten

Autoren

Erster Autor: SlayerHippie
(vor ca. 287 Tagen)

Letzter Autor:
SysOnt:SuperAdmin (vor ca. 27 Tagen)

Zeige alle Autoren

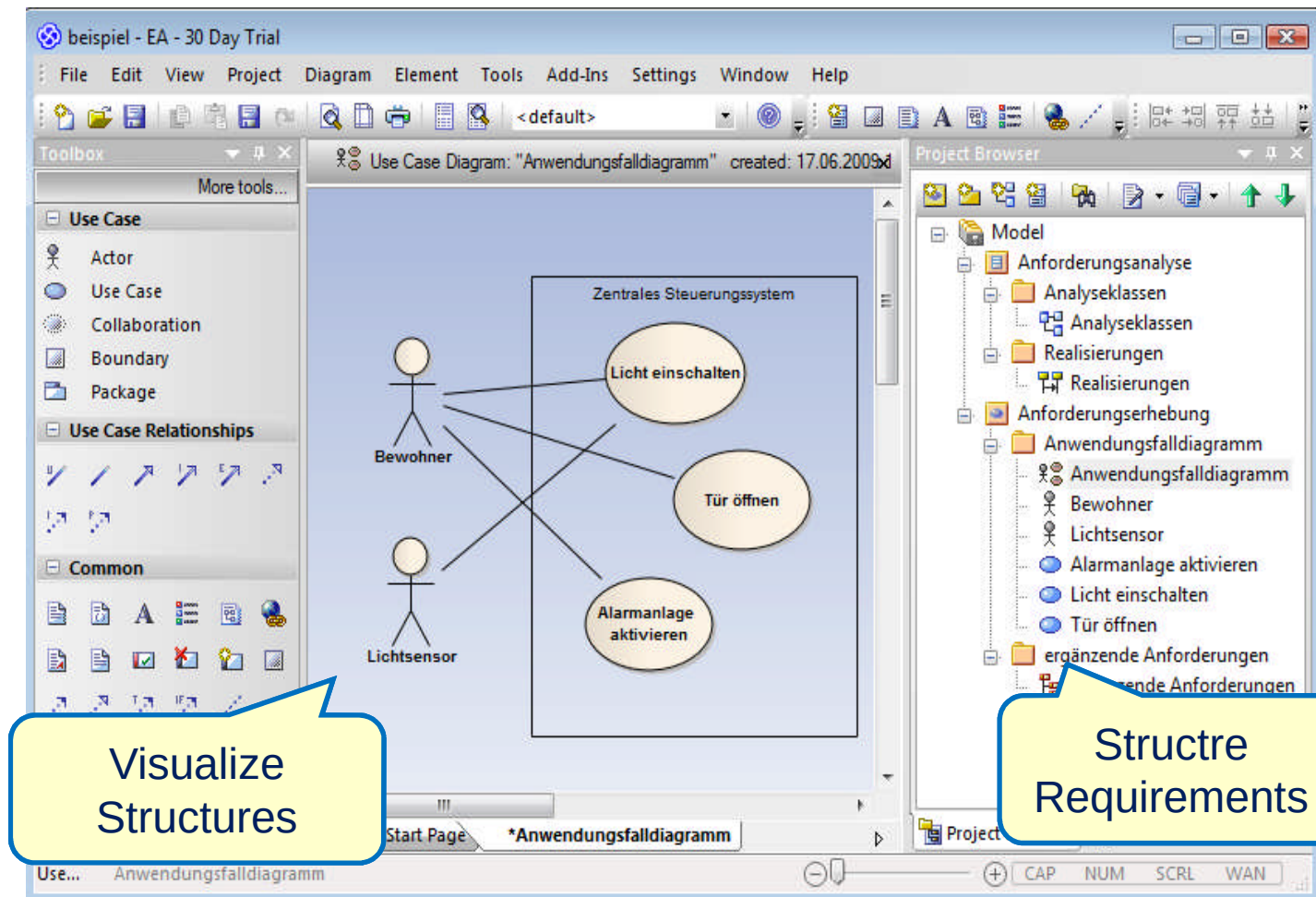
Verlinkte Dateien

Keine Dateien gefunden

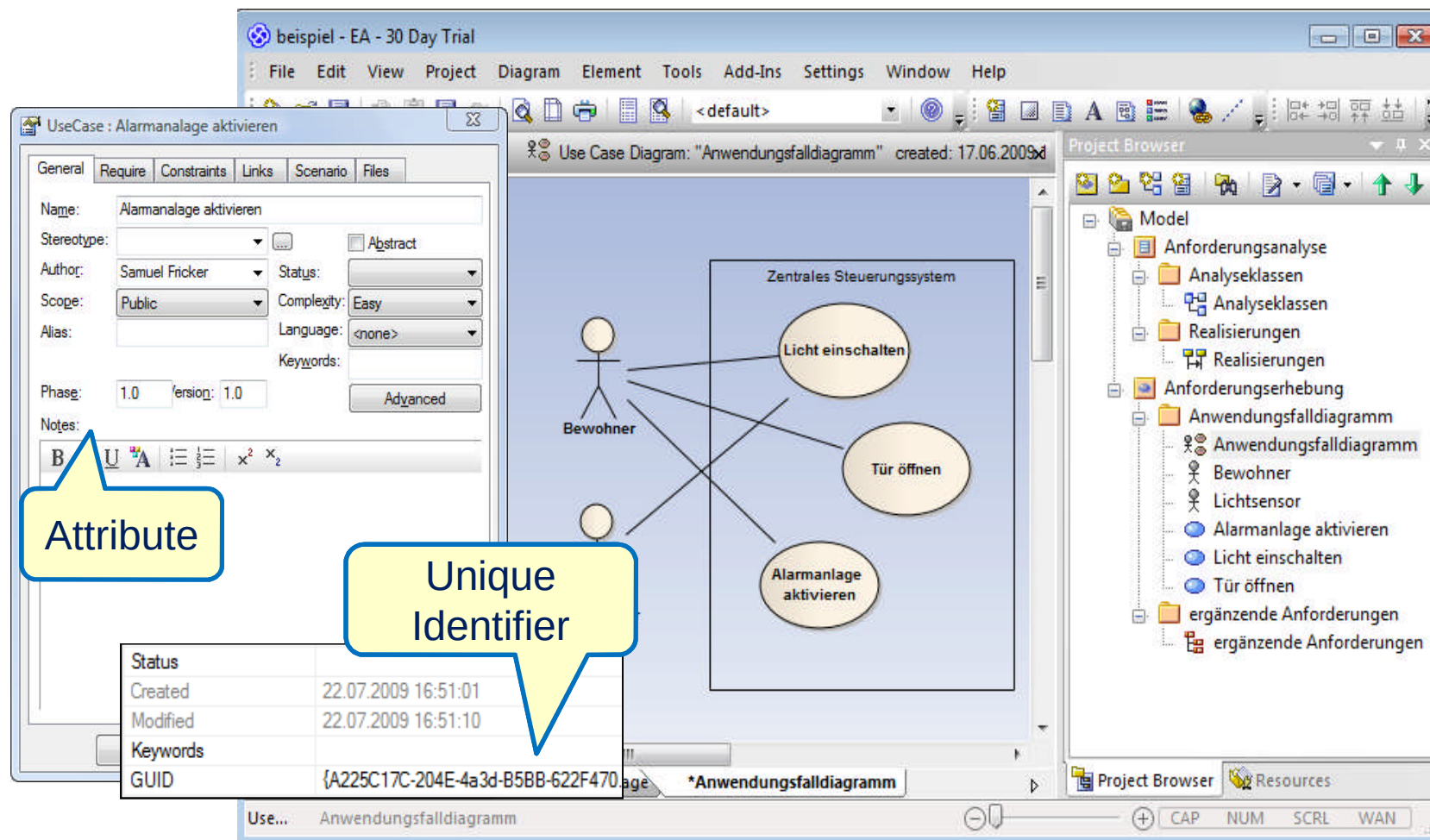
Verlinke Datei

Neue Datei

EnterpriseArchitect for Requirements Modelling



EnterpriseArchitect for Requirements Modelling



Jira for Issue Tracking



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JIRA Doris Edelmann | Schnellsuche

Dashboards | Projects | **Issues** | Administration

Filter: **Ansicht** Bearbeiten Neu Verwalten

Zusammenfassung

- Projekt:
- Behoben in:
- Status: Open
- Sortiert nach: Priorität absteigend

Aktionen

☐ Speichern als Filter

Navigator

Vorgänge 1 bis 4 von 4 Vorgängen insgesamt

Art	ID	Zusammenfassung	Bearbeiter	Ersteller	Prio	Status	Lösung	erstellt
	W-11	Hohe Verfügbarkeit			↑	Open	UNERLEDIGT	13/Jun/10
	W-13	Tabellen-Patterns für CV			↑	Open	UNERLEDIGT	13/Jun/10
	W-12	Automatische Eröffnung Basis-Datensatz			↑	Open	UNERLEDIGT	13/Jun/10
	W-9	Blog-Plattform			↑	Open	UNERLEDIGT	13/Jun/10

Atlassian JIRA (v4.1.1#522) | Report a problem | Request a feature | Contact administrators

POWERED BY A FREE ATlassian JIRA EVALUATION LICENSE. PLEASE CONSIDER PURCHASING IT TODAY.

Jira for Issue Tracking



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The screenshot displays the Jira issue tracking interface. At the top, the navigation bar includes 'Dashboards', 'Projects', 'Issues', and 'Administration'. The user 'Doris Edelmann' is logged in, and a search bar is present. The main content area shows the details of an issue with the following information:

- Vorgangsdetails:**
 - Typ: Projekt
 - Priorität: Major
 - Komponenten: Keine
 - Status: Open
 - Lösung: Unerledigt
 - Umsetzung geplant in Version(en): n 1.0
- Anhänge:**
 - 02_ANTRAG (13/Jun/10 9:12 AM)
 - 06_ABSCHLI (13/Jun/10 9:12 AM)
- Vorgang-Links:**
 - Include: Vorgang includes: W-8 News/Events
- Activity:**
 - Alle | Kommentare | Änderungsprotokoll | Activity
 - Bis jetzt wurde dieser Vorgang noch nicht kommentiert.
- People:**
 - Bearbeiter:
 - Ersteller:
 - Stimmen: 0
 - Beobachter: 0
- Dates:**
 - Erstellt: Heute 9:10 AM
 - Aktualisiert: Heute 9:20 AM

Kovair for ALM / PLM



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KOVAIR
Global Lifecycle™

Welcome Monica McDonald [Session 1 : 2010/06/13 01:30 AM] [Logout](#)
[Site](#) : Kovair Software Inc **Workspace** : [Application Lifecycle ...](#) [Workspace Setup](#)

[Home](#) [Projects](#) [Releases](#) [Requirements](#) [Test Cases](#) [Test Steps](#) [Test Sets](#) [Test Runs](#) [Issues](#) [Risks](#) [Tasks](#) [Workspace](#) [Settings](#)

[List](#) [Create New](#) [Traceability](#) [Matrix](#) [Multi-Edit](#) [Reports](#) [Export](#) [Import](#) [Move To](#)

[Requirements](#) » [View Requirement](#)

View Requirement [Edit](#) [Edit in New Version](#) [Cancel](#)

Requirement

ID	66	Status	New
* Title	Erweiterte Suchfunktion		
Project			
Linked Release			
Author	TM	Complexity	2-Medium
Reviewed	Not Reviewed	* Type	Business
Modules	IntERnet	Priority	■

Description

Ausbauer erweiterten Suche Erweiterung der Suchfunktion, so dass die Suche auf einen beliebigen Teil des Webauftritts eingeschränkt werden kann. Aufruf via Link oder Flag an der aktuellen Stelle.

Spezifischere Suchresultate. Bessere Unterstützung des Users beim Auffinden dergewünschten Informationen

Reviewers Rating

Ranking Information

Attachments

Comments [Add new comment](#)

By Monica McDonald on 2010/06/13 01:53

blo

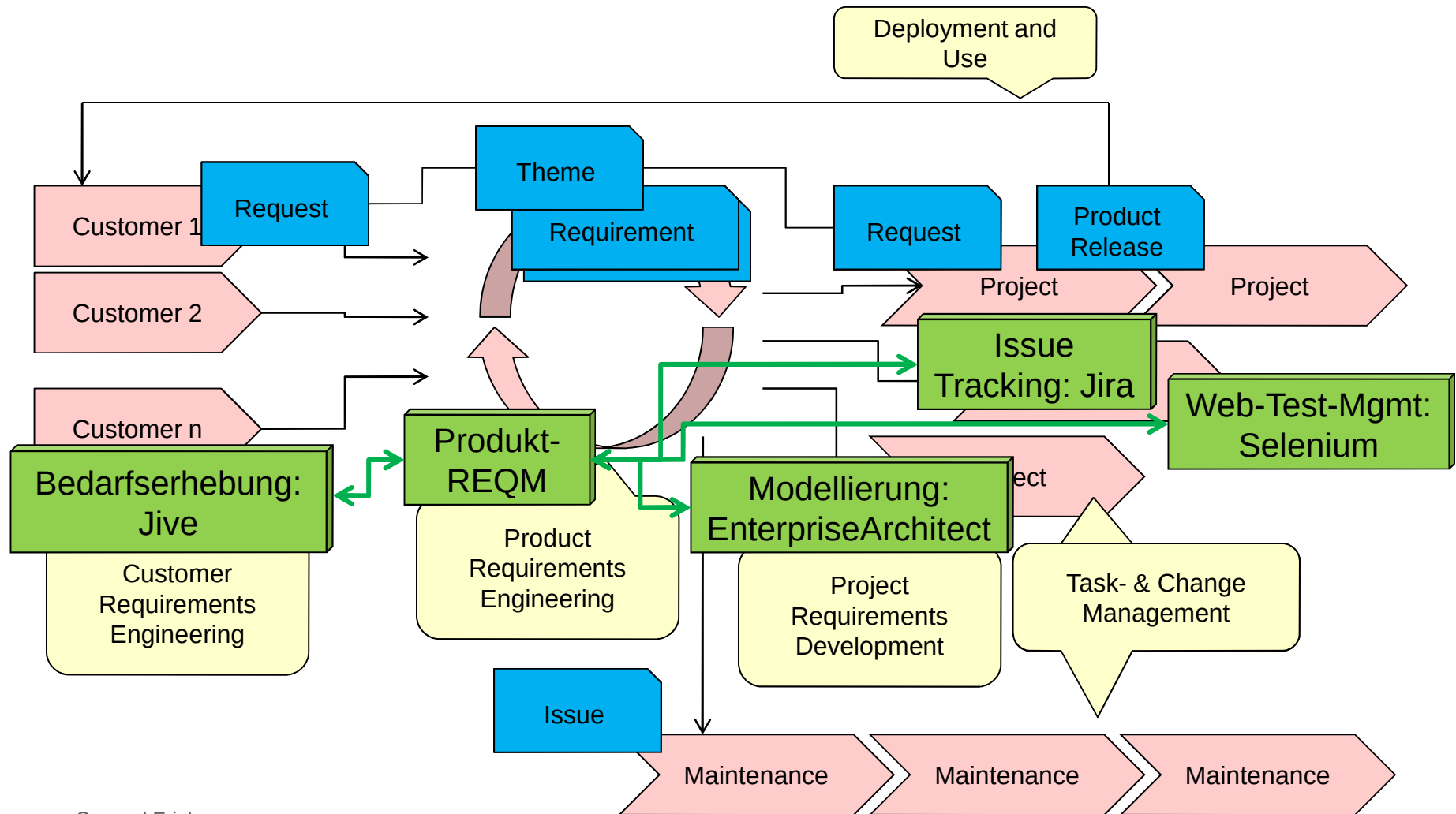
By Monica McDonald on 2010/06/13 01:53

bla

Tooling Strategies: Utilize Tool Integration



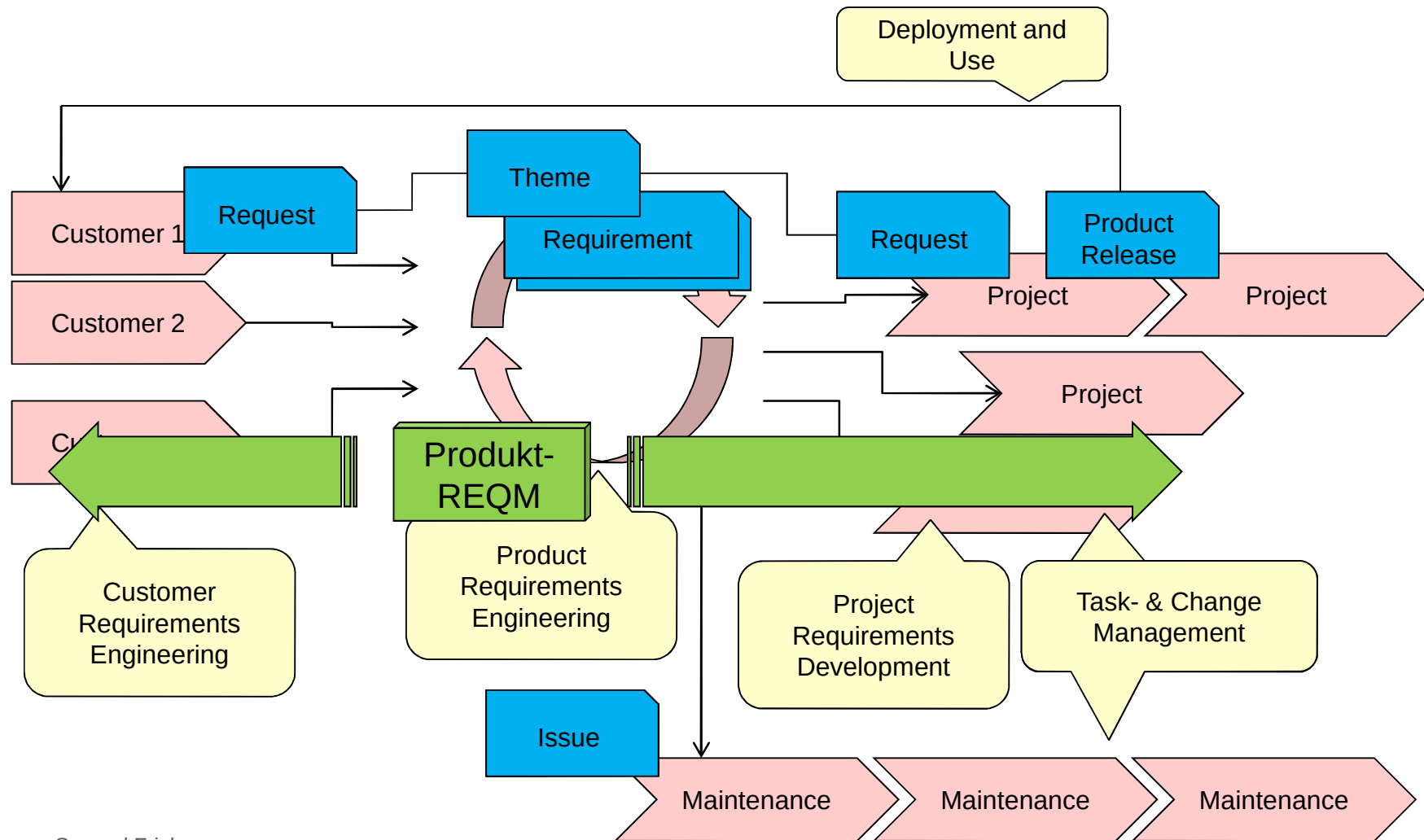
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Tooling Strategies: Utilize Tool Flexibility



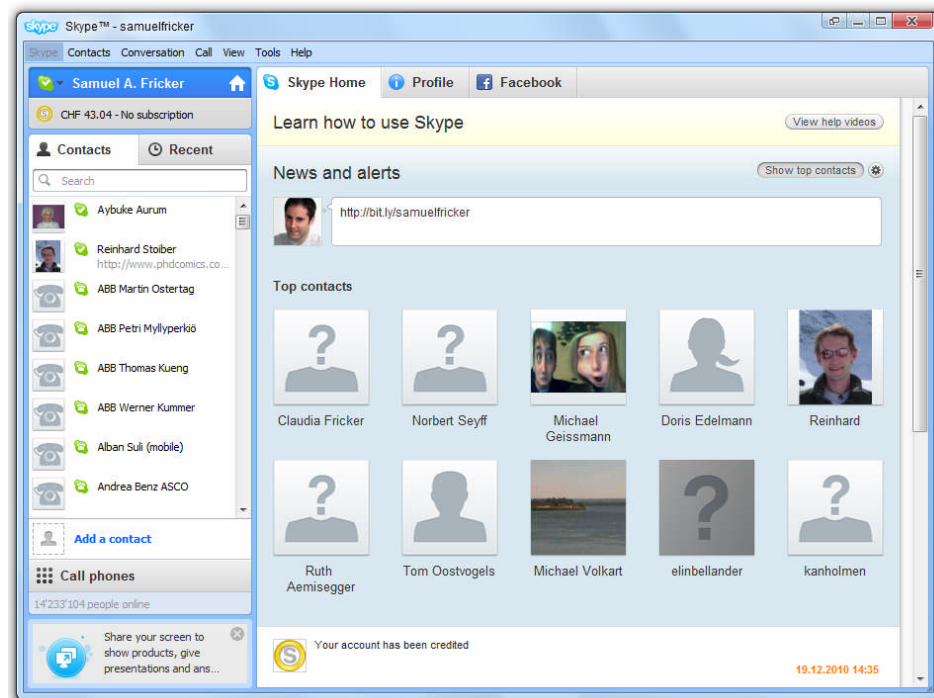
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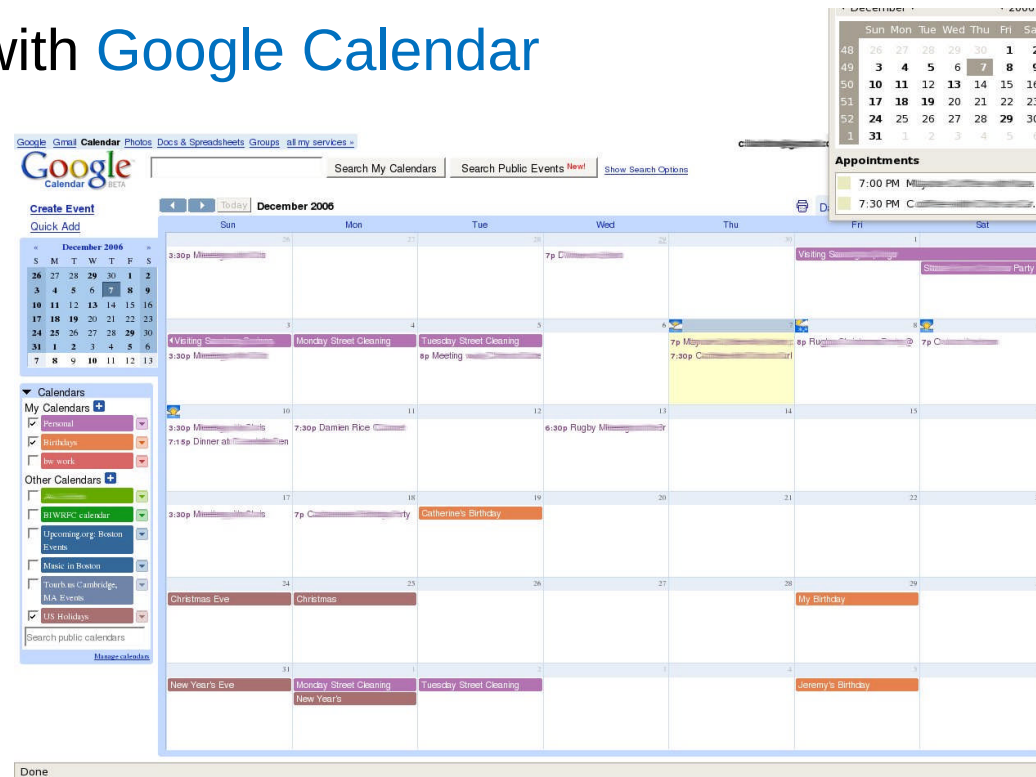
Free Distributed Collaboration

- Telephony with **Skype**
 - Voice and Video communication
 - Conferencing and screen sharing
 - Availability checking, chatting, and file sharing



Free Distributed Collaboration

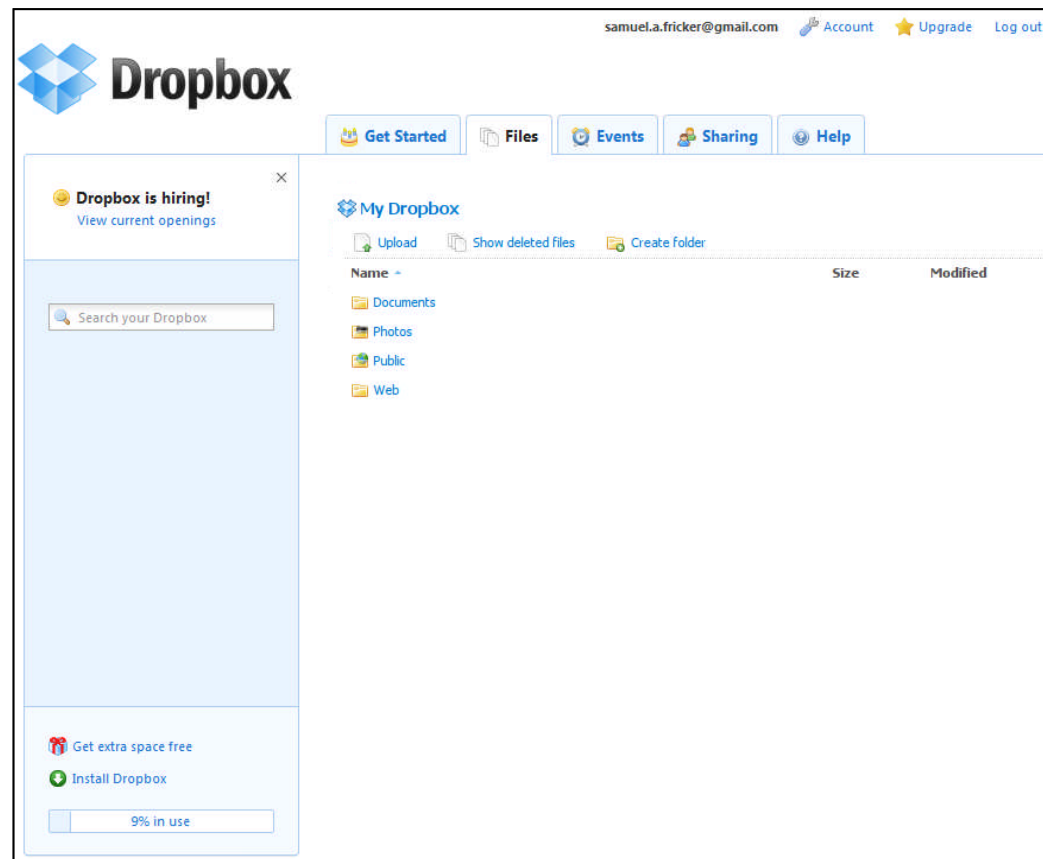
- Intranet with **Google Apps**
 - E-Mail with **Gmail**
 - Shared calendar with **Google Calendar**
 - Documents and presentations with **Google Docs**
 - Wikis and forums with **Google Sites** and **Groups**





Free Distributed Collaboration

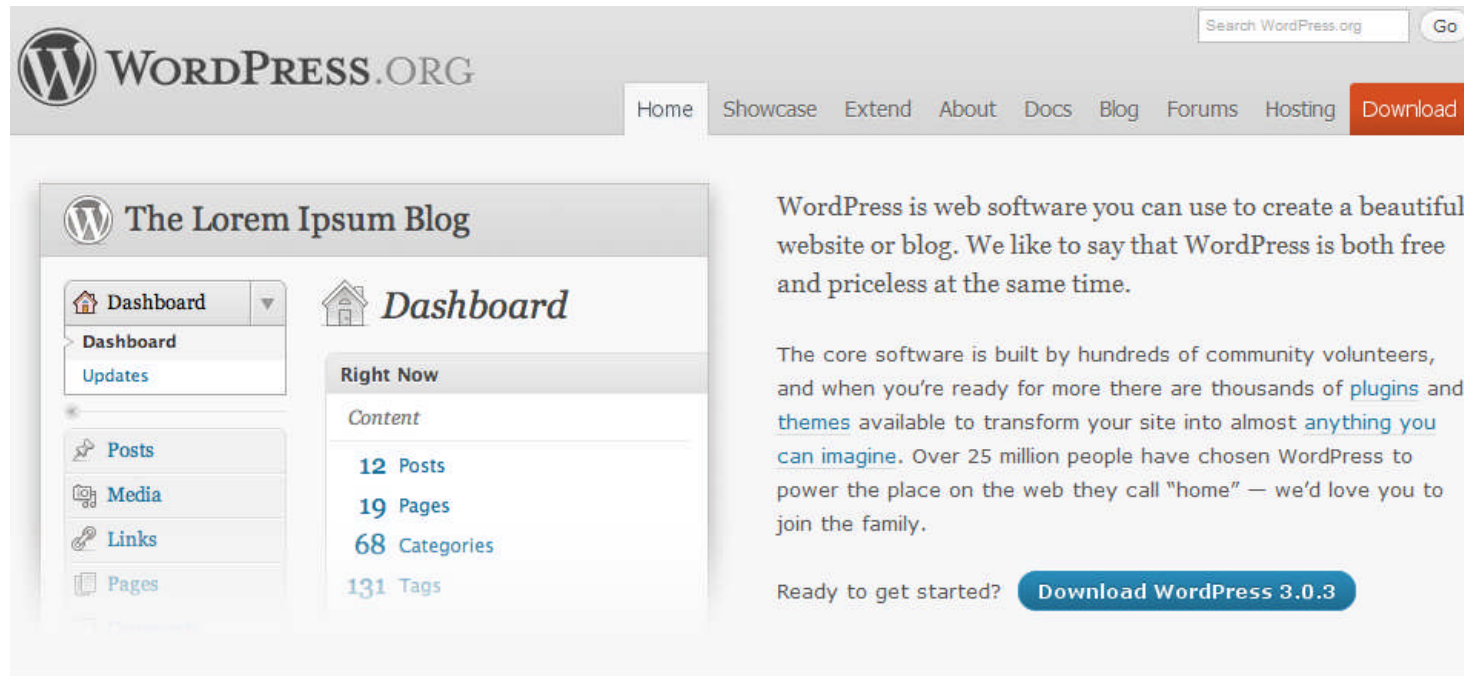
- Extranet with **Dropbox**
 - Shared file repository and versioning





Rapid Interactive Websites

- Post pages, news, and links
- Tailor with themes
- Extend with plugins



Twitter for Social Publicity



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The screenshot shows a Twitter profile for 'samuelfricker' (Samuel A. Fricker). The interface includes a search bar, navigation links (Home, Profile, Messages, Find People), and a user profile header with a bio and location. The main content area displays a timeline of tweets, including a tweet about medical device requirements and another about 3D glasses. The right sidebar shows 'Your Tweets', 'Following', 'Followers', 'Favorites', 'Listed', 'Trends', and 'Who to follow'.

twitter Home Profile Messages Find People samuelfricker

What's happening?

Timeline @Mentions Retweets Searches Lists

samuelfricker Samuel A. Fricker
entry criteria related to [#requirements](#) for selling in the [#medicaldevices](#) market: Karl Larsson from [www.aligned.ch](#) on [www.anforderungen.ch](#)
2 hours ago

slingerroijacke slingerroijacke
The main advantage to 3D glasses in the cinema: not showing that I cried at the movie [#namia](#) [#rocks](#)
9 hours ago

ThanouT Thanou Thirakul
[#waterfall](#) causes over production of [#requirements](#). [#waste](#)
9 hours ago

ThanouT Thanou Thirakul
[http://huff.to/fv40gk](#) UN mulls Internet Regulation. Feels so wrong at so many levels.
10 hours ago

Sebbe_Munich Sebastian Sälzle
Analysing data is the future for journalists, says Tim Berners-Lee | The Guardian [http://j.mp/dFx5js](#) [#analytics](#) [#data](#) driven [#journalism](#) [#fb](#)
14 hours ago

Sebbe_Munich Sebastian Sälzle
Zwingende Anforderungen an eine Website – wie erfahren? [http://j.mp/emic59](#) [#requirements](#) [#anforderungen](#) [#analyse](#) [#kano](#)
14 hours ago

Your Tweets 19
2 hours ago: entry criteria related to [#requirements](#) for selling in the [#medicaldevices](#) market: Karl Larsson from [www.aligned.ch](#) on

Following 33
Followers 26
Favorites 5
Listed 1

Trends
Worldwide - [change](#)
[#DidUCWhatDiddyDid](#) Promoted
[#sjspecial](#)
[#gdtopbom](#)
[#happyjunday](#)
Cookie Monster
Inki
Lonely Island
Zac Farro
Beefheart
Gilbert Arenas

Who to follow
Suggestions for you - [view all](#)
[ecomagination](#) - Follow
[tomzimmermann](#) - Follow
[StewartRogers](#) - Follow
[vesavesterinen](#) - Follow
[Refresh suggestions](#)
[Browse interests](#) - [Find friends](#)

Tweet for lit-er-a-cy
n. a way to show your support on World Literacy Day.

About · Help · Blog · Status · Jobs · Terms · Privacy · Shortcuts
Businesses · Media · Developers · Resources · © 2010 Twitter

Enhancing Twitter Communication and Analysis



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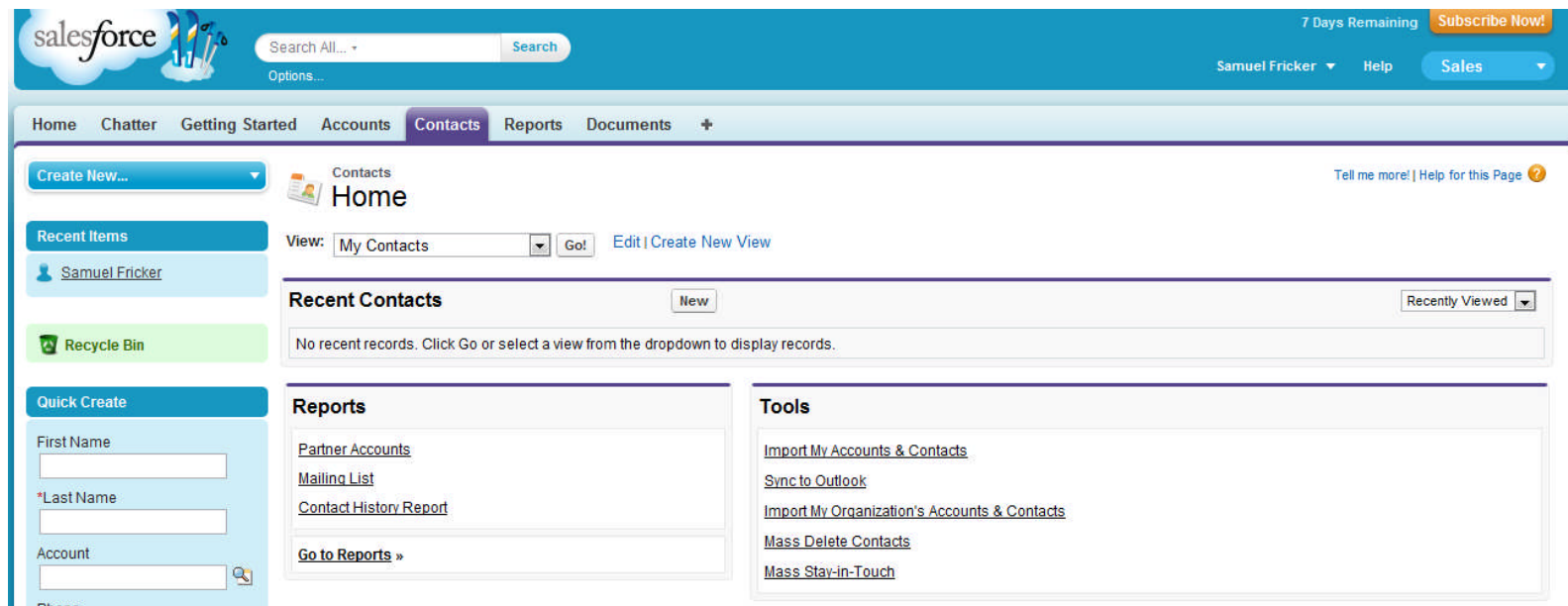


- Publication of 140-character teasers, pictures ([twitpic](#)), and movies ([youtube](#)) to followers
- Communication scales with retweets and lists
- Integration with [linked-in](#), [facebook](#), [wordpress](#) and other networks with [ping.fm](#)
- Integration with website widgets
- Team work with [cotweet](#)
- Network and tweet analysis with [twitter analyzer](#)
- Link shortening and attractiveness analysis with [bit.ly](#)

Customer Relationship Mgmt (CRM) with Salesforce



- Manage customers and interactions with customers
- Coordinate with and inform other team members
- Integrate with e-mail, documents, and calendars



Getsatisfaction for Eliciting User Needs



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Effect of Tools on Productivity

- The effect on productivity may differ significantly for the same tool.

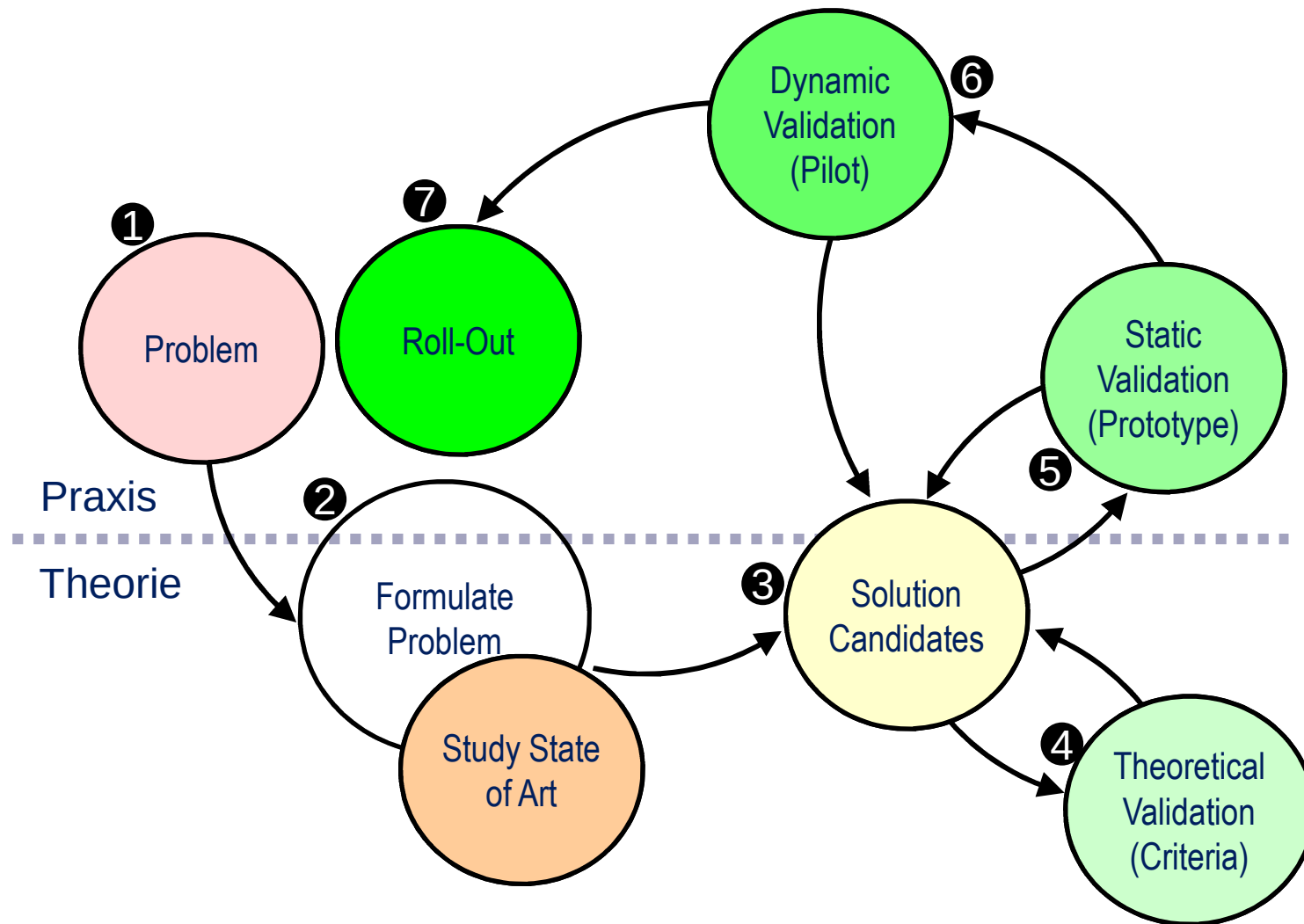
Features / Week

Same Process	5 Features	80 Features
Without Tool	7.6	3.4
With Tool	15.8 (+107.9%)	2.6 (-23.5%)

10 Features	Simple Process	Komplex Process
Without Tool	28.04	7.79
With Tool	20.71 (-26.1%)	12.18 (+56.4%)



Tooling-Prozess



Theoretical Validation: Triage of Candidates



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- Develop requirements for the requirements engineering tool
 - Goal: select only the best candidates
 - Requirements = Kill Criteria
- Criteria: Usage
 - Method Support
 - Support of Product Management
 - Usability
- Criteria: Product
 - Functionality
 - Interoperability and Scalability
- Criteria: Business
 - Cost
 - Service of Supplier

Static Validation: Prototyping



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- The tool should adequately support the planned process
 - Goal: check effectivity and user acceptance
 - Goal: train users for dynamic validation
- Prototyping: Inputs
 - Data model with representative examples
 - Process and role descriptions
- Prototyping: Validation
 - User acceptance (include users for developing operational concepts)
 - Quality requirements

Dynamic Validation: Pilot



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- The tool should support daily work under realistic conditions
 - Goal: check efficiency and user acceptance
 - Goal: develop team for tool roll-out
- Pilot: Representative Use
 - Representative team in representative project and activities
 - Adaptation and finetuning of configuration
- Pilot: Risk
 - The tool may still be rejected



Roll-Out

- The tool is used by the majority of the organization
 - Goal: transfer work to selected tool
- Roll-Out: Facilitate
 - Provide access to tool
 - Communicate changed way of working
 - Adjust tool to specific products and projects
- Roll-Out: Control
 - Check tool use
 - Support with user coaching and tool adjustments

Roll-Out: How to Eliminate a Tool?



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- Make it optional
 - „Why don't you try this and see if you like it? “
 - Never suggest to users that you'll judge their performance based on how well they use the new tool.
- Economize on training
 - „That new tool is expensive!” A good way to compensate is to minimize spending on training.
 - Training: small, too warm/cold room, at least 50 PowerPoint slides, no hands-on exercises, no real content and examples.
- Don't use it in a real project
 - Use the new product only in pilot studies.
 - Never let it out of the “tools group” (for at least during 6 months).

Roll-Out: How to Eliminate a Tool?



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- Never integrate it
 - Keep the tool “stand-alone.” It then will eventually wither and die.
 - If kept outside of metrics collection, the tool can never demonstrate its value.
- Use it sporadically
 - Interval between uses kept at > 1 month: “tool is difficult to use.”
- Make it part of a quality initiative
 - Deadlines come 1st, and quality isn’t 2nd but about 6th.
 - Users will quickly decode the message: when we get to crunch time, we can forget about this baby.
- Marginalize the champion
 - Portray the champion as an ineffective, misguided intellectual.
 - Ensure that no one influential gets interested in the tool.

Roll-Out: How to Eliminate a Tool?



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- Capitalize on early missteps
 - Set the expectation that the tool will fix overnight problems that took years to create. Early before vs. after comparison is on your side.
 - Early in the adoption of any tool, glitches will occur. Ensure everyone understands that the new tool costs valuable time and money.
- Make a small investment
 - Keep the initial purchase commitment small:
This key step lets managers cut their losses at the first opportunity without losing face
- Exploit fear, uncertainty, doubt, laziness, and inertia
 - Always remember that people resist change. They have to learn how to do their jobs differently.
 - Btw, tools that increase efficiency reduce jobs.





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