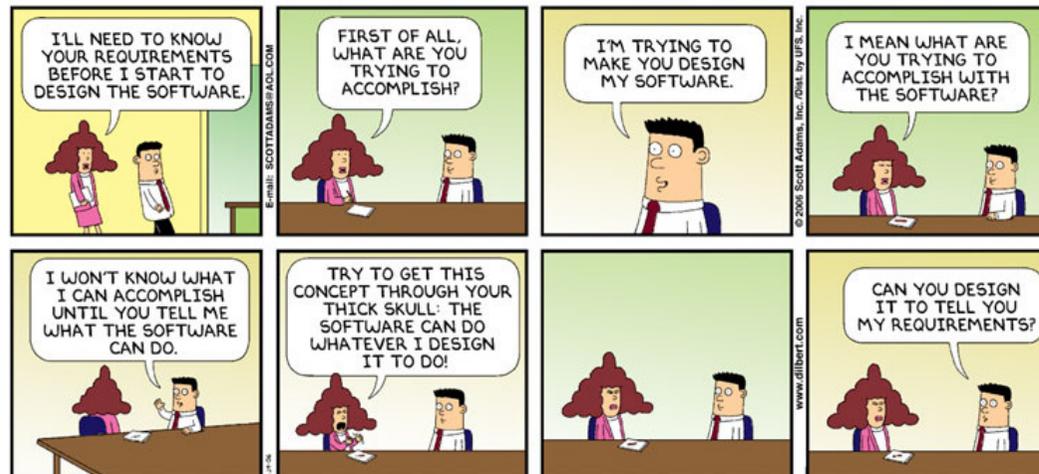


Effective Requirements Engineering

an evergreen; key to success; a discipline; a tool...



Slide 1
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Rainer Grau, Executive Director

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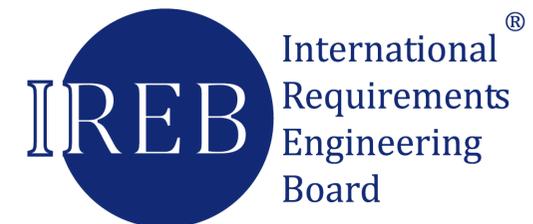
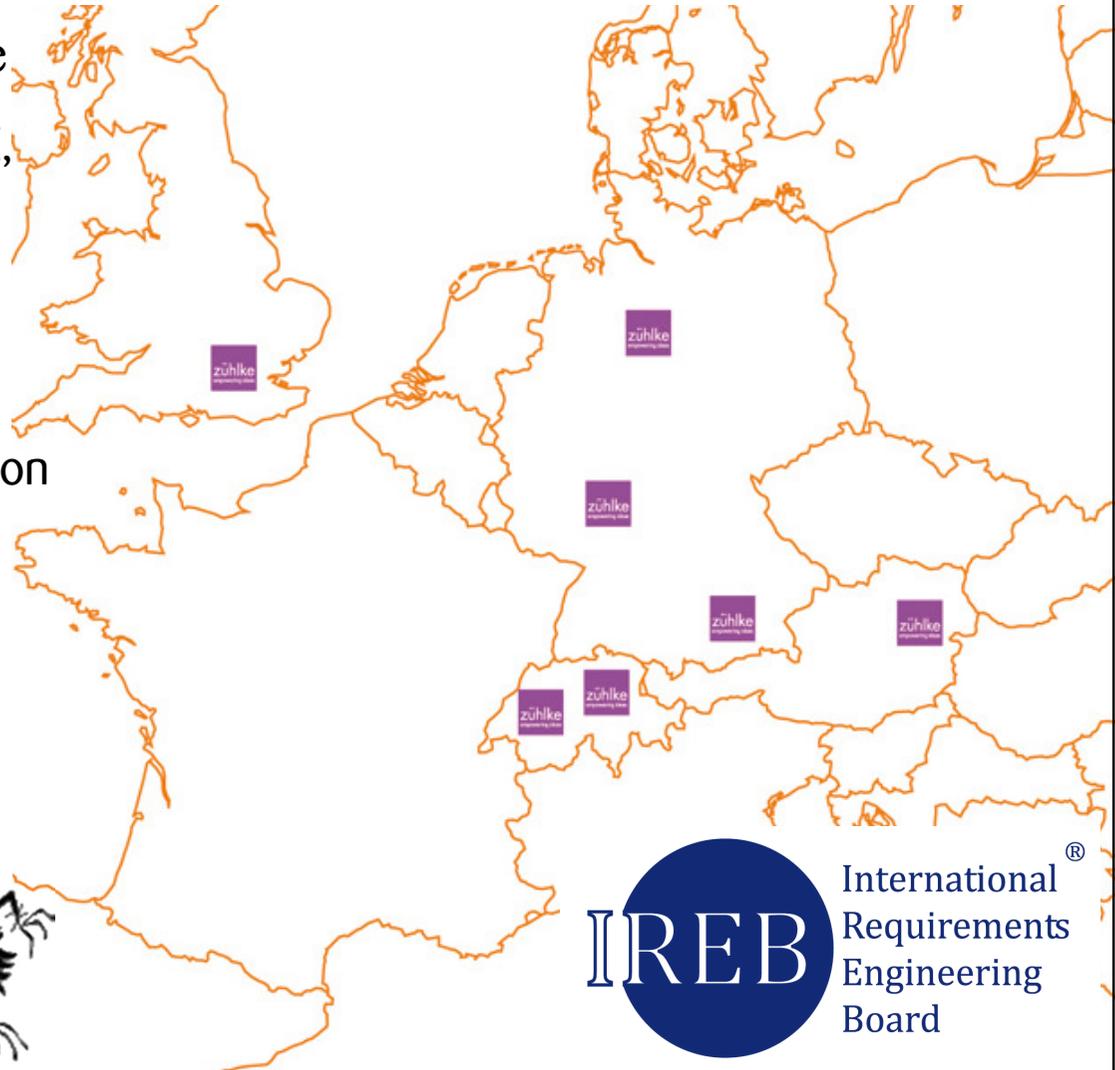
Rainer Grau

Executive Director & Partner

Distinguished Engineer

zühlke
empowering ideas

- Executive Director and Partner Zühlke
- Distinguished Consultant for SPM, RE, Lean, Agile, Change Mgmt
- Board of directors IREB
- Board member ISPMA
- Head STC Informatics Swiss Association for Quality
- Head PC of gotoZurich Conference



The old school of requirements engineering

Die Hard (I – IV)*

A set of nice movies with Bruce Willis – you do not want to try that...



Effective Requirements
Engineering, HUSTEF 2013
Slide 3
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Rainer Grau, Executive Director

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Failure 1: Detailed Upfront work is value

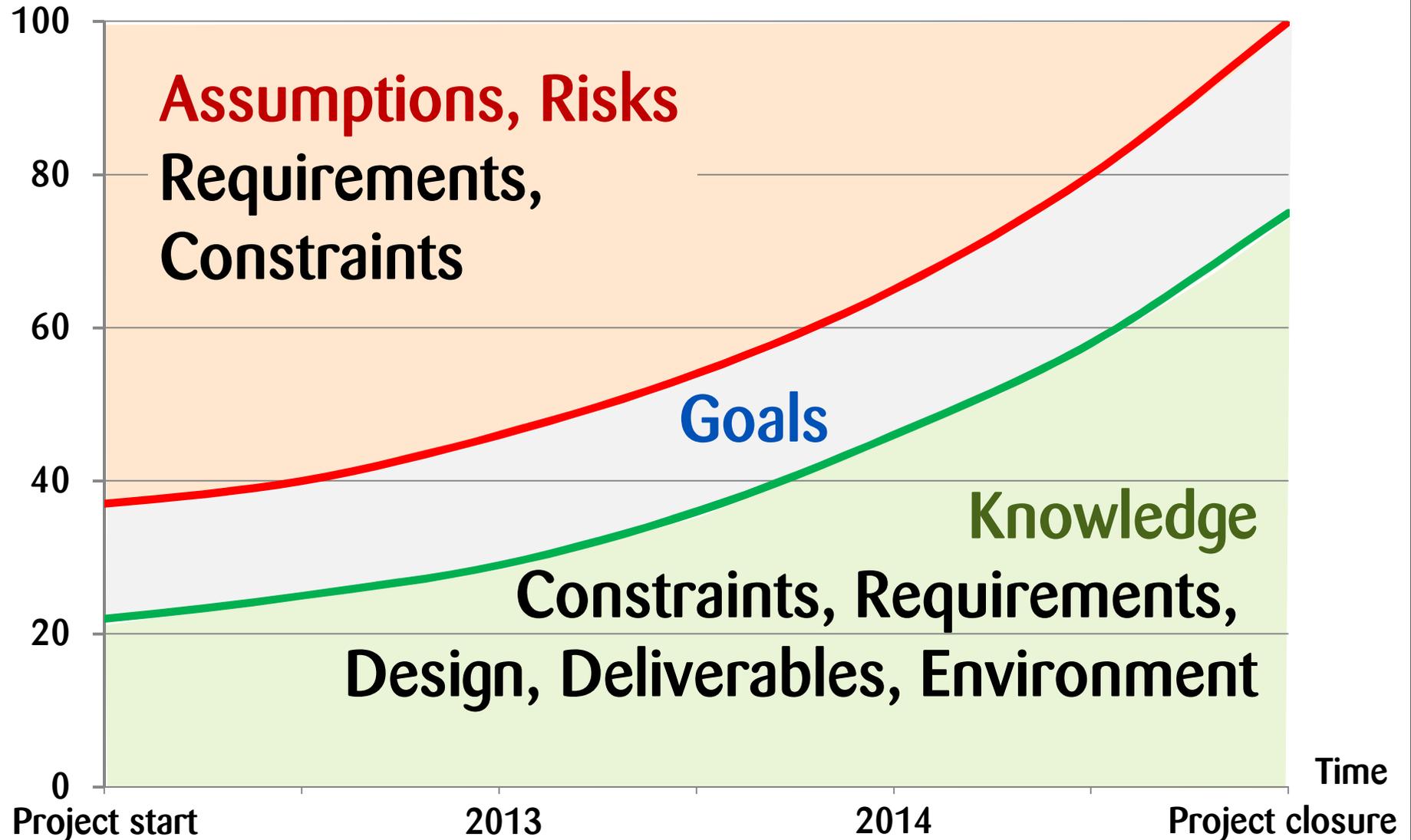


Failure 2: Validation without real user feedback



Failure 3: Long Term planning avoids risks

Knowledge
[per cent]

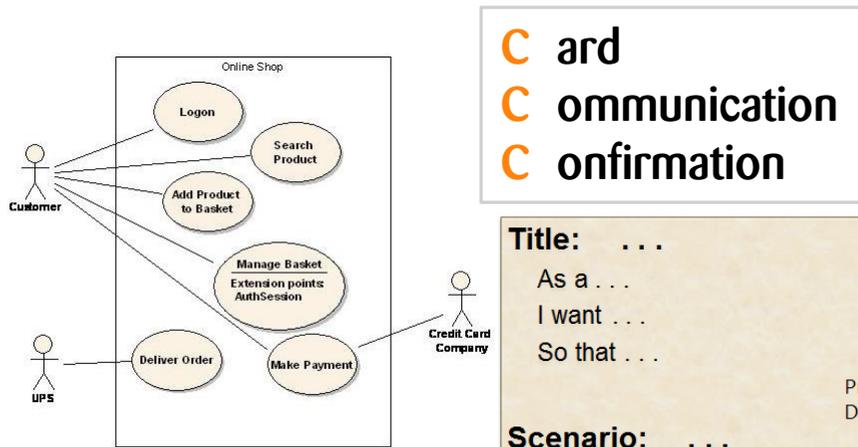


Failure 4: Quality can be built-in at the end



**...but we developed
new ideas as well**

...from use cases to user stories



Card
Communication
Confirmation

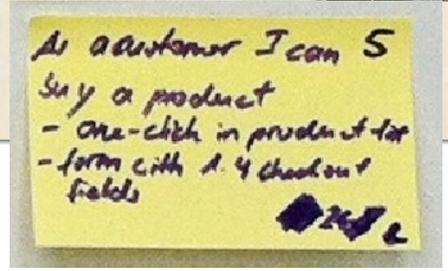
collaboration and feedback



Independent
Negotiable
Valuable
Estimable
Small
Testable

Title: ...
 As a ...
 I want ...
 So that ...

Scenario: ...
 Given ...
 When ...
 Then ...

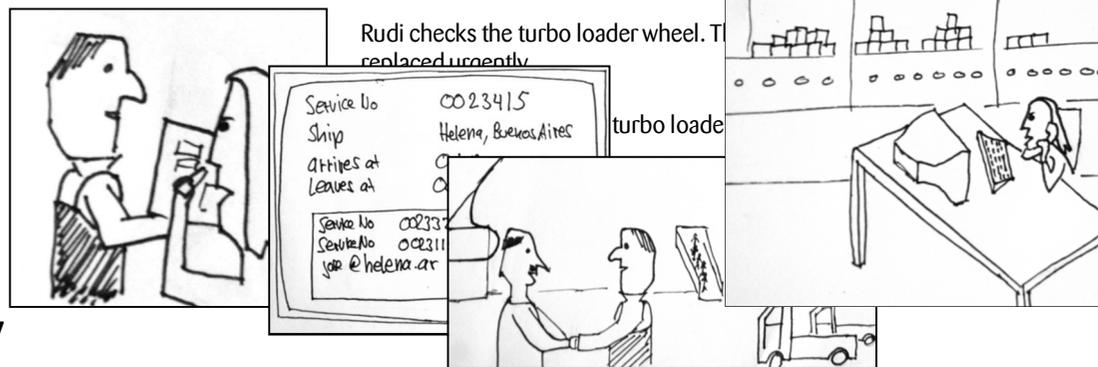


acceptance criteria

quality criteria

Inspired by Ux methods

- Personas
- Storyboards
- Contextual Inquiry



...from RE classification to RE abstraction

The requirements Abstraction Model RAM, University Blekinge

see: http://fileadmin.cs.lth.se/cs/Education/Examensarbete/Rapporter/2008/Vetart_2008-27.pdf



Product Vision and Roadmap

Product Features and Product Development Tasks

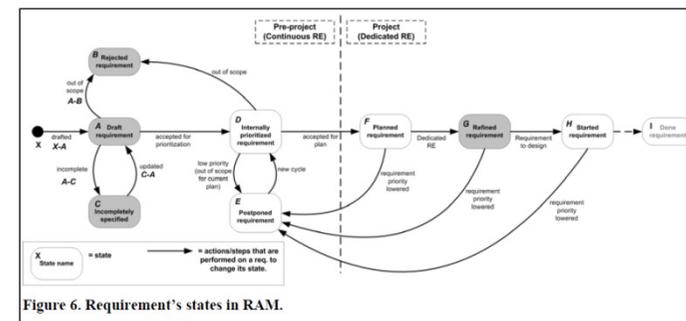
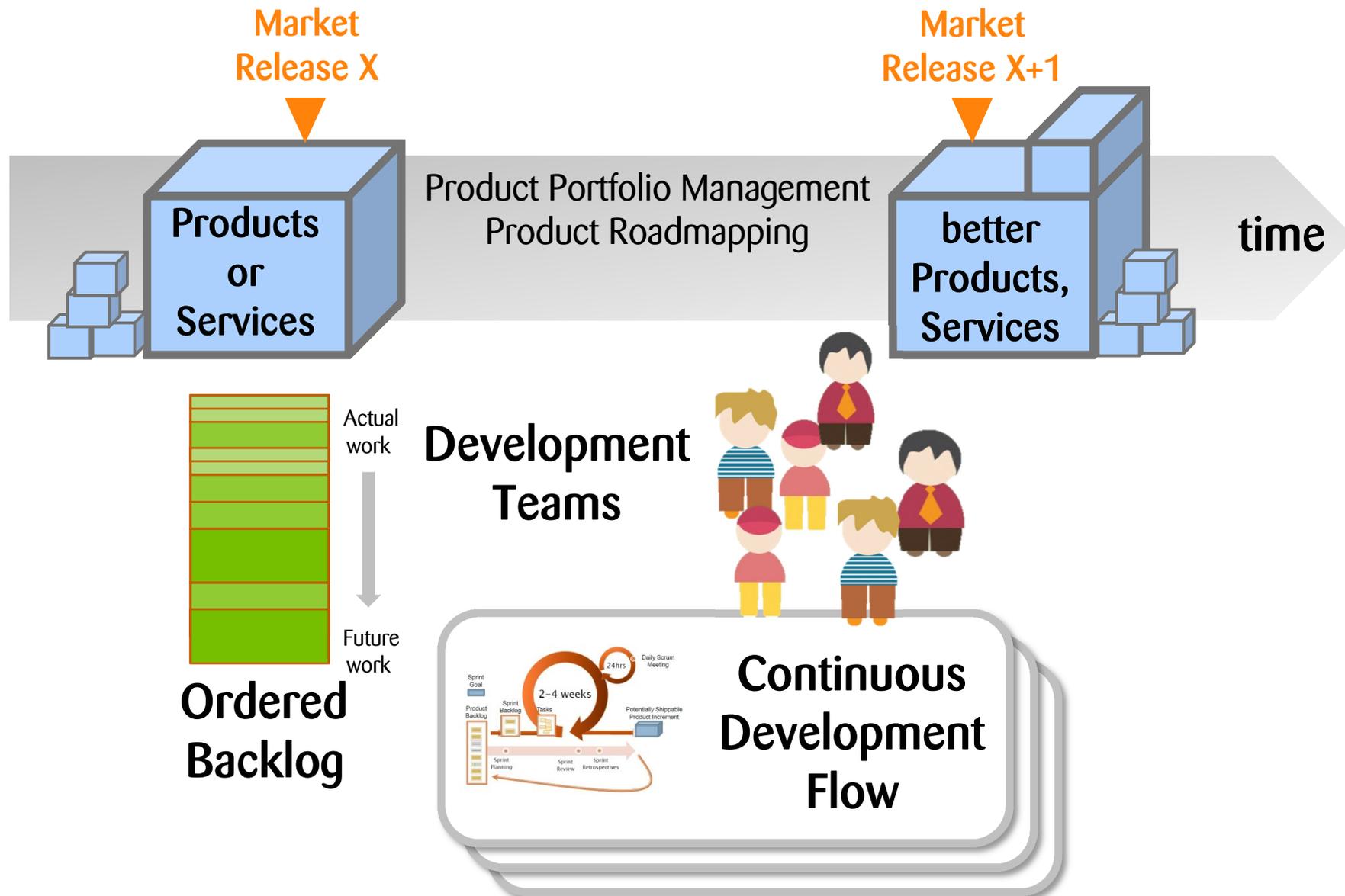


Figure 6. Requirement's states in RAM.

RE lifecycle model

...from project thinking to product thinking



Agility – under the view of RE benefits and failures

Odysse 2010: A movie about brute force intelligence...



Benefit: Feedback, Ceremonies, Cadences

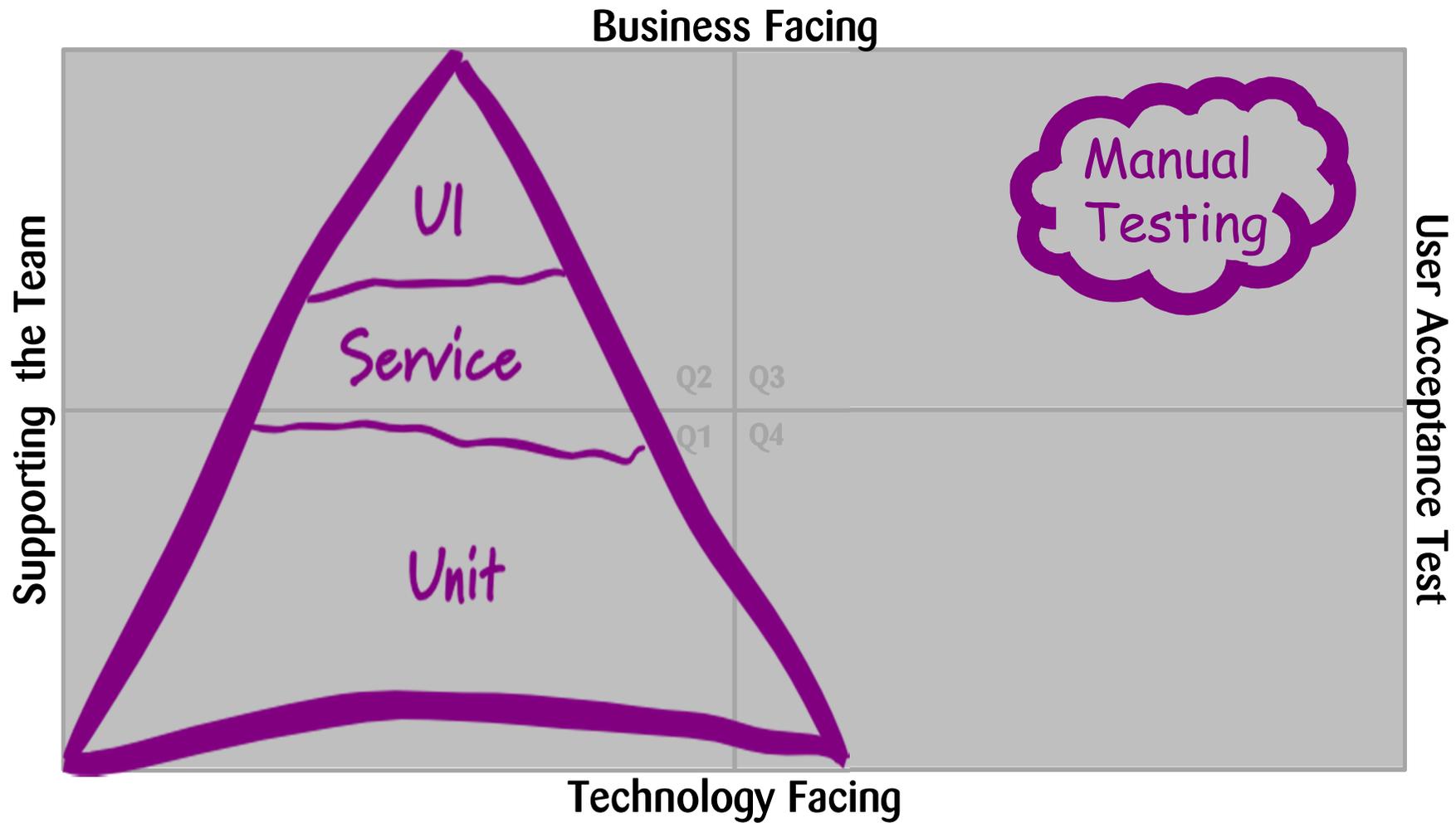


A team sharing tacit knowledge

Benefit: (Acceptance) Test Driven Development

Automated

Manual

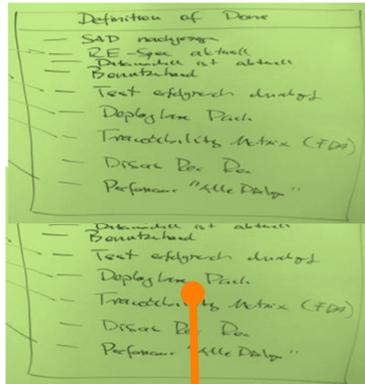


Automated

Tool Harness

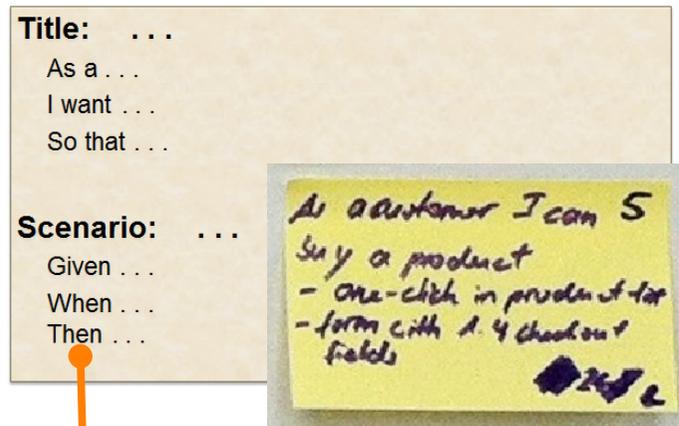
Benefit: A lightweight RE maturity model

Definition of Ready



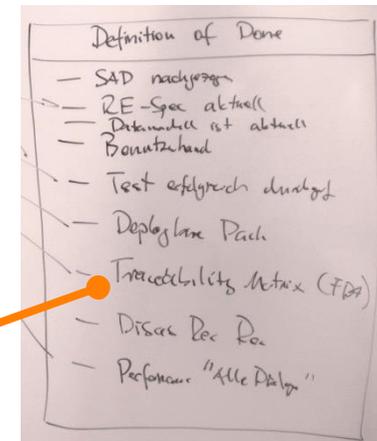
**Maturity Definition
for Dev-Gate**

User Stories



**Function specific
Acceptance criteria**

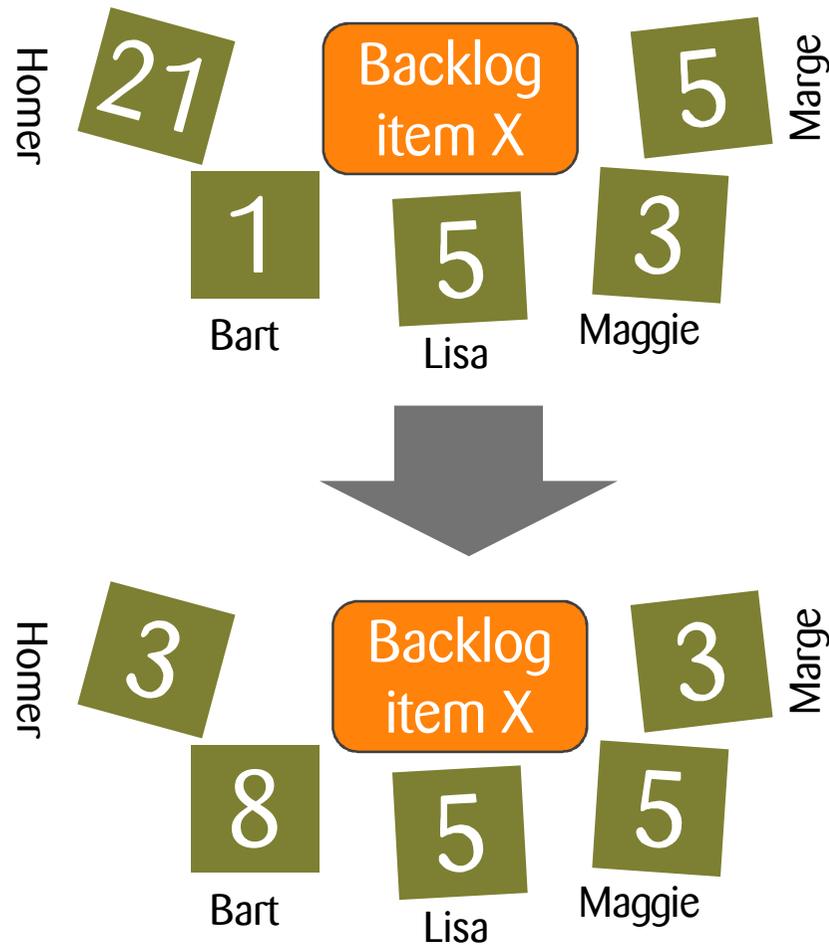
Definition of Done



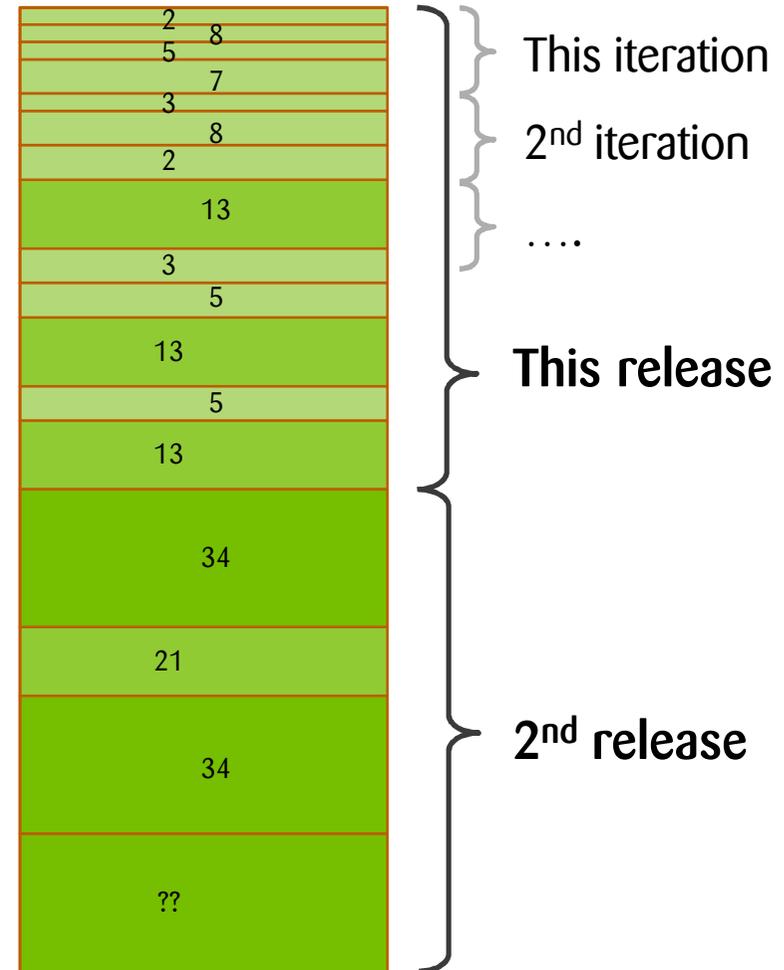
**Additional
Acceptance criteria**

Benefit: Estimation and Prioritization

Planning Poker



Product Backlog

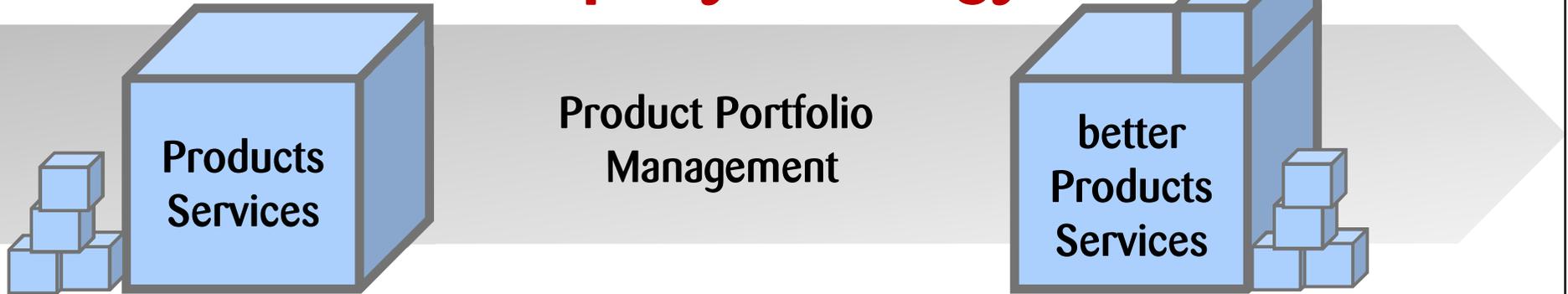




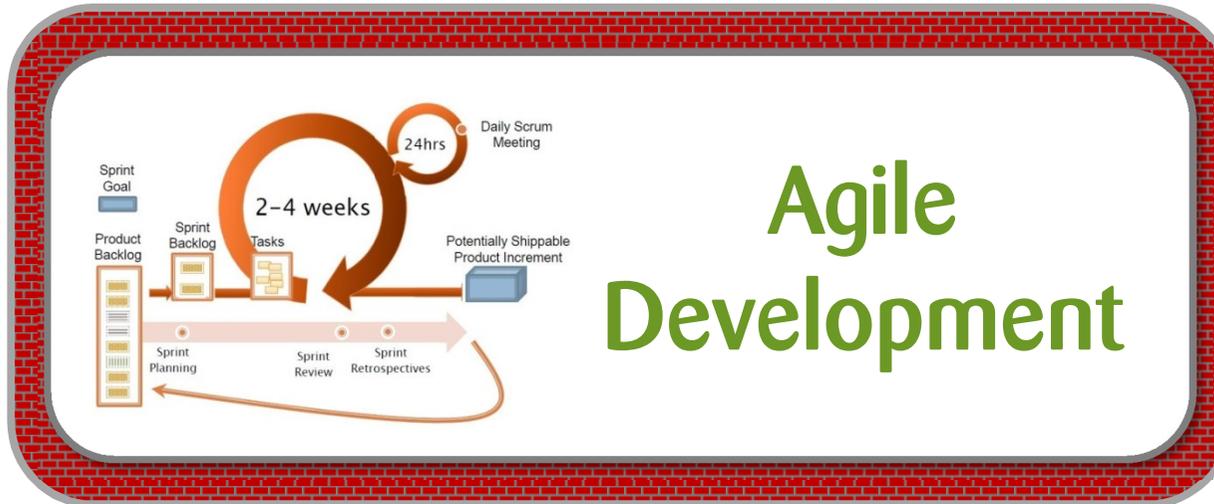
**...but agility lost ground in
Requirements engineering !**

Missing strategic and tactical alignment

Company Strategy



Product Roadmap



Agile
Development

Working software over comprehensive documentation



A Backlog is NOT a replacement for a product specification

The product manager* asks: "...Who can tell me the current set of features of the software we developed the last four years ??!!"

*) or customer, new hire, CEO, ...

Neglecting of good practices and techniques

Use Cases Perspective Reading Traceability

Feature Trees Apprenticing

Vision Document Analysis

Stakeholder Map Impact Analysis

Interview Techniques User Behavior Analysis

System Archeology Analogy

CRC-Technique Questionnaires

NABC

Effective Requirements Engineering

Intouchable

A Movie about extreme viewpoints that emerge into a better world



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Principles of Effective Requirements Engineering

Product thinking based on ceremonies and continuous RE-flow

- Transparent product roadmap and release planning
- Improved demand / capacity balance
- Ceremonies substantially improve efficiency

Product management based on backlogs and feedback

- Customer oriented
- Creates and preserves tacit team knowledge
- Alignment of strategy, requests management and development
- Clear Prioritization, clear RE maturity model

Product repository as organizational memory including the product specification

- Product RE-spec as tactical instrument
- Avoid overwhelming upfront RE investment
- Create specification on demand



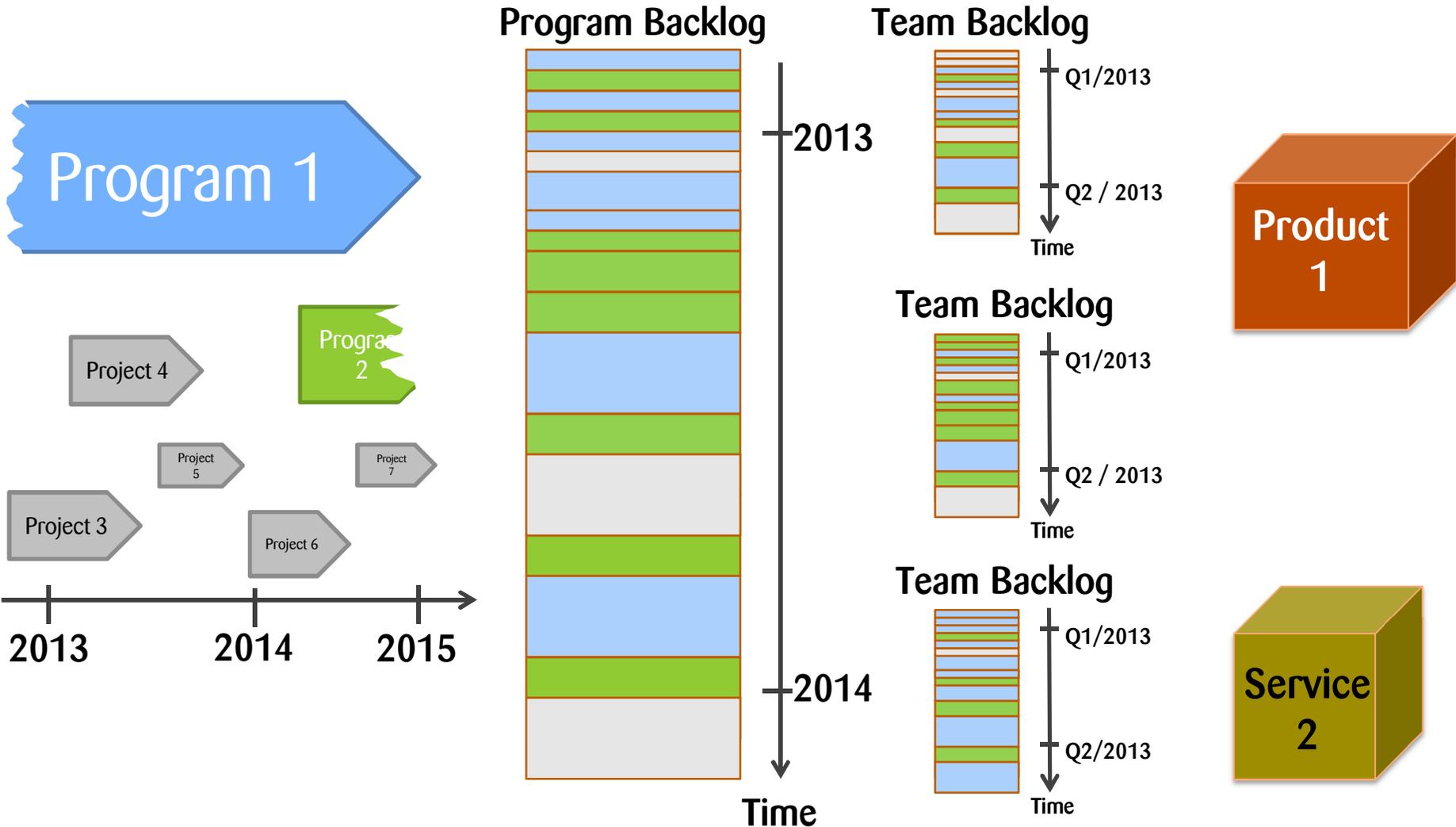
RE flow in Lean Product Management

Demand

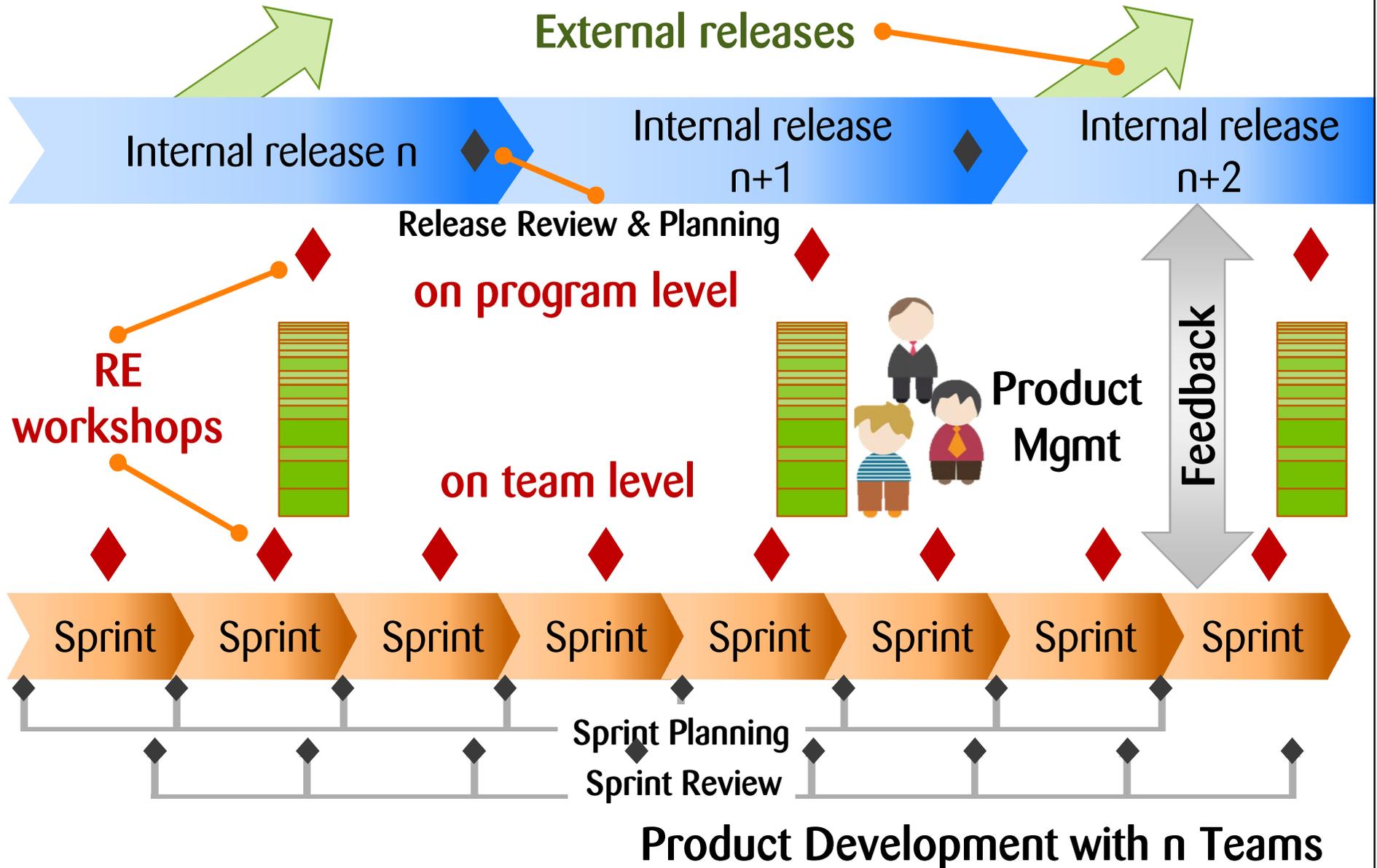
Product Mgmt

Development

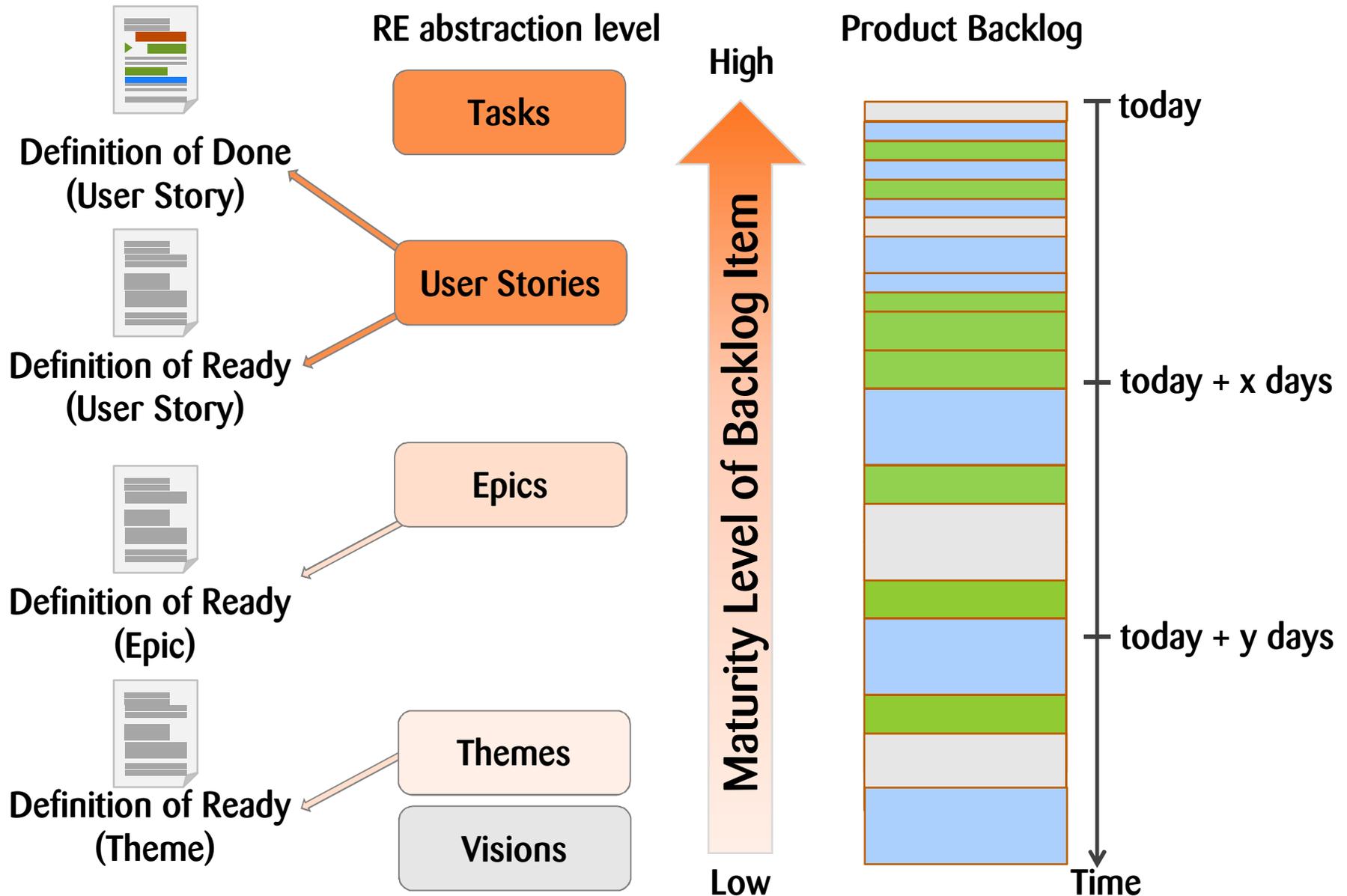
Product



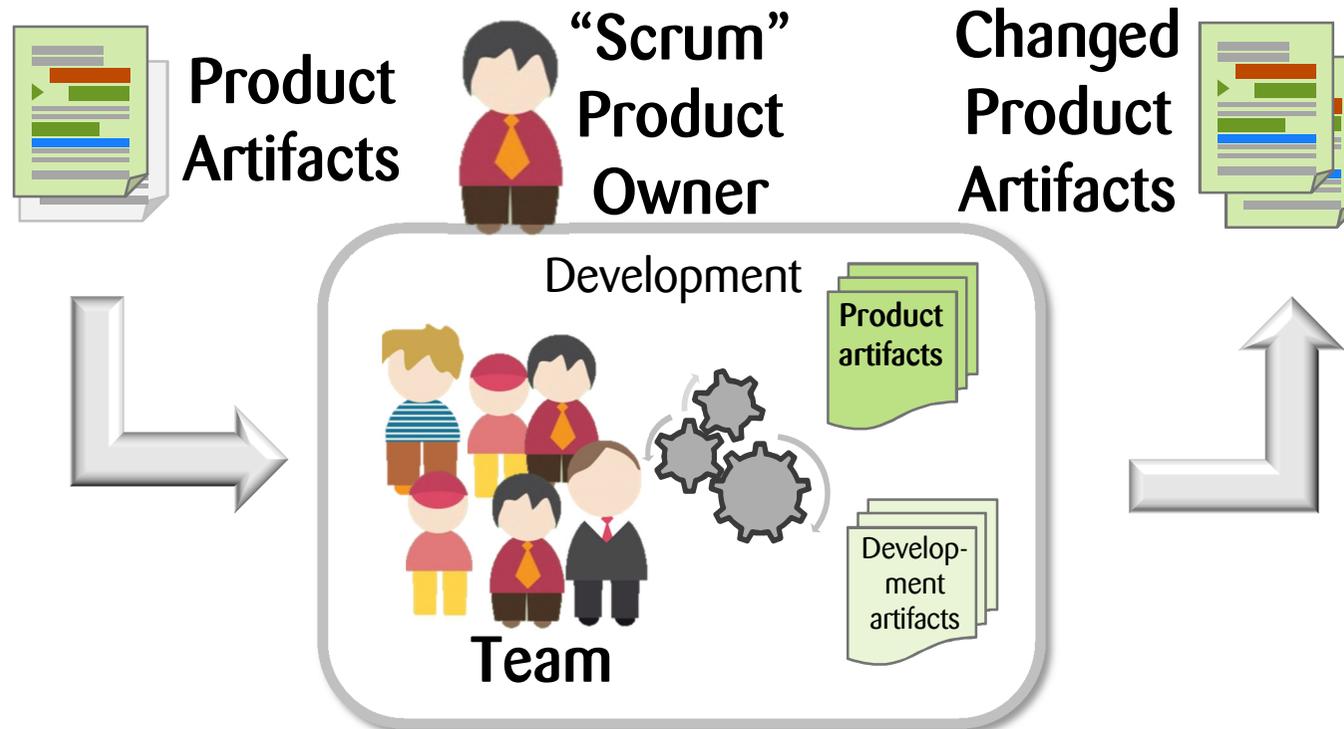
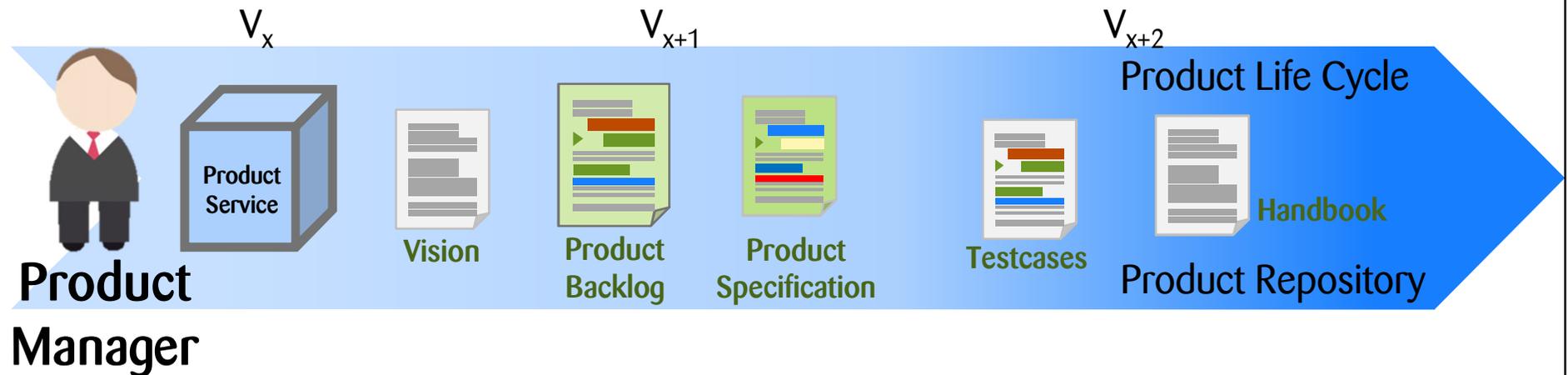
Ceremonies and cadences in Product Management



Backlog, RE Abstraction level and RE maturity model



A Product Repository as organizational memory





**Effective RE
is a smart merger
of old school with
improvements
coming from
the agile community**

Questions & Answers



zühlke
empowering ideas



International
Requirements
Engineering
Board