



**OHJELMISTOPROJEKTIT EIVÄT
VOI ENÄÄ EPÄONNISTUA!**

Ketterän projektinhallinnan peruseriaatteita

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A fact

“Universal yardstick to measure success does not exist”

A KEY PROBLEM

- So, when is this presentation a success?
- Who is involved?
 - Speaker
 - Listener
 - Chairman
 - Technical help
 - Conference organizer
- If we do not clarify the concept nor agree on the terms, success remains as a subjective feeling!



COMMON SUCCESS DIMENSIONS

- Project efficiency
- Benefit to the customer
- Business success
- Preparing the future

Source: Shenhar et al 1997

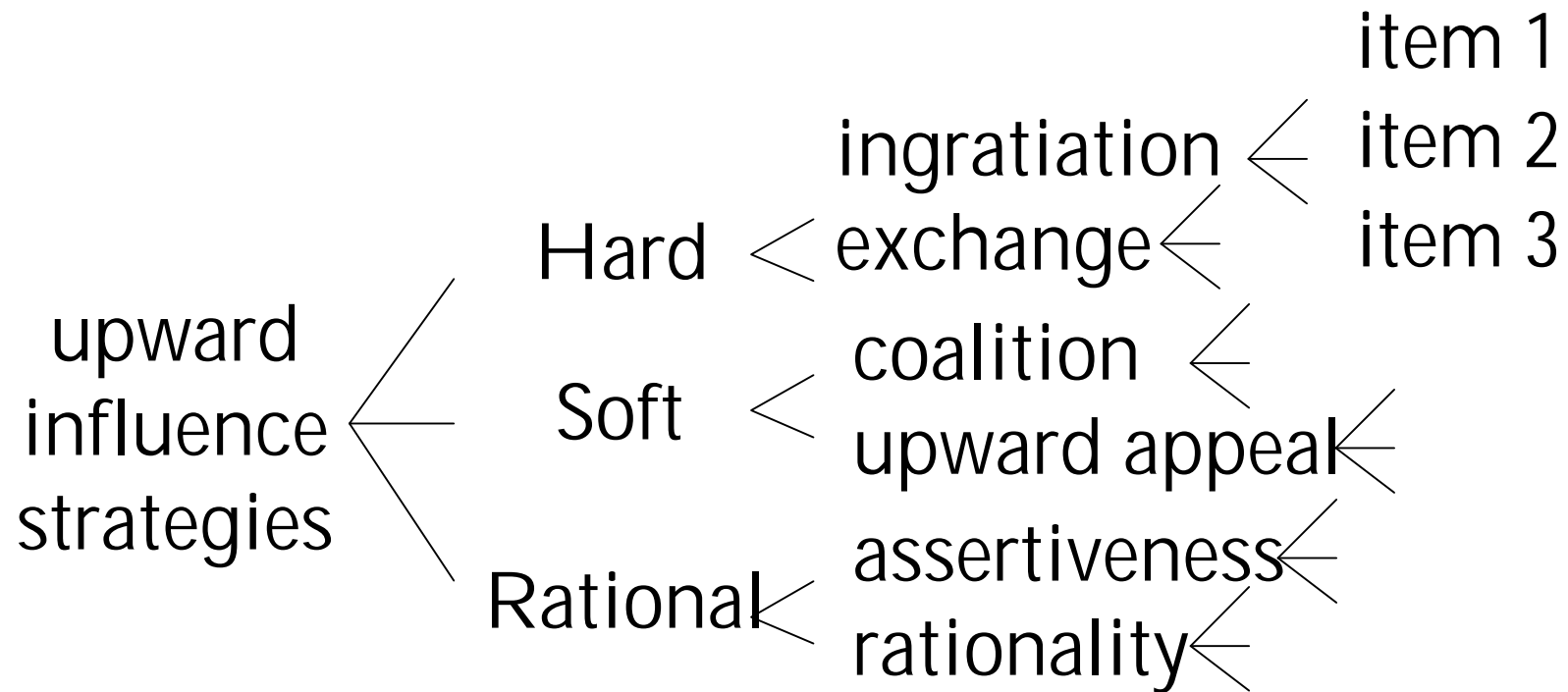
Success as a multidimensional construct

Theoretically, what is the relationship between the dimensions and the construct ?

- a) Latent model ————— Role stress
Upward-influence
tactics
- b) Aggregate model ————— Job satisfaction
Job motivation

Measuring upward-influence tactics

- It is a latent model

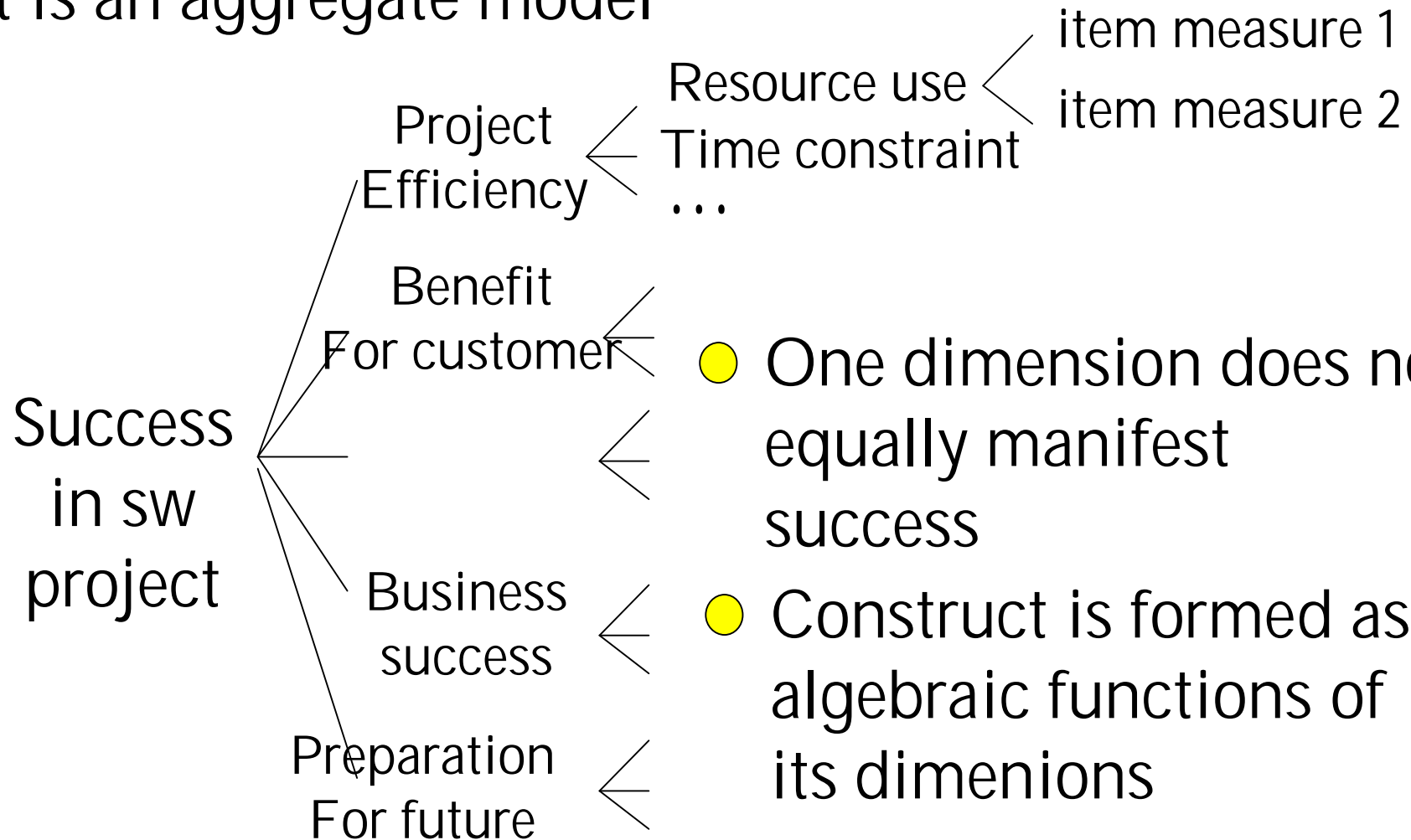


(Farmer et al. 1997)



Measuring software project success

- It is an aggregate model



- One dimension does not equally manifest success

- Construct is formed as algebraic functions of its dimensions

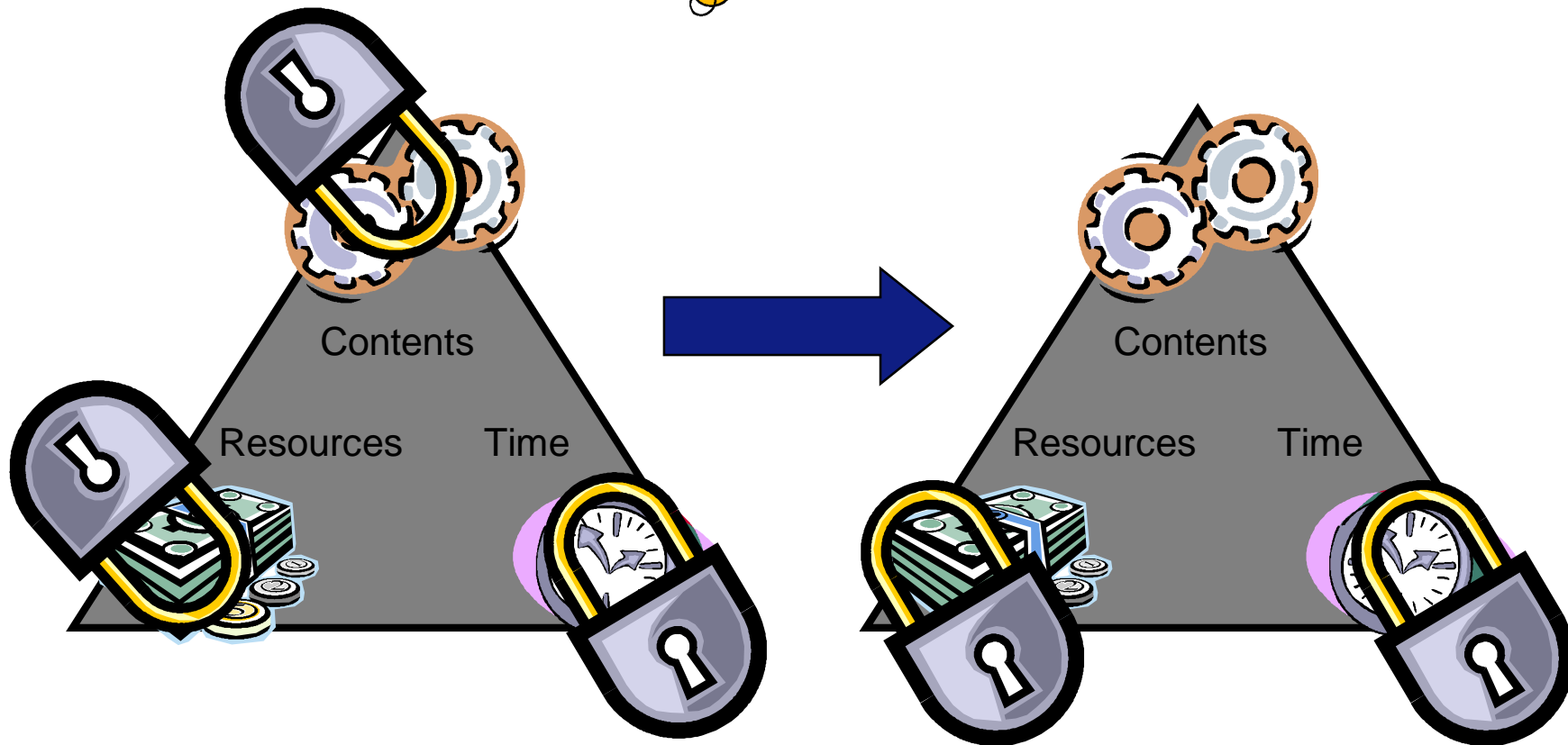
AGILE PROJECT MANAGEMENT



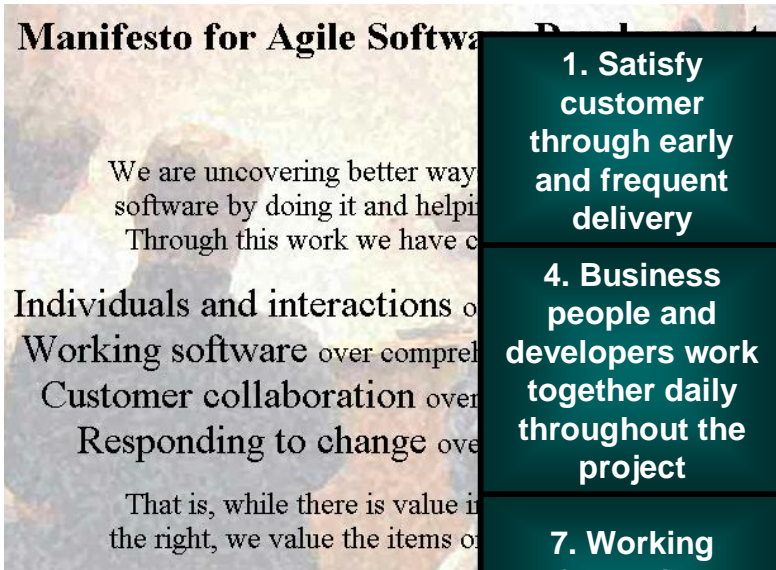
A PRINCIPLE AGILE SOLUTION



Product management steering group



Principles of agile software development



Agile manifesto

1. Satisfy customer through early and frequent delivery	2. Welcome changing requirements even late in the project	3. Deliver working software frequently
4. Business people and developers work together daily throughout the project	5. Build projects around motivated individuals	6. Place emphasis on face-to-face communication
7. Working software is the primary measure of progress	8. Promote sustainable development	9. Continuous attention to technical debt
10. Simplicity is essential	11. The best architectures, requirements, and designs emerge from self-organizing teams	

Practices

	Project Management	Engineering	Support
LD	Decide as late as possible See the whole Empower the team	Deliver as fast as possible	Eliminate waste Amplify learning
SCRUM	Daily Scrum Sprint Planning Meeting Sprint Review Meeting	Product Backlog Sprint Backlog	Product Owner Scrum Master Scrum Team
FDD	Plan by Feature	Domain Object Modeling Developing by Feature Inspections Regular Builds	Individual Class (Code) Ownership Feature Teams Configuration Management Reporting/Visibility of Results
XP	Planning Game Small Releases On site Customer	Pair Programming Coding Standards System Metaphor Testing	Collective Ownership 40-hour work
ASD	Speculate Collaborate Learn	Simple Design Refactoring Continuous Integration	

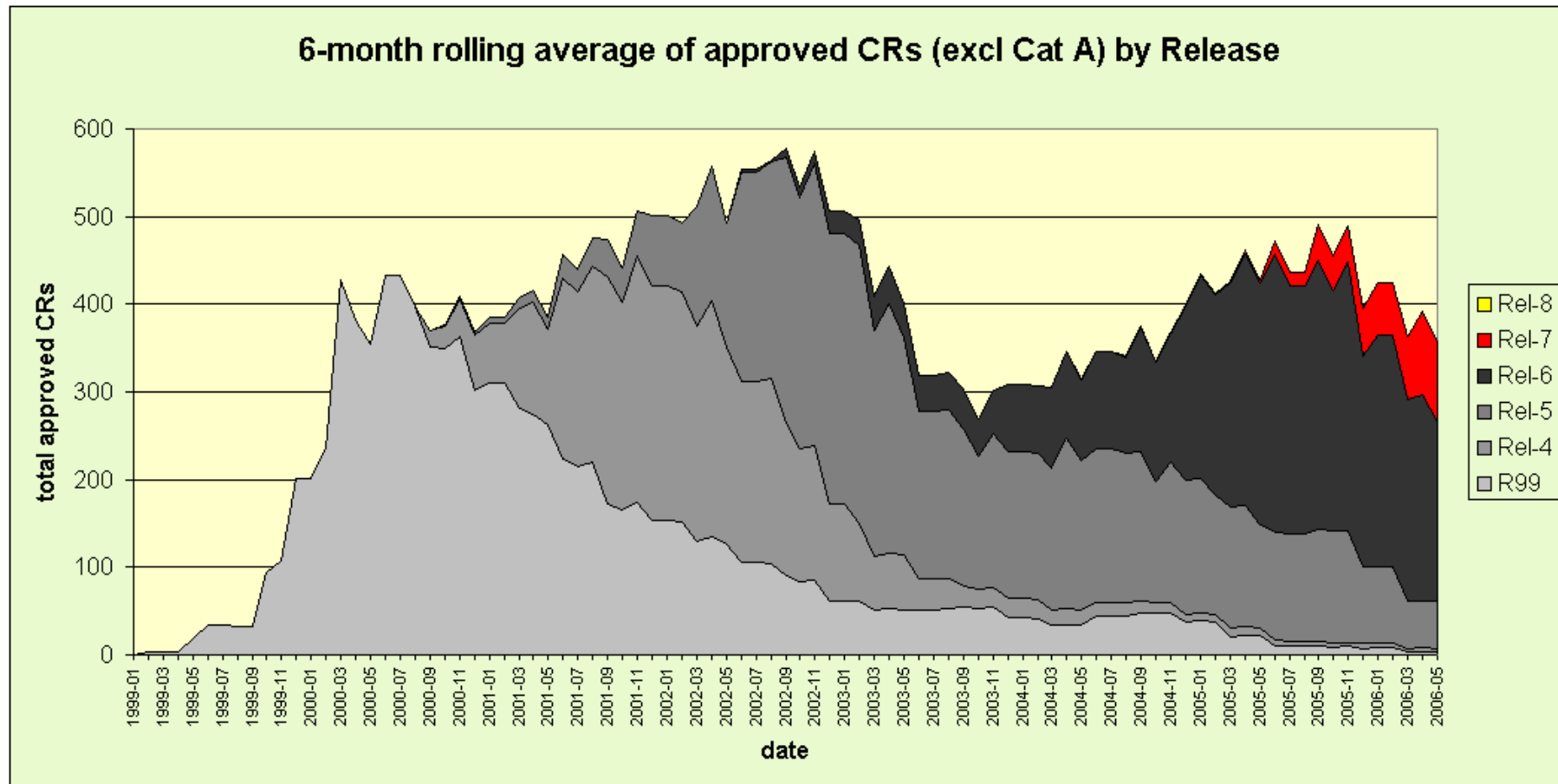


COMMON BELIEFS OF AGILE DEVELOPMENT

- Agile software development leads to hacking
- Agile means no documentation
- We have problems, agile is the easy way out
- Agile is best suited for small team development
- There is very little room for architecture work in agile development
- **Agile means that we do not think about the future**
- **Agile means that we do not need to plan**
- Agile means incremental & iterative; we have always been incremental and iterative --> there is nothing new here

Change is the only certainty in software design & development

The production of Technical Specifications for a 3rd Generation Mobile System based on the evolved GSM core networks.



What is Agility?

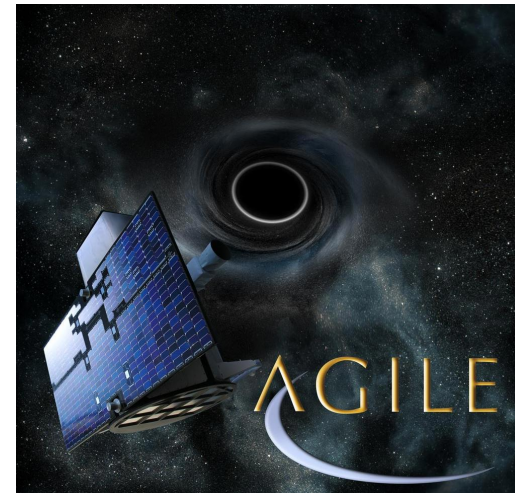
- Agility, for a software development organization, is the ability to adapt and react expeditiously* and appropriately to changes in its environment and to demands imposed by this environment” [Kruchten, 2001]
 - * expeditiously, d. nopeasti, vauhdikkaasti, joutuisasti
- Thus, agility is the ability to both create and respond to change in order to profit in a turbulent business environment
- Agile organizations are
 - *nimble*, i.e. able to change directions quickly
 - *flexible*, i.e. able to change the way things are done

What Kinds of Problems Does Agility Solve Best?

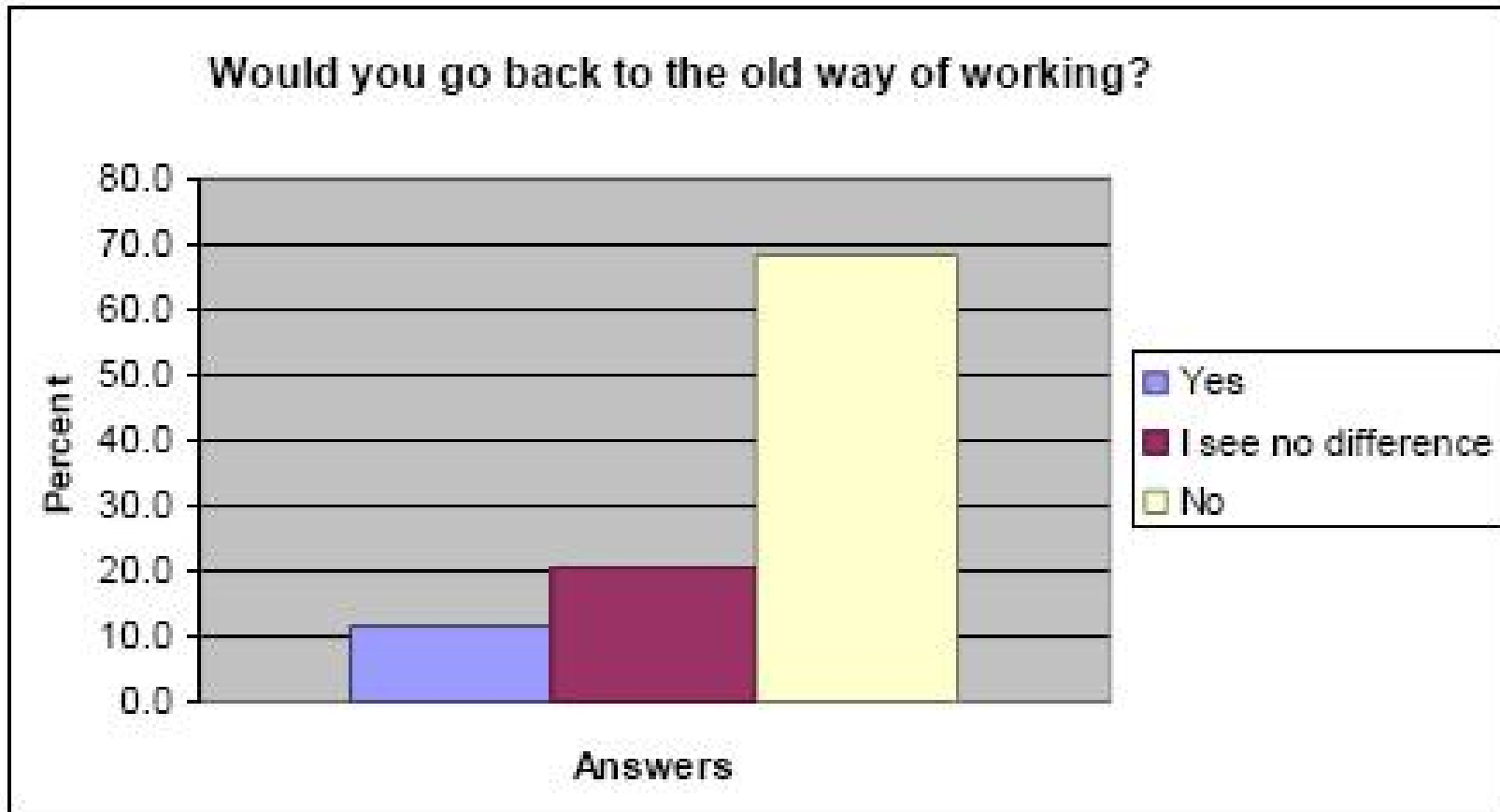
- Complex problems characterized by
 - change,
 - speed, and
 - turbulence.
- Situations where the development is required
 - to meet the tight delivery schedules, and
 - to reduce the significant risk and uncertainty that generate constant change during the project.
- Change is imposed by rapidly evolving technology, business and product needs

AGILE SOFTWARE DEFINED

- Technical Excellence
- Co-operation
- Time-boxed development
- Fixed costs & delivery date
- Continuous risk management



IN ORDER ANYTHING TO HAPPEN - THE DEVELOPERS NEED TO BE ONBOARD!



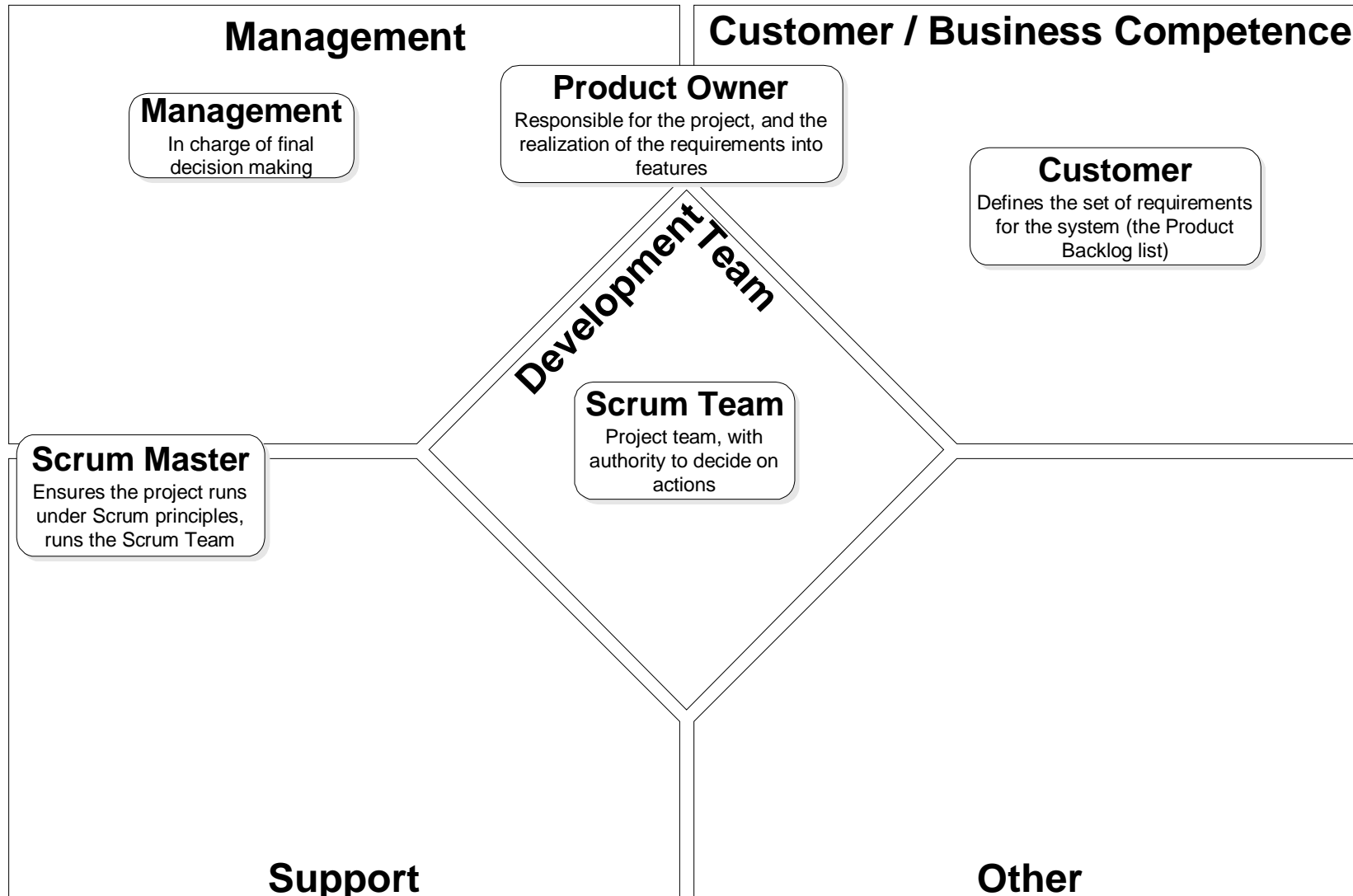
Source: Nokia, publicly available at:
http://www.odd-e.com/articles/2006/nokia_agile.pdf

"PROVEN" BENEFITS OF AGILE DEV.: THE PROJECT, PRODUCT MANAGERS & BUSINESS

- Improved control over product and/or service
 - > You're truly in the driver's seat
 - > Every 2-4 weeks you decide
 - > Continuous risk management
 - > Accept losses or declare victory at any given control point
- Visibility of projects improve by several magnitudes --> lesser need for status reporting
- Improved focus on real issues: You concentrate on product roadmap, future and communication

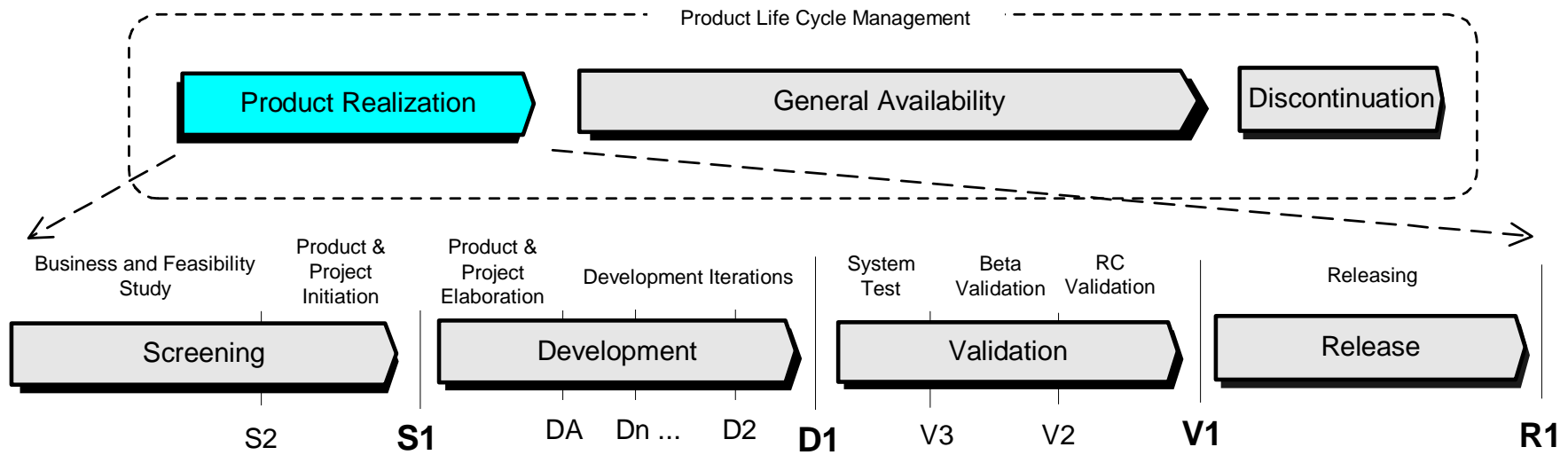
SCRUM FOR AGILE PROJECT MANAGEMENT

Scrum Roles & Responsibilities





F-Secure's starting point (2004)

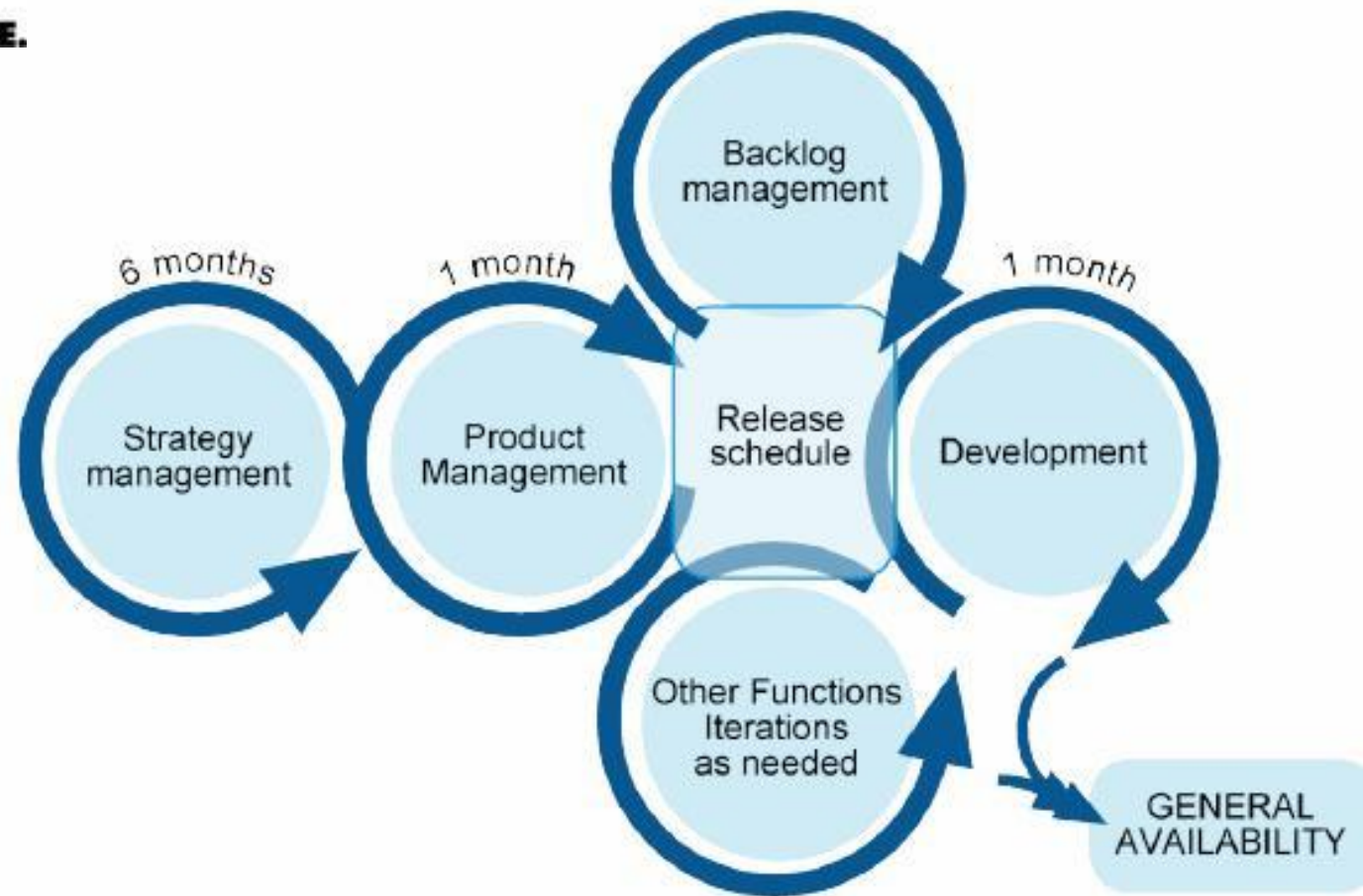


Product life-cycle and product realization cycle

Source: Agile-ITEA newsletter 1/2006



F-Secure's new production model - FLEX (2006-)



Source: Agile-ITEA newsletter 1/2006



THE CASE OF AN INNOVATIVE LEAP

- Due to the adoption of an agile production frame, F-Secure's mobile division in a new product development achieved

§ 3x reduction in lead-time,

§ 4x cheaper,

§ Best quality ever

- Innovative leap due to the acceptance of radical variation in product development & management processes



Fact corner:

- SME of 300 developers
- Mobile & desktop sw
- Products sold globally

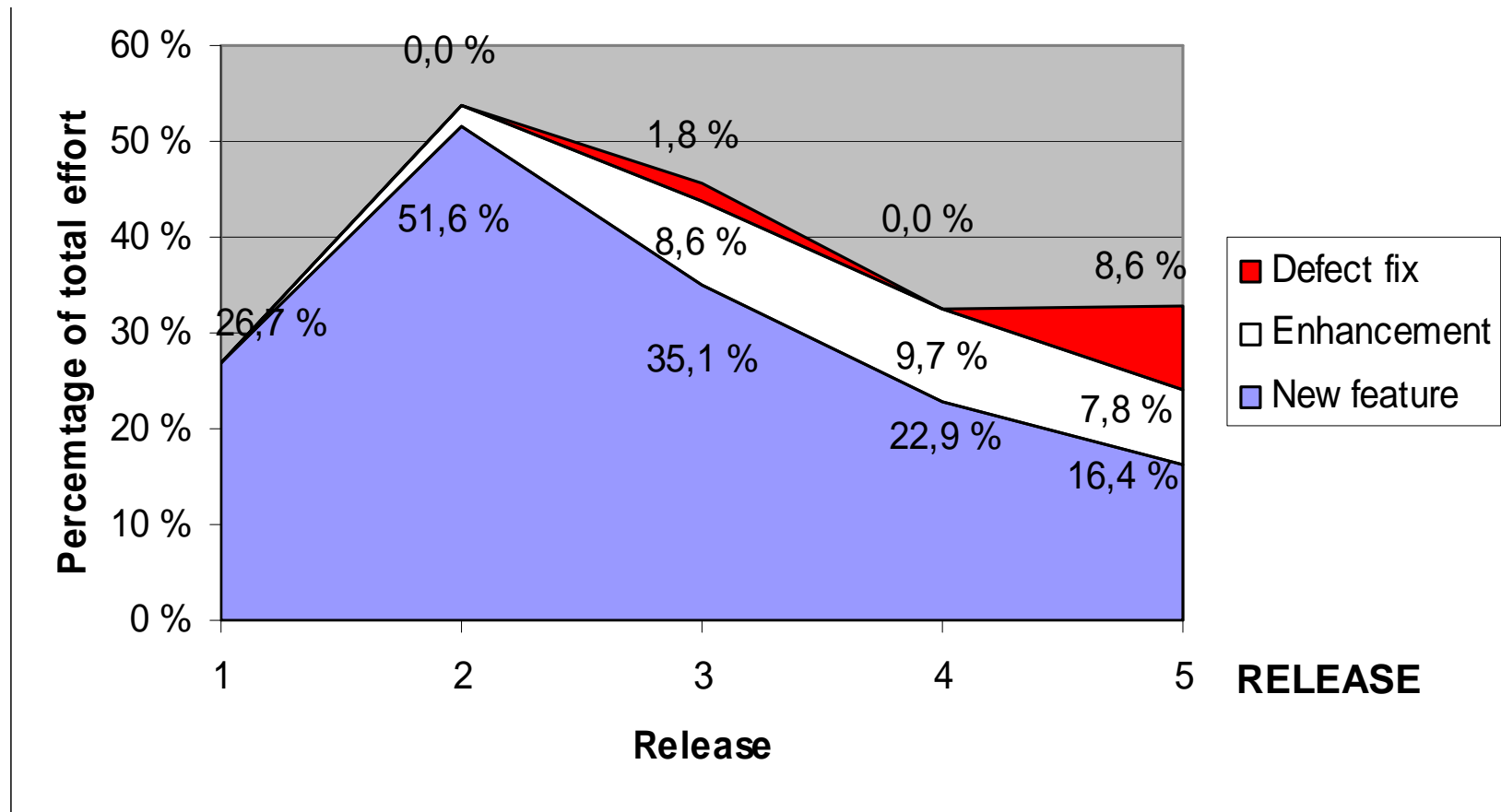
Pekka Abrahamsson

"From the management point of view, the results were amazing." Jari Still, Director, F-Secure, Finland

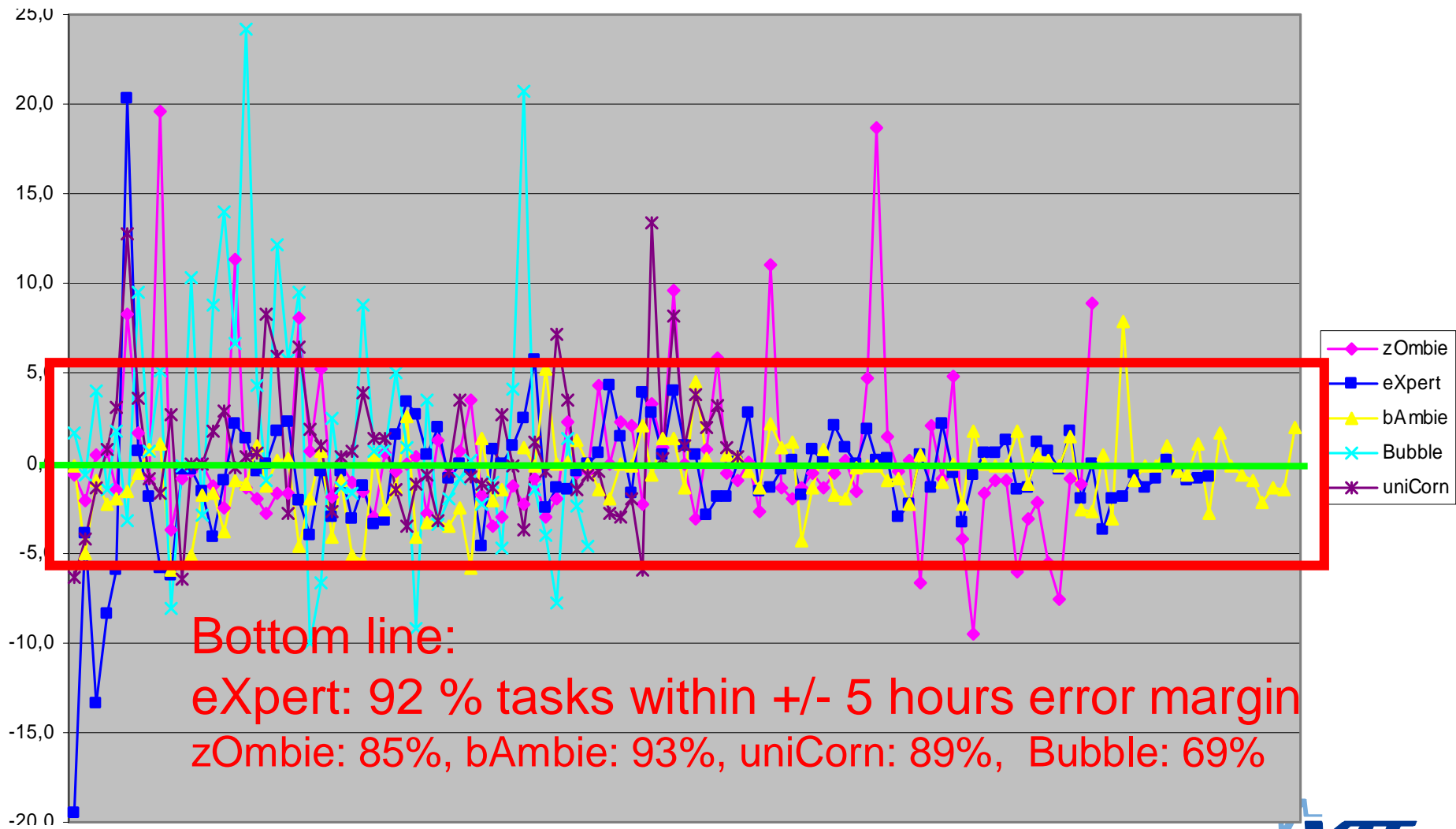
Source: AGILE-ITEA Newsletter #2, 2005
AGILE-ITEA Newsletter #1, 2006
(<http://www.agile-itea.org>)



QUANTIFIED QUALITY "CONTROL"



ESTIMATION PRECISION IN AGILE DEVELOPMENT (I.E. HOURS LOST BY FAULTY ESTIMATES)





Agile productivity Case Philips: Modena project

- Industry data:
 - Average: 150 SLOC/MM
 - Best-in-class: 750 SLOC/MM
 - PSP: 4000 SLOC/MM
- Case agile (Modena project)
 - New code only: 858 SLOC/MM
 - **New + (0.3 * Adapted): 1143 SLOC/MM**
 - New + Adapted: 1809 SLOC/MM

Based on total effort including Management & external Test effort

INNOVATIVE LEAP EXPLAINED

- "The actual processes adopted were neither novel nor particularly inventive. Rather they had the virtues of being easy to explain and relatively easy to comply with, with goals easily describable as having been met or not."



Ward et al. (2001)

THANK YOU!

Questions and comments?

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