VSR | EDU

Current Trends in Web Engineering

Prof. Dr.-Ing. Martin Gaedke

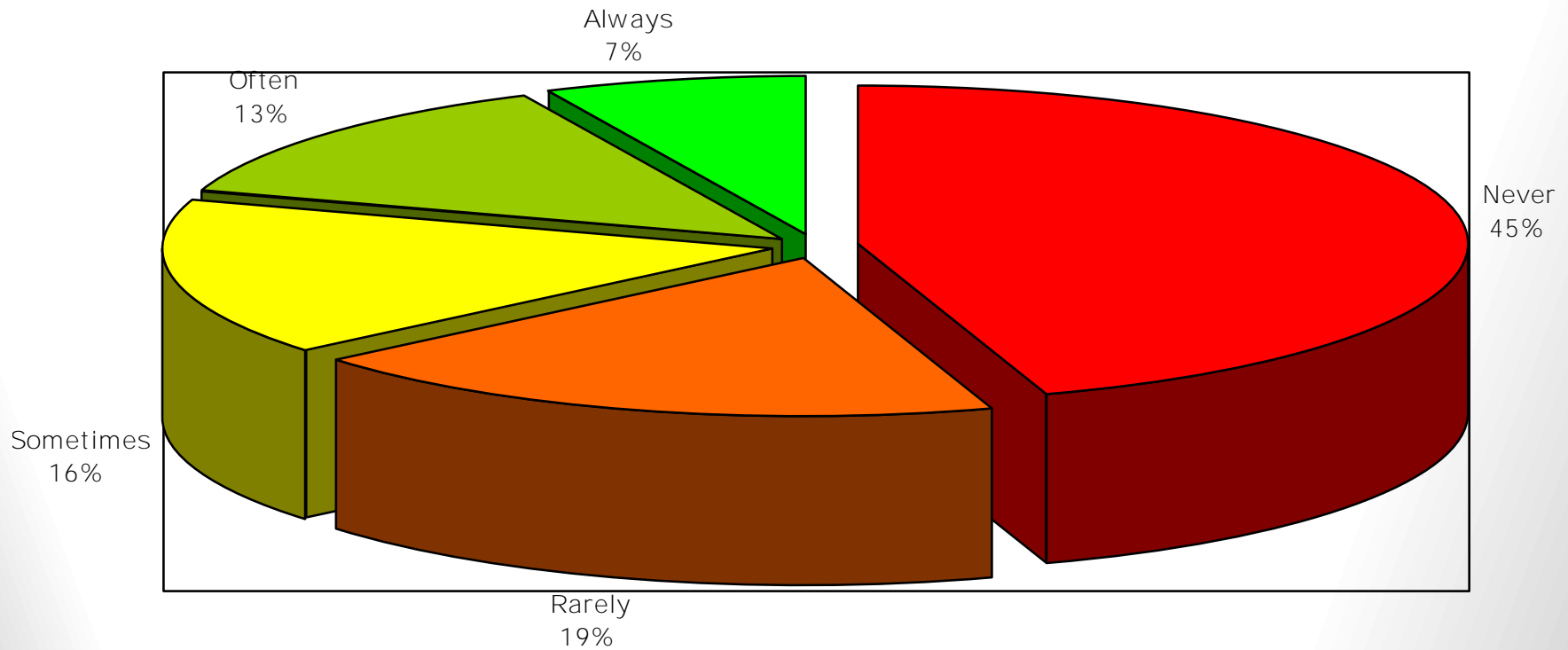Technische Universität Chemnitz

Fakultät für Informatik

Verteilte und selbstorganisierende Rechnersysteme

TECHNISCHE UNIVERSITÄT CHEMNITZ

Planning: The Cost of Traditional BRUF

"Successful" Projects Still Have Significant Waste

Source: Jim Johnson of the Standish Group, Keynote Speech XP 2002
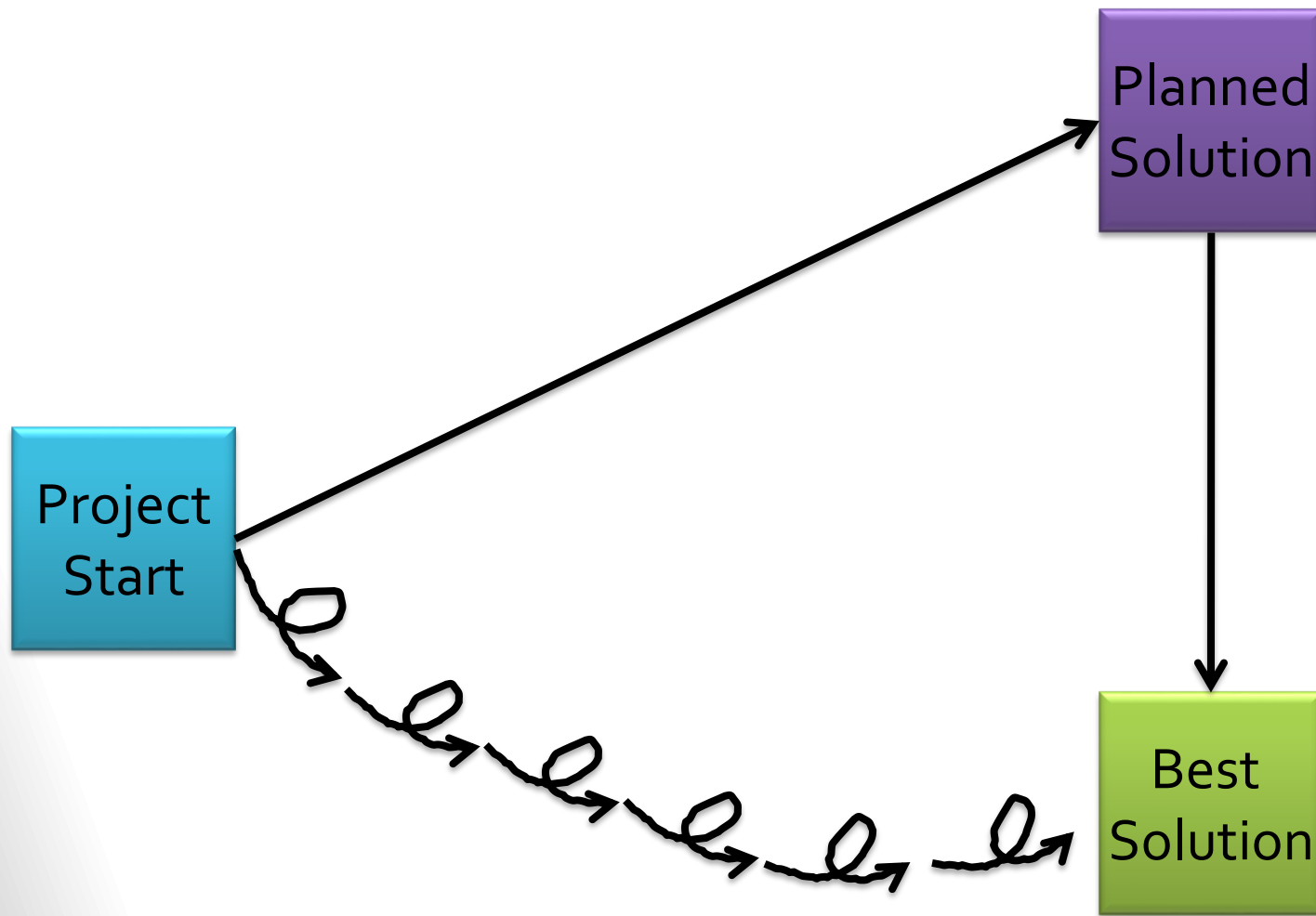
Idea: Agile Processes

- Reaction to the "bureaucratic" process models
  - ▶ Lightweight methodologies (now agile methodologies)
  - ▶ Too much process vs. no process
- Apply an iterative and evolutionary approach to development
- Examples
  - ▶ Scrum
  - ▶ Kanban

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Iterations versus Planning

Project Start

Planned Solution

Best Solution

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Agile Manifesto

We value

- individuals and interactions
- working software

- customer collaboration
- responding to change

over

- processes and tools
- comprehensive documentation

- contract negotiation
- following a plan

For further information, cf.: http://agilemanifesto.org/

CHAPTER://2

- SCRUM

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Scrum in 100 words

- Scrum is an agile process that allows us to focus on delivering the highest business value in the shortest time.

- It allows us to rapidly and repeatedly inspect actual working software (every two weeks to one month).

- The business sets the priorities. Teams self-organize to determine the best way to deliver the highest priority features.

- Every two weeks to a month anyone can see real working software and decide to release it as is or continue to enhance it for another sprint.

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Scrum origins

- Jeff Sutherland
  - ▶ Initial scrums at Easel Corp in 1993
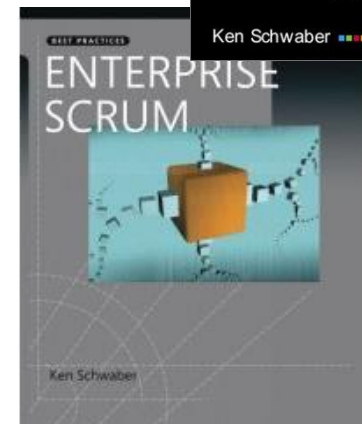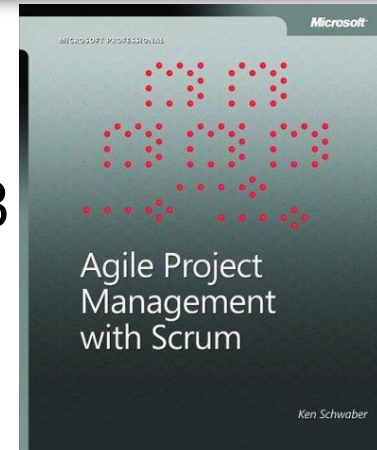 - ▶ IDX and 500+ people doing Scrum
- Ken Schwaber
  - ▶ ADM
  - ▶ Scrum presented at OOPSLA 96 with Sutherl
  - ▶ Author of three books on Scrum
- Mike Beedle
  - ▶ Scrum patterns in PLOPD4
- Ken Schwaber and Mike Cohn
  - ▶ Co-founded Scrum Alliance in 2002, initially within the Agile Alliance

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Scrum has been used for:

- Commercial software
- In-house development
- Contract development
- Fixed-price projects
- Financial applications
- ISO 9001-certified applications
- Embedded systems
- 24x7 systems with 99.999% uptime requirements
- the Joint Strike Fighter

- Video game development
- FDA-approved, life-critical systems
- Satellite-control software
- Websites
- Handheld software
- Mobile phones
- Network switching applications
- ISV applications
- Some of the largest applications in use

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Characteristics

- Self-organizing teams

- Product progresses in a series of month-long "sprints"

- Requirements are captured as items in a list of "product backlog"

- No specific engineering practices prescribed

- Uses generative rules to create an agile environment for delivering projects
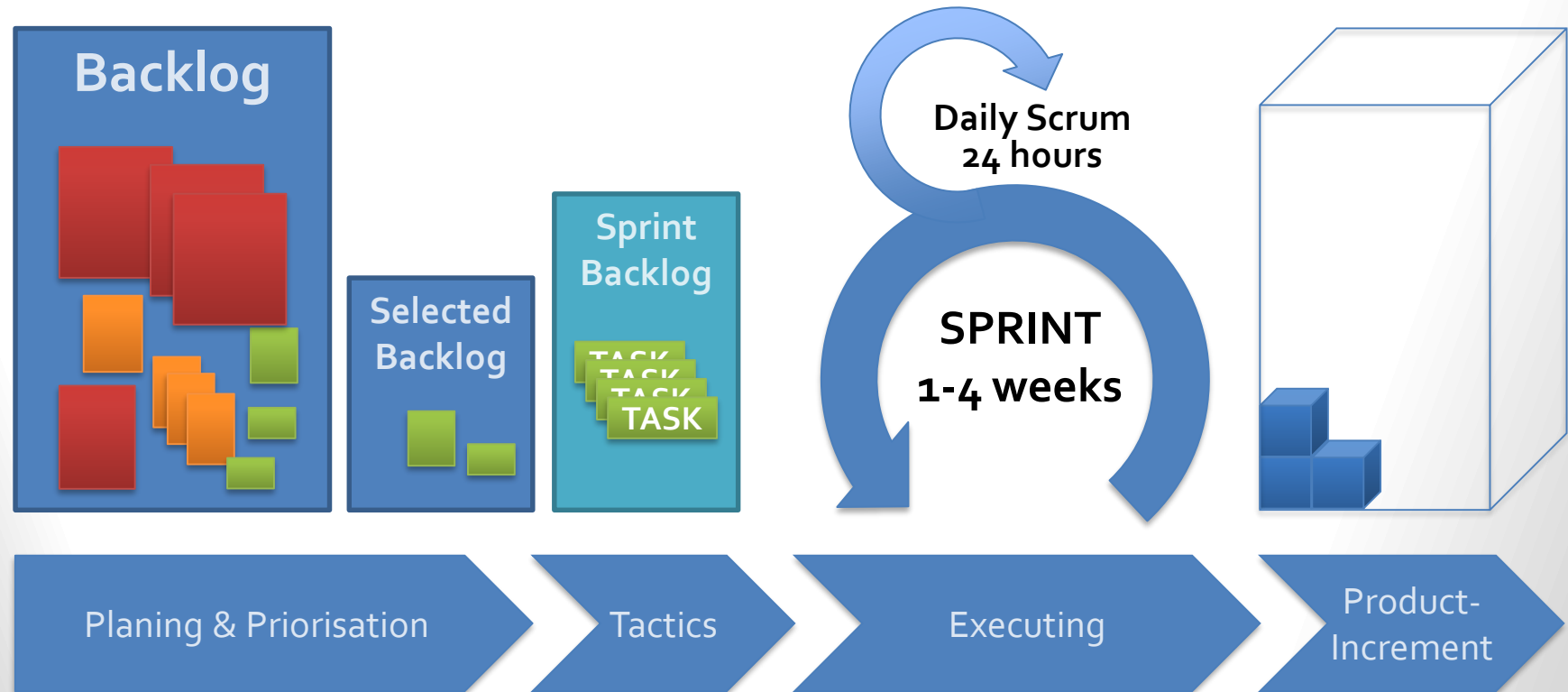
- One of the "agile processes"

SECTION://1

■ Framework Overview

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Scrum Practice: Inspect & Adapt

From Vision ....to Tangible Result

Backlog

Selected Backlog

Sprint Backlog

TASK
TASK
TASK

Daily Scrum 24 hours

SPRINT 1-4 weeks

Planing & Priorisation

Tactics

Executing

Product-Increment

Not x%, but done
What does done mean?

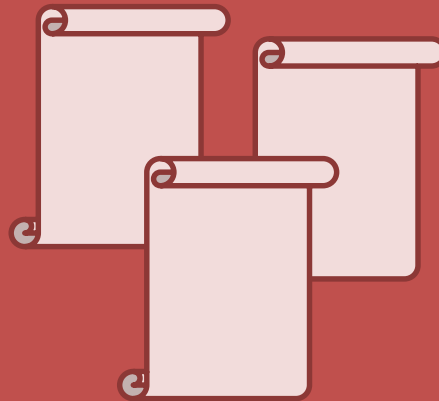CTWE: Part I - Development ▶ Chapter 2: SCRUM ▶ Framework Overview

Roles

▶ Product owner

▶ ScrumMaster

▶ Team

Artifacts

▶ Product backlog

▶ Sprint backlog

▶ Burndown charts

Meetings

▶ Sprint planning

▶ Sprint review

▶ Sprint retrospective

▶ Daily scrum meeting

SECTION://2

- Roles

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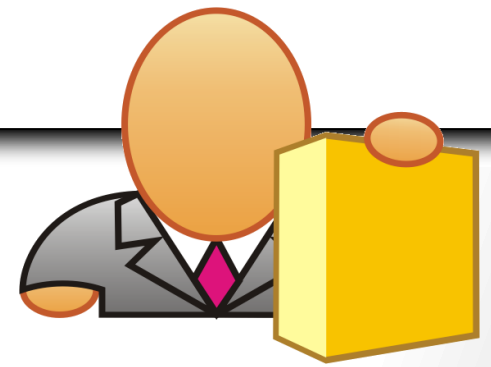CTWE: Part I - Development ► Chapter 2: SCRUM ► Roles

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The SCRUM Team

■ In Scrum we talk about pigs and chicken

▶ Scrum Team (pigs - committed)

▶ Other stakeholders (chicken - involved)

■ The Scrum Team member are in one of the following roles:

▶ Product owner

▶ ScrumMaster

▶ The Team

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Product owner

- Define the features of the product
- Decide on release date and content
- Be responsible for the profitability of the product (ROI)
- Prioritize features according to market value
- Adjust features and priority every iteration, as needed
- Accept or reject work results
- Responsable for WHAT will be delivered

The ScrumMaster

- Represents management to the project
- Responsible for enacting Scrum values and practices
- Removes impediments
- Ensure that the team is fully functional and productive
- Enable close cooperation across all roles and functions
- Shield the team from external interferences
- Responsible for the Scrum Process

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The team

- Typically 5-9 people
- Cross-functional:
  - ▶ Programmers, testers, user experience designers, etc.
- Members should be full-time
  - ▶ May be exceptions (e.g., database administrator)
- Teams are self-organizing
  - ▶ Ideally, no titles but rarely a possibility
- Membership should change only between sprints
- Responsable for How Much will be delivered

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