

# Scrum Overview

**Prof. Dr. Dirk Riehle**

**Friedrich-Alexander University Erlangen-Nürnberg**

**AMOS C03**

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- 1. Individuals and Interactions**  
(over Processes and Tools)
- 2. Working Software**  
(over Comprehensive Documentation)
- 3. Customer Collaboration**  
(over Contract Negotiation)
- 4. Responding to Change**  
(over Following a Plan)

**Scrum**  
(for process practices)

**XP**  
(for technical practices)

# Scrum Definition 1 / 2

- An agile method, invented around 1993, 1995
- A rugby situation requiring intense collaboration

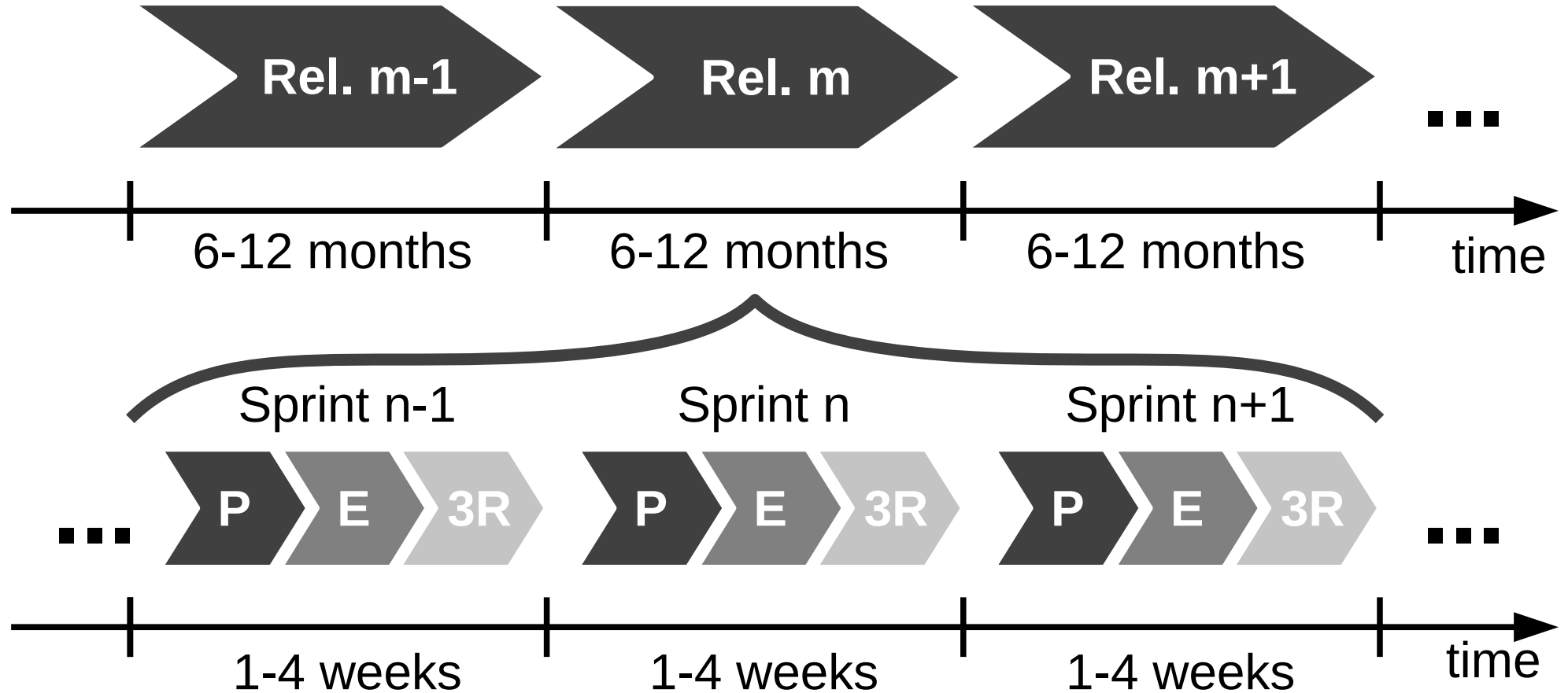


# Scrum Definition 2 / 2 [S04] [C06]

- A (minimal) agile process model
- Independent of software development
- Where definitions sometimes vary (two fathers)

1. Portfolio
2. Product
3. Release
4. Sprint
5. Day

# Scrum Process Overview



P: Planning  
E: Execution  
3R: Review, release, and retrospective

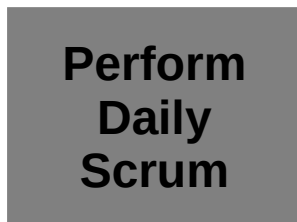
# Scrum Roles, Practices, and Artifacts

## Roles



- Product owner
- Software developer [1]
- Scrum master

## Practices



- Sprint planning
- Daily Scrum
- Sprint review
- Release planning
- ...

## Artifacts

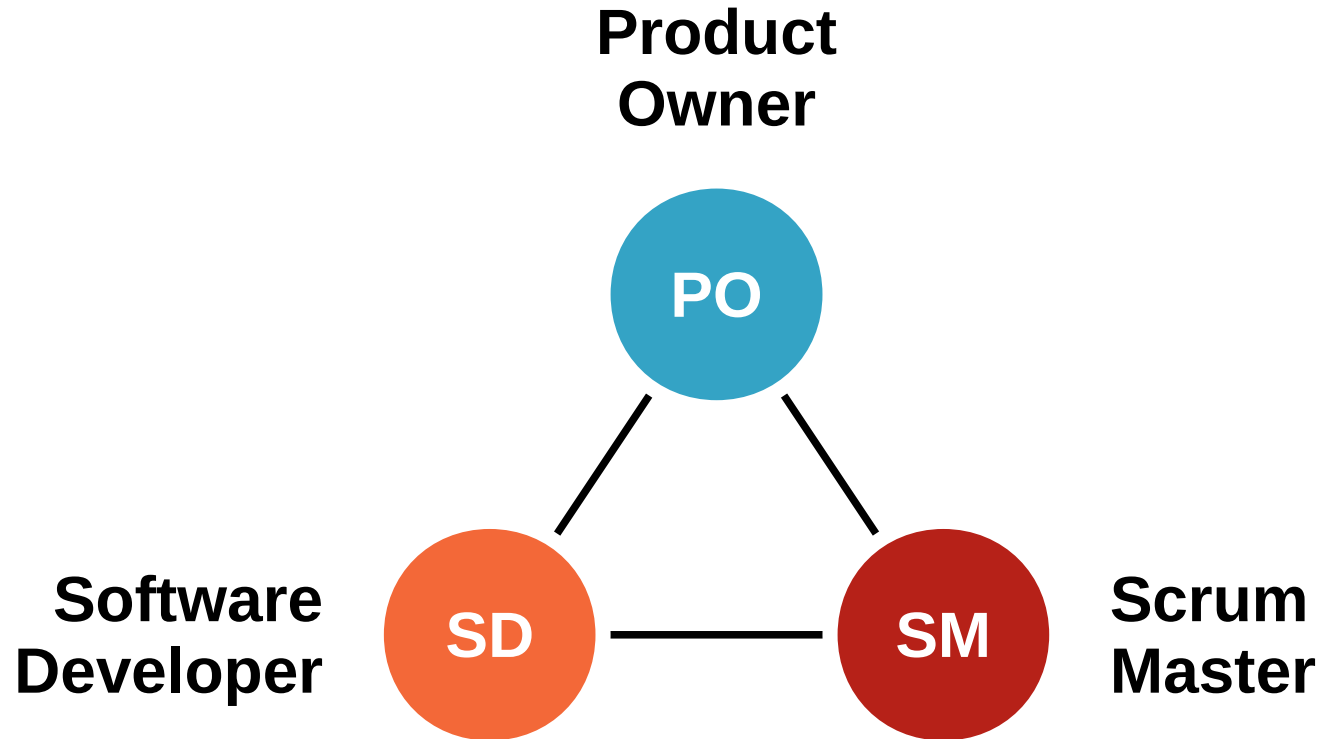


- Product backlog
- Sprint backlog
- Burndown chart
- ...

[1] Originally “team members”



# Scrum Roles and Responsibilities



# Committed vs. Involved (Scrum Lore)

- **Committed**

- Product owner
- Software developer
- Scrum master

- **Involved**

- Customer
- Marketing manager
- Sponsor / funder
- Others ...

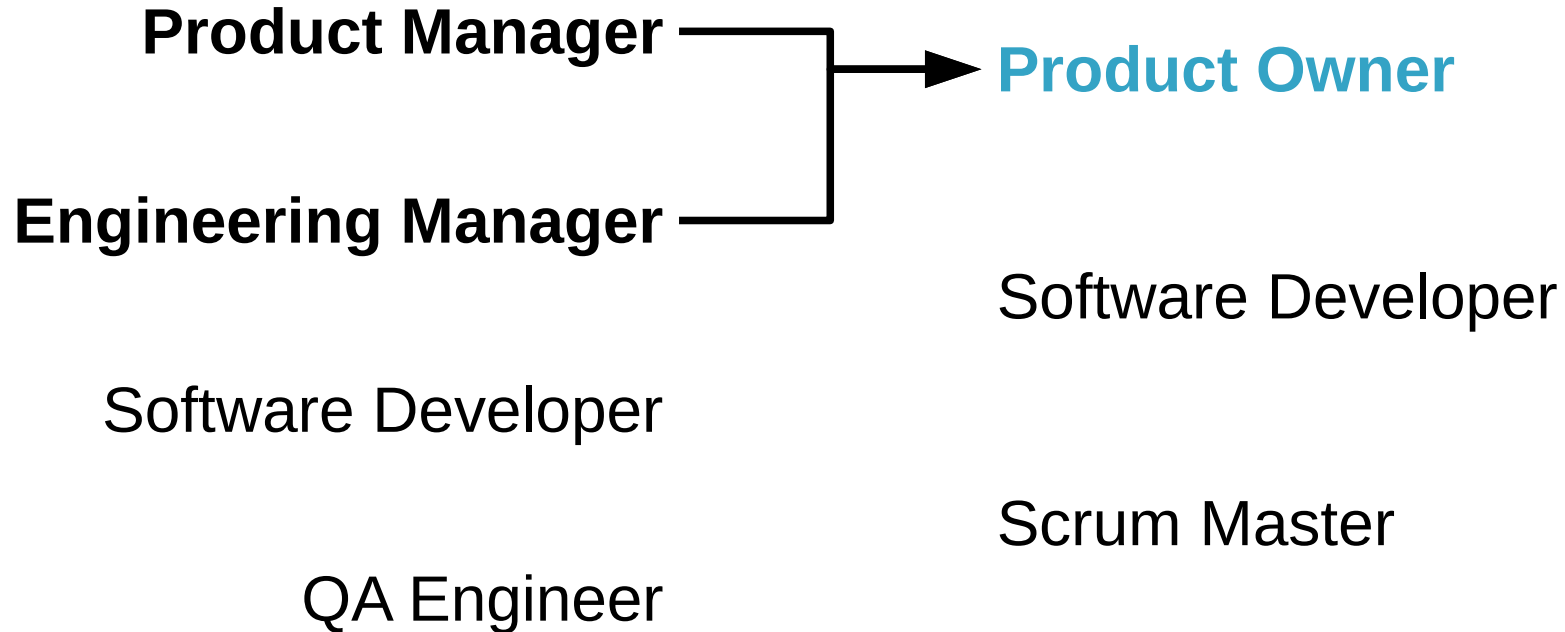
- **Product owner**
  - Holds **overall responsibility** for the product being developed
  - Provides
    - product vision,
    - product requirements
  - **Plans** and helps plan **development**
  - **Tracks progress**

1. Opportunity Assessment
  2. Product Specification
- 
3. Development Planning
- 
4. Progress Tracking

# Traditional to Scrum Role Mapping (Recap)

## Traditional

## Scrum



# Product Owner Processes and Artifacts

Processes	Artifacts
Opportunity Assessment	Product Vision
Product Specification	Product Glossary Product Backlog Feature Archive
Product Planning	Sprint Backlog Release Plan
Progress Tracking	Burndown Charts Feature Archive

# Traditional vs. Scrum Product Management

- **Traditional Product Manager**

- Product manager is responsible for product strategy and specification
- Product manager does not interfere with detail development planning
- Product Manager is frequently high-level, delegates product decisions to engineering

- **Scrum Product Owner**

- Product owner is also responsible for product strategy and specification
- Product owner shoulders some of the engineering manager role
- Product owner is very much in the details of planning and tracking development

**Scrum is a framework and thus typically enhanced with other roles and responsibilities**

# Software Development Team

- The **software development team**
  - Holds **overall responsibility** for **delivering working software**
    - That provides the **features** the **team committed to delivering**



1. **Architecture Definition**
  2. **Feature Implementation**
- 
3. **Size Estimation**
  4. **Sprint Committment**

# Traditional to Scrum Role Mapping (Recap)

## Traditional

## Scrum

Product Manager

Product Owner

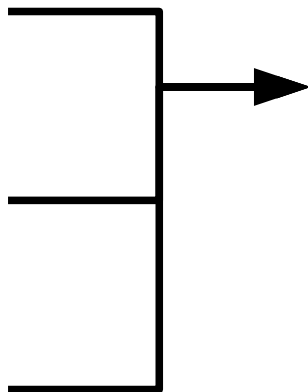
Engineering Manager

Software Developer

QA Engineer

**Software Developer**

Scrum Master



# Software Developer Processes and Artifacts

Processes	Artifacts
Development Planning	Sprint Backlog
Software Development	Software
Quality Assurance	Software

# Scrum Master

- **Scrum master**
  - Holds **overall responsibility** for
    - **Removing non-technical obstacles** from the project's path

# Traditional to Scrum Role Mapping (Recap)

## Traditional

Product Manager

Engineering Manager

Software Developer

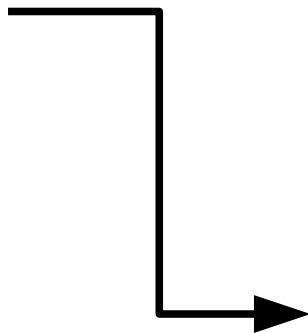
QA Engineer

## Scrum

Product Owner

Software Developer

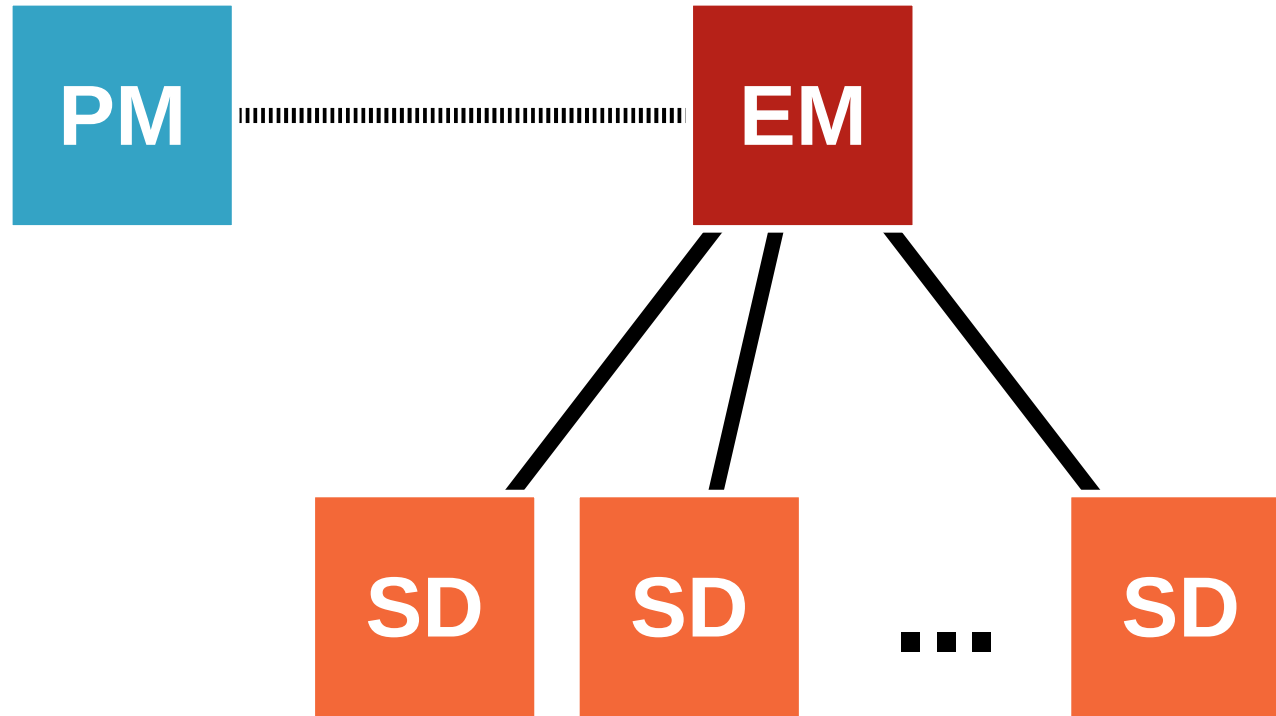
Scrum Master



# Scrum Master Processes and Artifacts

Processes	Artifacts
Process Facilitation	Impediment Backlog
Process Improvement	Impediment Backlog

# Line Reporting (vs. Roles)



PM  
EM  
SD

Product Manager  
Engineering Manager  
Software Developer

# Scrum Sprints (Iteration)

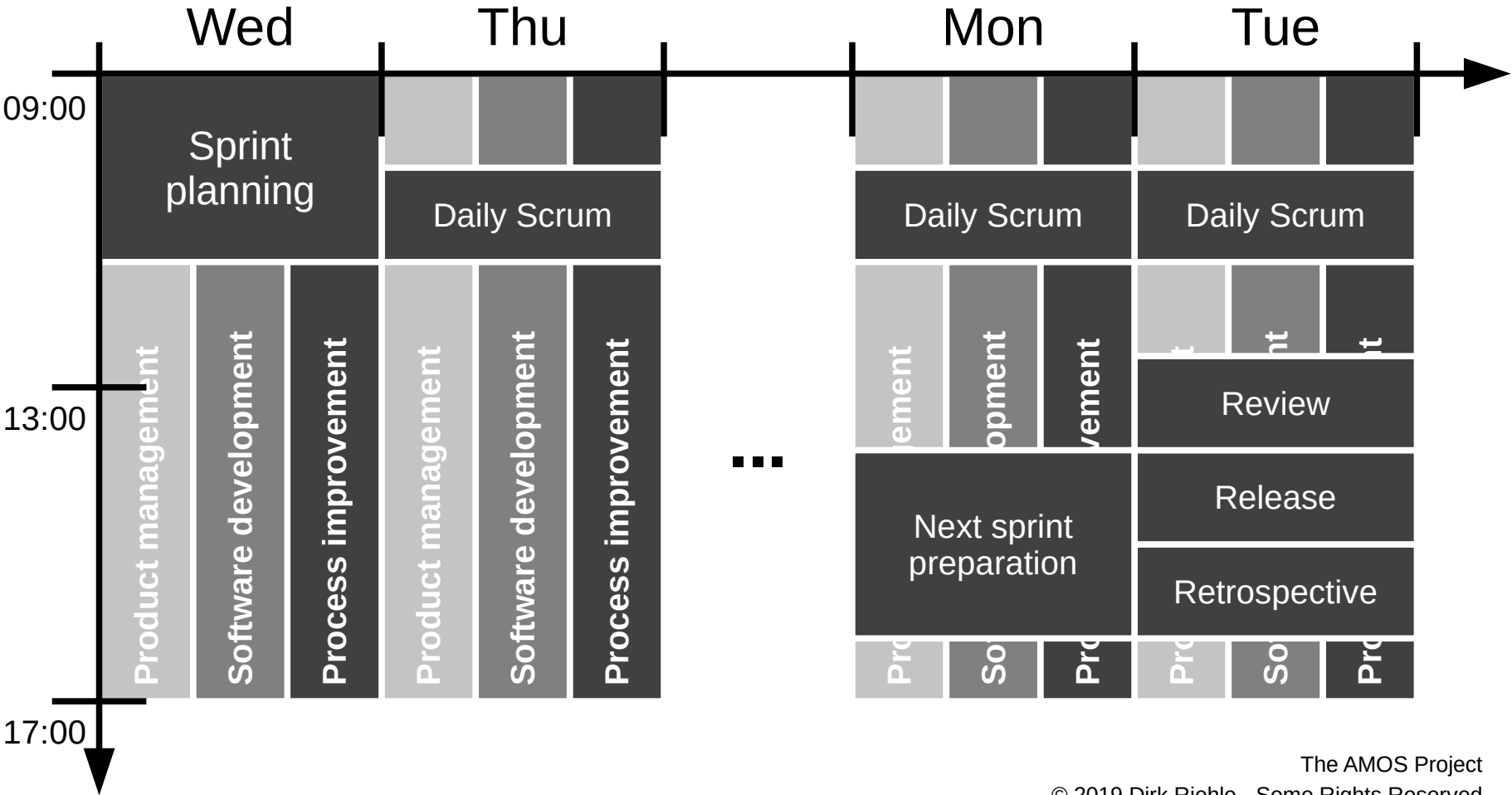
- A sprint is Scrum's iteration; it is an equal-length time-box
- It is a highly structured process with defined feedback points



P: Planning  
E: Execution  
3R: Review, release, and retrospective



# Sprint Structure



- 1. Product management**  
(Product owner)
- 2. Software development**  
(Software developer)
- 3. Process improvement**  
(Scrum master)

# Sprint Planning

- Definition
  - Serves to plan the upcoming sprint's work
  - Involves product owner, software developers, and Scrum master
  - Results in sprint backlog containing the upcoming sprint's work
- Activities
  - Product owner
    - The product owner provides the prioritized list of features
  - Software developer
    - The software developers estimate feature size using planning poker
    - Features keep being added to sprint backlog until there is enough work
    - Software developers breakdown features into tasks, distribute them
  - Scrum master
    - Observes team dynamics

# Sprint Execution

- Definition
  - Serves to evolve product
- Activities
  - Product owner
    - Answers developer questions about features
    - Evolves product backlog, updates release plan
  - Software developer
    - Implement features from sprint backlog
    - Interact with product owner to refine feature specifications
  - Scrum master
    - Learns about process impediments
    - Tries to fix those impediments

# Next Sprint Preparation

- Definition
  - Serves to prepare the upcoming sprint planning meeting
  - Involves product owner and at least one software developer
  - Results in sufficiently comprehensive product backlog
- Activities
  - Product owner
    - The product owner provides the prioritized list of features
    - Includes high-priority bug reports as backlog entries
  - Software developer
    - Provides size estimates for highly prioritized features
    - Adds refactorings for planning consideration

# Sprint Review, Release, and Retrospective

- Definition
  - Sprint review
    - Product owner reviews results
    - Team signs off on finished features
  - Sprint release
    - Stakeholders sign off
    - If so, product is released
  - Sprint retrospective
    - Team reviews process
    - Developers commit to improvements

# Review / Summary of Session

- Scrum defined
  - Scrum process overview and scope
  - Scrum roles, activities, and artifacts
  - When compared with traditional definitions

# Thank you! Questions?

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- Contributions
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The AMOS Project  
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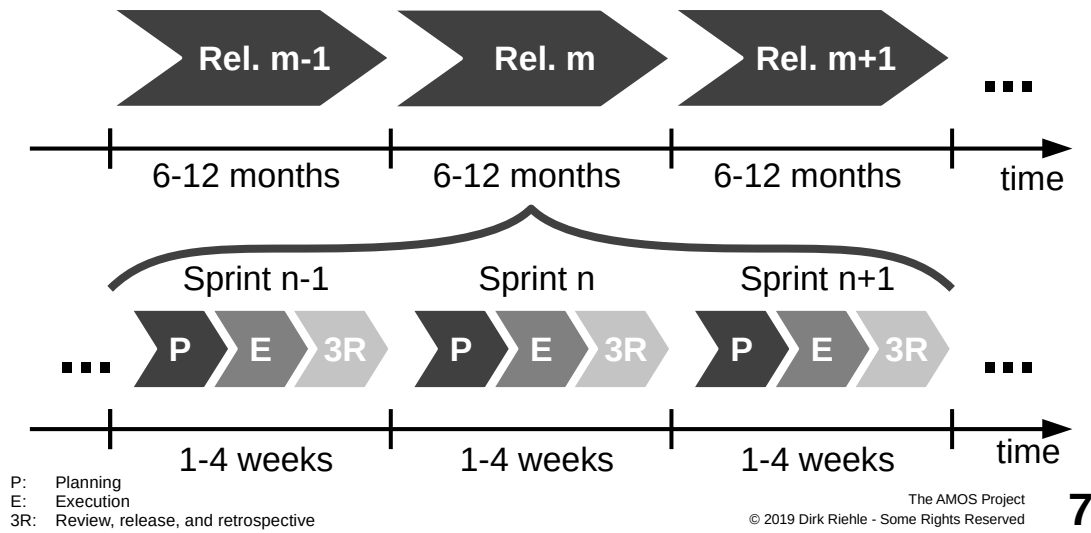
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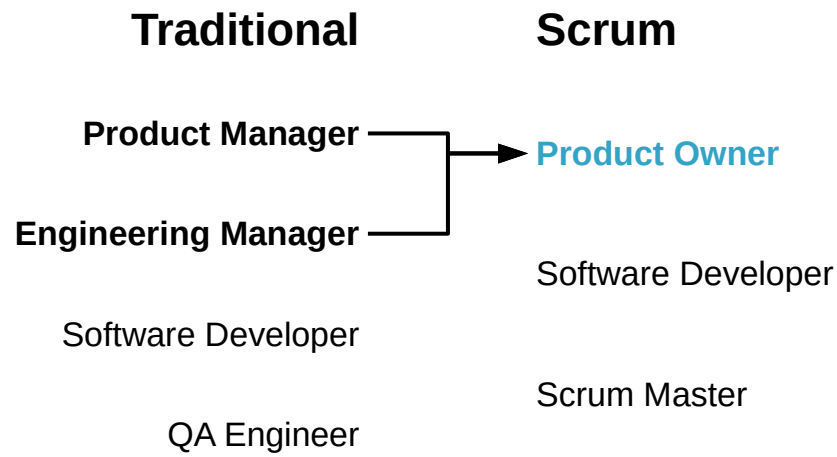
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1. Opportunity Assessment
  2. Product Specification
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3. Development Planning
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## Traditional to Scrum Role Mapping (Recap)



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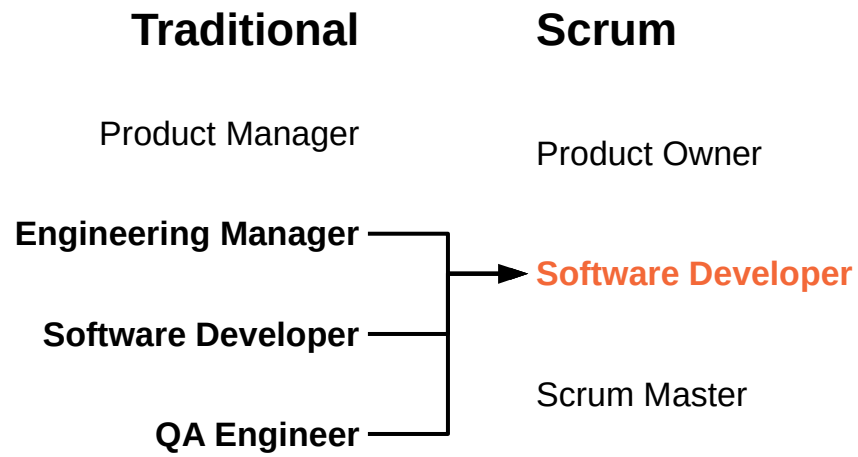
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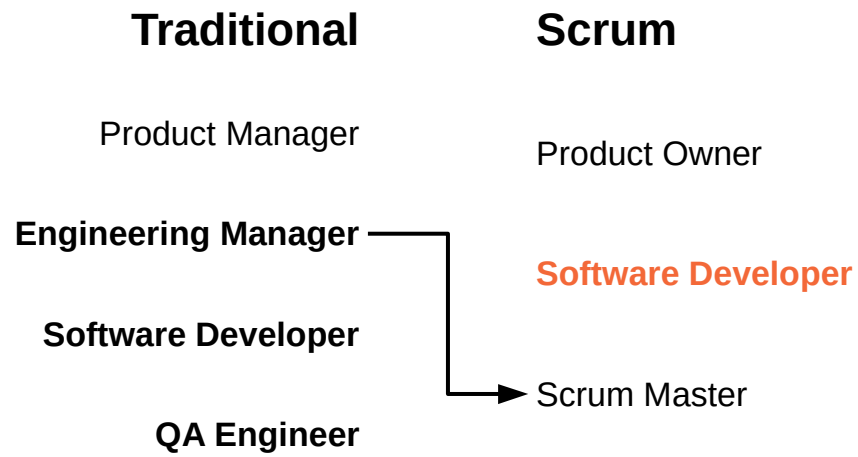
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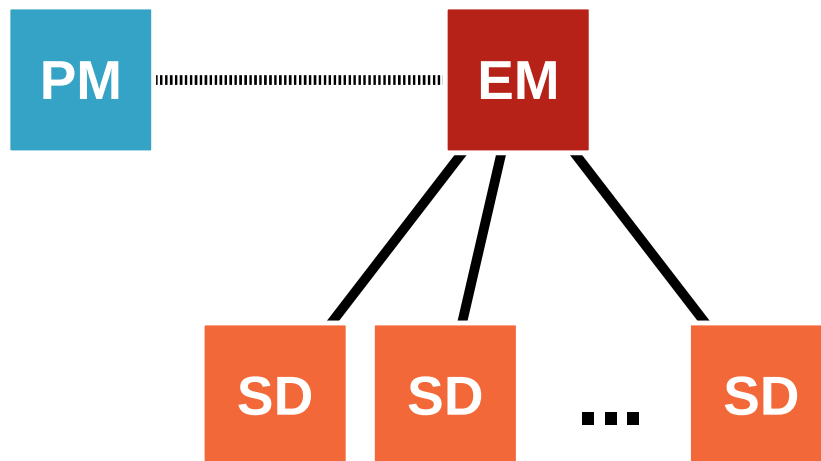
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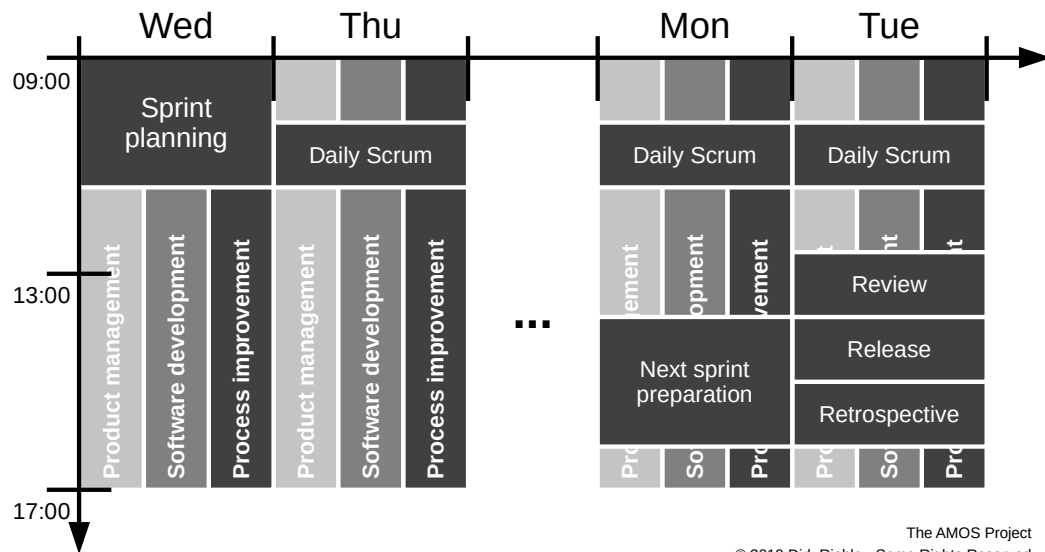
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## Sprint Structure



## Main Work Streams of Sprints

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- 2. Software development**  
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DR

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