

## Software Engineering 2 (SWT2)

Chapter 1:  
Introduction and Organization

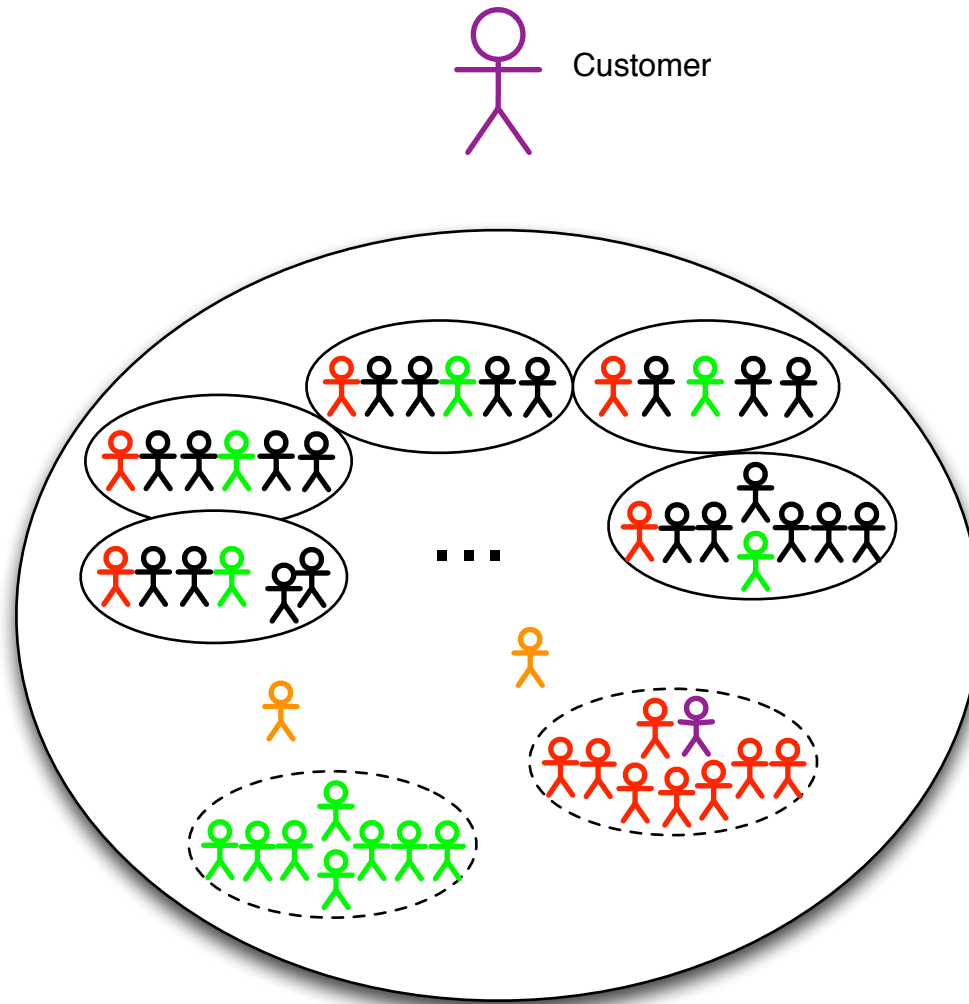
# Agenda: Introduction and Organization

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- **High-level Overview of SWT2**
- Organization
- SWT2 Project
- Basic IT Infrastructure
- SWT2 Lecture
- Next Weeks' Schedule
- Literature

# High-Level Overview of SWT2

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# High-level Overview of SWT2

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## Your semester in a nutshell

- Introduction into technology, methodology, requirements etc.
- Sprints #1 + #2 + lectures
  - Sprint planning
  - Sprint Execution incl. “Daily (Weekly) Scrum”
  - Estimation meeting
  - Scrum of Scrums
  - Planning of planning
  - Sprint review
  - Sprint retrospective
  - Result presentation
- Christmas holidays
- Sprints #3 + #4 + lectures
- Oral or written exam

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# Organization

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## Prerequisite to SWT2

- Undergraduate program
- Softwaretechnik 1

## Class

- 4 SWS (~8h work per week including lectures)
- 6 ECTS credit points (graded)

# Organization

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## Important dates

- Enrollment until October 24, 2014
- Preparation exercise starts today
- Project starts November 3, 2014

## Lectures

- Friday, 11:00 – 12:30, HS3
- Friday, 13:30 – 15:00, HS3

## Exercises: Block

## Web

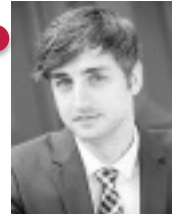
- <http://epic.hpi.uni-potsdam.de/Home/SoftwaretechnikII2014>

# Organization

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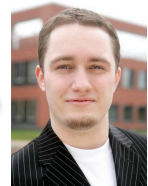
## Responsible

- Dr. Matthias Uflacker ([matthias.uflacker@hpi.de](mailto:matthias.uflacker@hpi.de))



## Teaching Team

- Arian Treffer ([arian.treffer@hpi.de](mailto:arian.treffer@hpi.de))
- Thomas Kowark ([thomas.kowark@hpi.de](mailto:thomas.kowark@hpi.de))
- Ralf Teusner ([ralf.teusner@hpi.de](mailto:ralf.teusner@hpi.de))
- Keven Richly ([keven.richly@hpi.de](mailto:keven.richly@hpi.de))



## Tutors

- Hubert Hesse ([hubert.hesse@student.hpi.uni-potsdam.de](mailto:hubert.hesse@student.hpi.uni-potsdam.de))
- Christoph Matthies ([christoph.matthies@student.hpi.uni-potsdam.de](mailto:christoph.matthies@student.hpi.uni-potsdam.de))



# Organization

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## Grading

- Preparation exercise (completion mandatory)
- Oral exam (30%, individual mark), will be replaced by written one if #students >> 30
- Usage of presented methods and concepts (45%, team mark)
  - Scrum
  - Behaviour-driven development
  - Test-driven development
  - Software Configuration Management
  - Continuous Integration
- Software development results (25%, team mark)
- If work is not distributed equally amongst team members, individual adjustments of the marks are possible
- To pass, you have to reach a 4.0 in **each** category

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# Learning Targets

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# Content of the Project

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Break down of people into groups and teams

- Development Group is split into teams of 5-8 people
- Each team
  - 1 Product Owner (PO)
  - ~½ Scrum Master (SM)
  - Several team members
- Questions
  - Who is not in the 5<sup>th</sup> semester?
  - Who is not an HPI student?
- Hints
  - Consider grouping by Bachelor's project
    - ◇ See lecture homepage for doodle
  - Product owners should not attend different dSchool tracks

# Content of the Project

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Break down of people into groups and teams

- Special teams for special meetings
  - Scrum of Scrums (SoS)
  - Planning of Planning (PoP)
- Addition from the teaching team for each group
  - 1 customer (Ralf) 
  - 1 chief product owner for tough decisions (Keven) 
- Tutors accompany each team



# Content of the Project

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## Software engineering assignment

- Minimal core is provided
- Strong focus on avoiding “patchwork” (UI, Workflows, Data)
- Programming framework is fix: *Ruby on Rails 4 on Ruby 2.1*
- Results will be open source

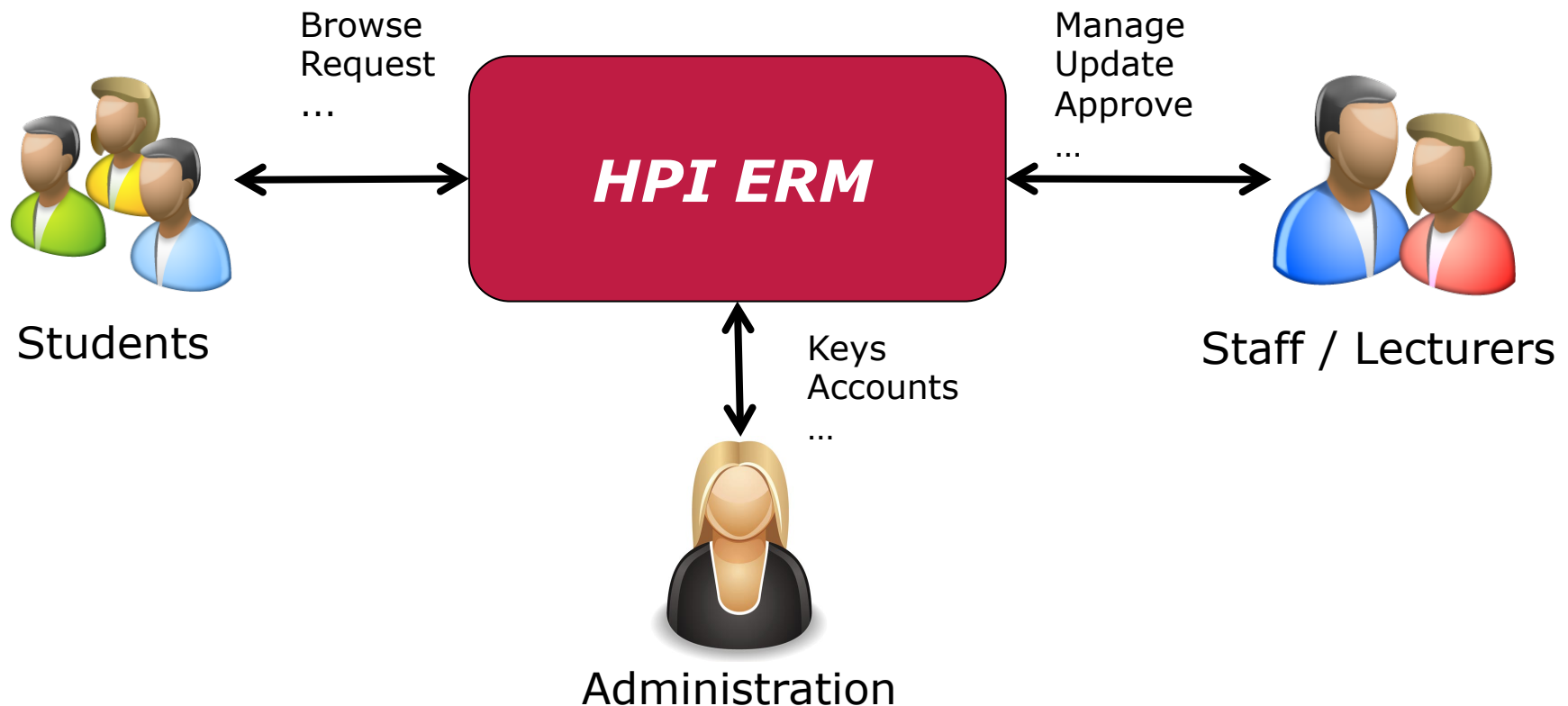
**So what’s the topic?**

# HPI Event and Room Management<sup>1</sup>

<sup>1</sup> working title

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- Build a portal that supports students, lecturers, and staff to organize events, book rooms, and request equipment.



# Preliminary Requirements

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- Events
  - Tasks
  - Participants
  - Required Equipment
- Rooms
  - Booking
  - Available Equipment
- Tasks
  - Standard/Reoccurring
  - Freetext
  - Due dates
- Notifications
  - On problems or updates
  - For assigned tasks
- Schedules
  - Per room, program student
- Event Templates
- Outlook Integration



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# IT Infrastructure – Open Source!

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# Infrastructure

HuBoard  
GoogleCalendar

Github  
Mailing-Lists  
Gemnasium  
CodeSchool  
Travis-CI  
Heroku  
CodeClimate

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# SWT2 Lecture

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Lecture supports project

- Rails Intro
- Project Intro
- Scrum Lego exercise
- Scaling Scrum
- Project infrastructure in detail
- BDD & TDD (in Rails)
- Code Review, Tool presentations, Process Improvements
- Deployment
- Awesome Guest Lecturers from Industry

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# Next Weeks' Schedule

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## Week 1 (Oct 13 – Oct 17)

- Ends today
- Introduction lectures

## Week 2 (Oct 20 – Oct 24)

- Find teams, **enroll!**
- Code School exercise
- Lecture on Scrum
  - Important exercise after Lunch!
- Project Infrastructure

## Week 3 (Oct 27 – Oct 31)

- POs: Customer meeting
- Code School exercise
- No lecture

## Week 4 (Nov 3 – Nov 7)

- PO Vision (~30min)
  - Mo 15:15
  - ... or propose other date
- Start of project

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- General literature
  - Ruby, S.; Thomas, D.; Hansson D. H.: Agile Web Development with Rails, 2010 (ebook)
  - Swicegood, T.: Pragmatic Guide to Git, 2010 (ebook)
  - Rappin, N.: Rails Test Prescriptions, 2010
  - Rasmusson, J.: The Agile Samurai, 2010 (ebook)
  - Pichler, R.: Agile Product Management with Scrum, 2010
  - Wirdemann, R.: Scrum mit User Stories, 2009
  - Larman, C.; Vodde, B.: Scaling Lean & Agile Development, 2009
  - Ludewig, J.; Lichter, H.: Software Engineering, 2006
  - Sommerville, I.: Software Engineering, 2004
  
- Specific literature is provided in each chapter of the lecture
- Ebooks will be made available for chosen books