
# Lesson 2: Scrum !!!!

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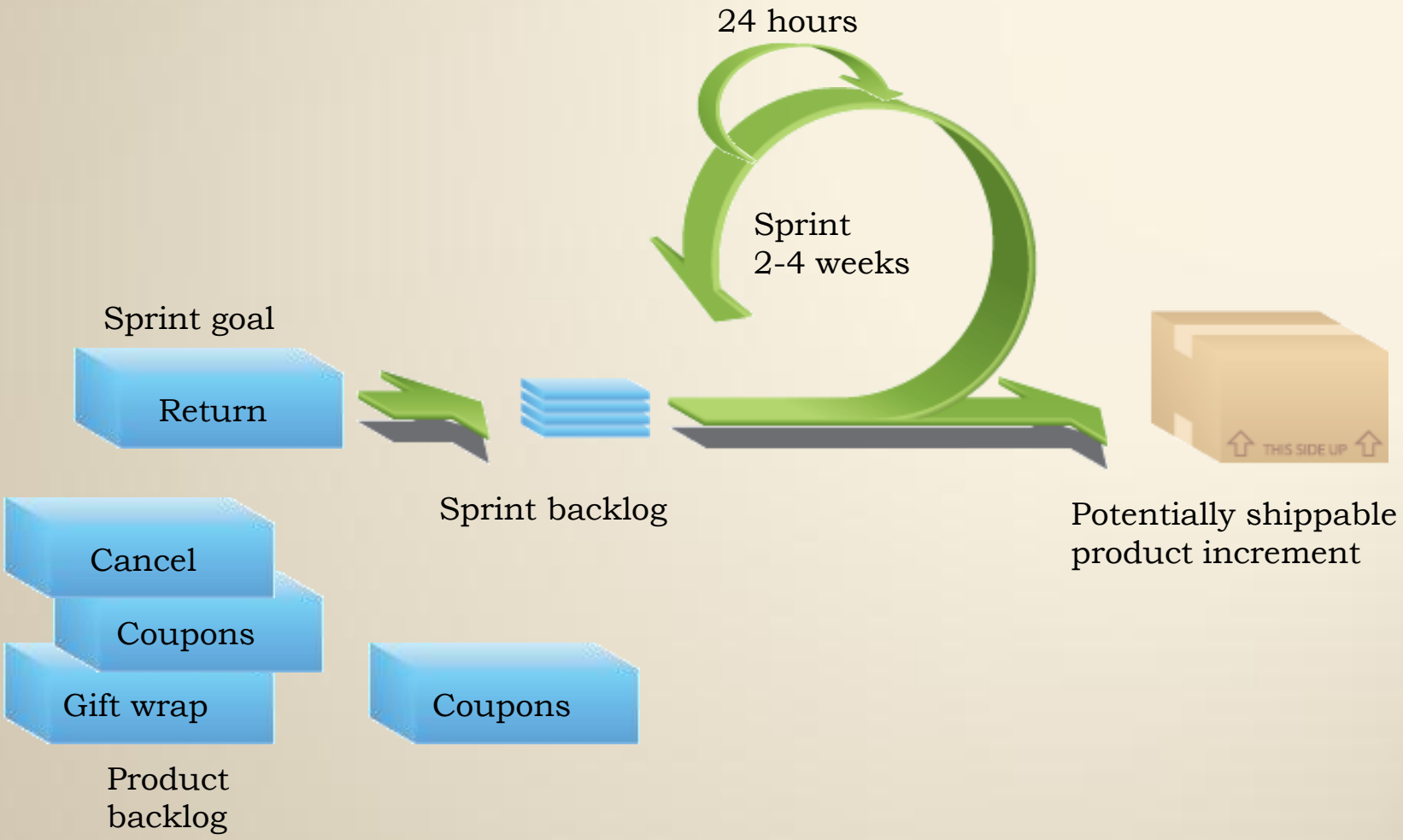
# Scrum in 100 words

- 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.

# 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”

# Scrum


24 hours
Sprint
2-4 weeks
Sprint goal
Return
Cancel
Coupons
Gift wrap
Product
backlog
Sprint backlog
Coupons
THIS SIDE UP
Potentially shippable
product increment

# Putting It All Together

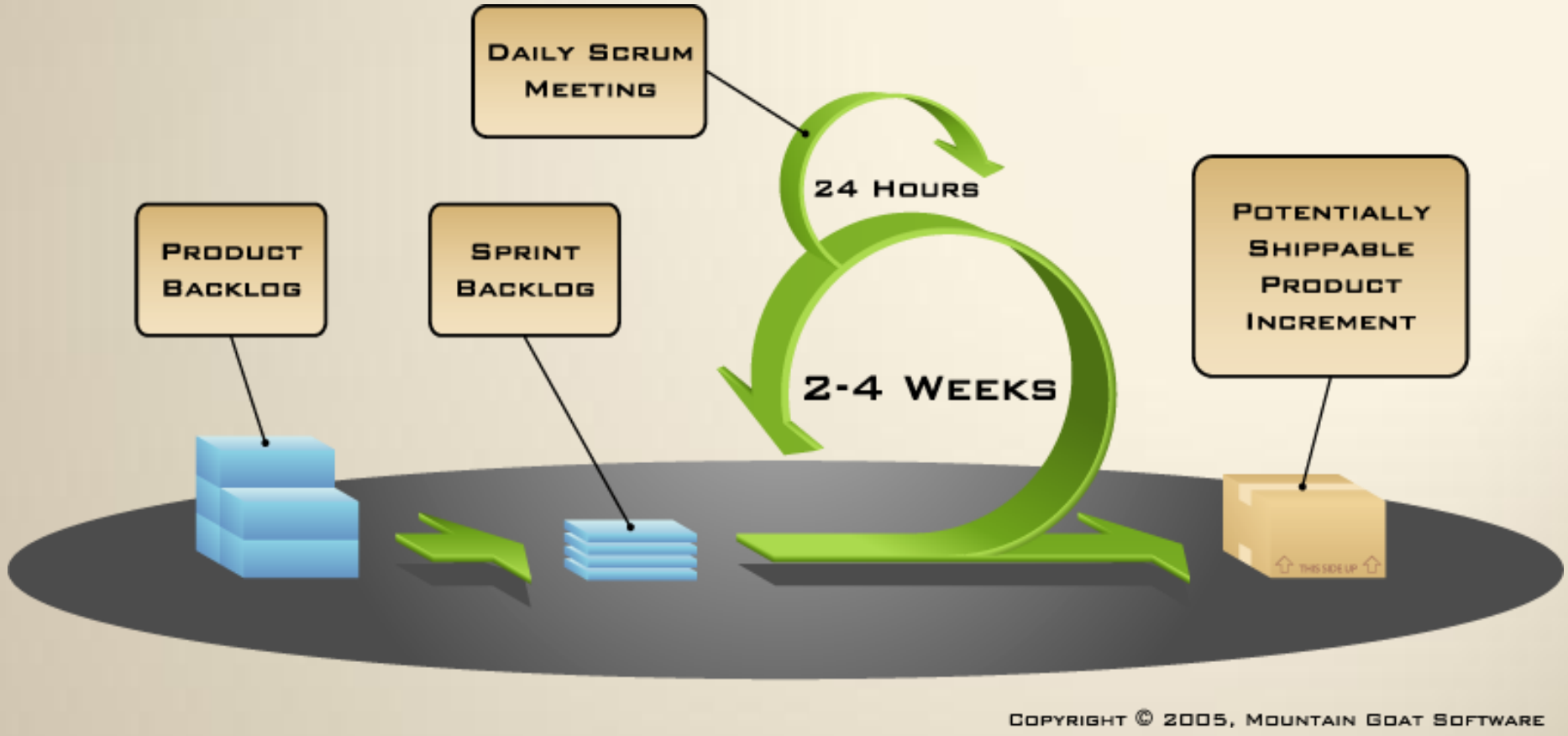
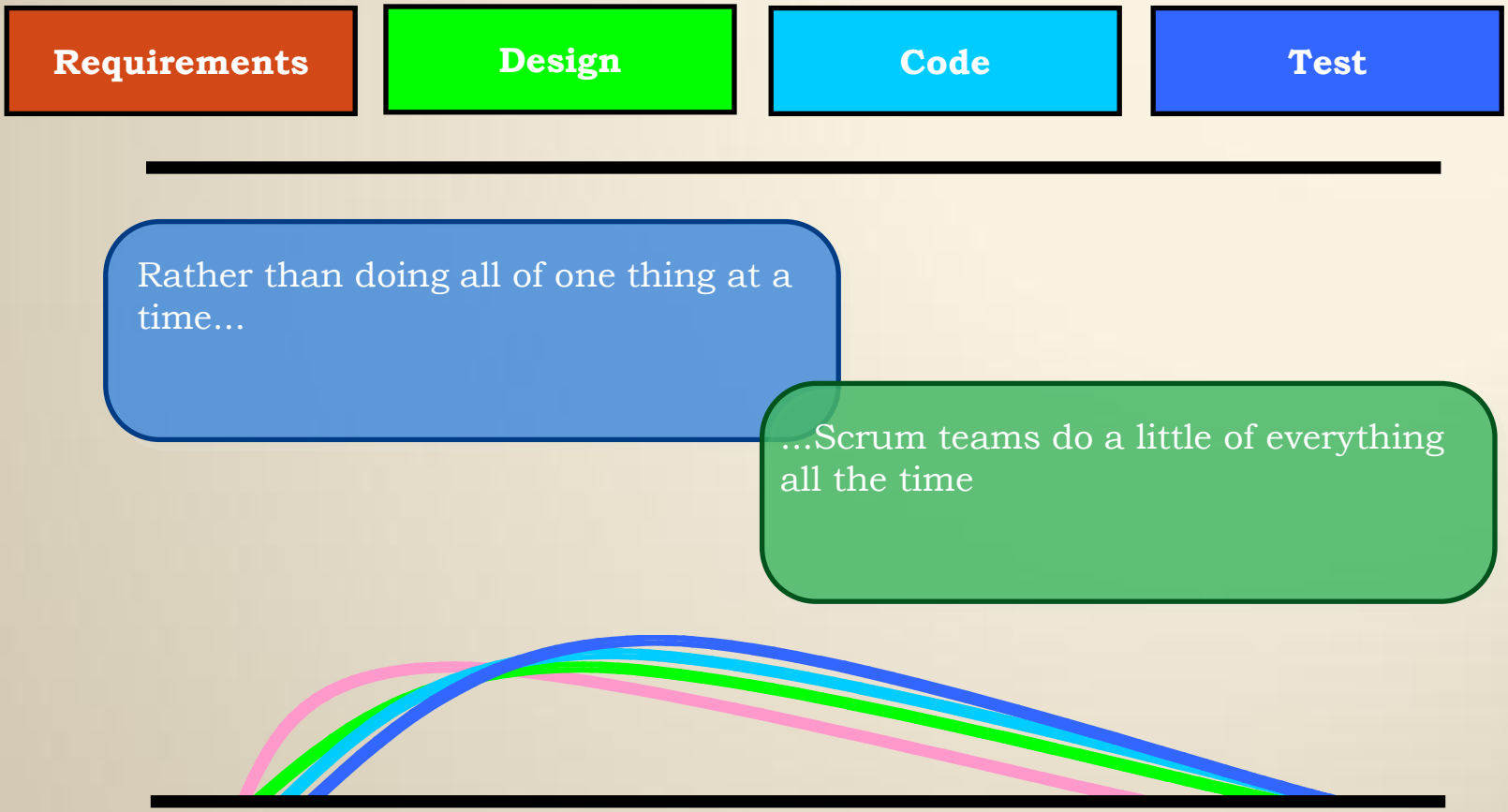



Image available at www.mountaingoatsoftware.com/scrum

# Sprints

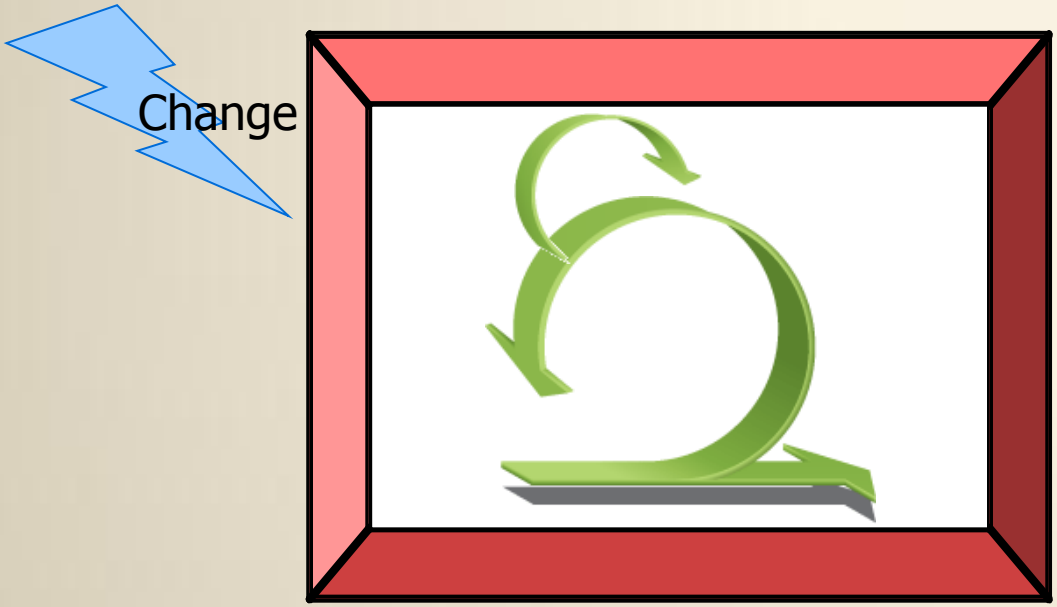
- Scrum projects make progress in a series of “sprints”
  - Analogous to Extreme Programming iterations
- Typical duration is 2–4 weeks or a calendar month at most
- A constant duration leads to a better rhythm
- Product is designed, coded, and tested during the sprint

# Sequential Vs. Overlapping Development




Source: "The New New Product Development Game" by Takeuchi and Nonaka. *Harvard Business Review,* January 1986.

# No Changes During A Sprint




- Plan sprint durations around how long you can commit to keeping change out of the sprint

# Scrum Framework

## Roles

- Product owner
- Scrum Master
- Team

## Ceremonies

- Sprint review
- Sprint planning
- Sprint retrospective
- Daily scrum meeting

## Artifacts

- Product backlog
- Sprint backlog
- Burn down charts

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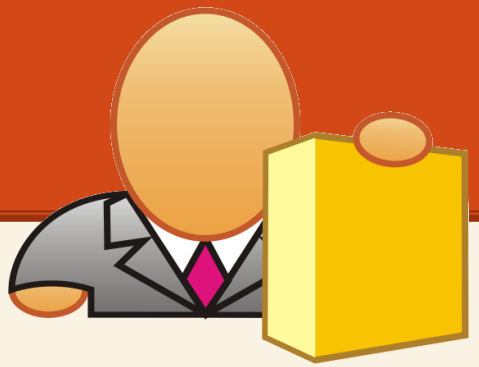
# Product Owner



- 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

# The Scrum Master


- 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

# 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)

# The Team

- Teams are self-organizing
  - Ideally, no titles but rarely a possibility
- Membership should change only between sprints

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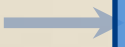
Sprint planning meeting
Team capacity
Product backlog
Business conditions
Current product
Technology
Sprint prioritization
• Analyze and evaluate product backlog
• Select sprint goal
Sprint planning
• Decide how to achieve sprint goal (design)
• Create sprint backlog (tasks) from product backlog items (user stories / features)
• Estimate sprint backlog in hours
Sprint goal
Sprint backlog

# Sprint Planning

- Team selects items from the product backlog they can commit to completing
- Sprint backlog is created
  - Tasks are identified and each is estimated (1-16 hours)
  - Collaboratively, not done alone by the ScrumMaster
- High-level design is considered

As a vacation planner, I want to see photos of the hotels.



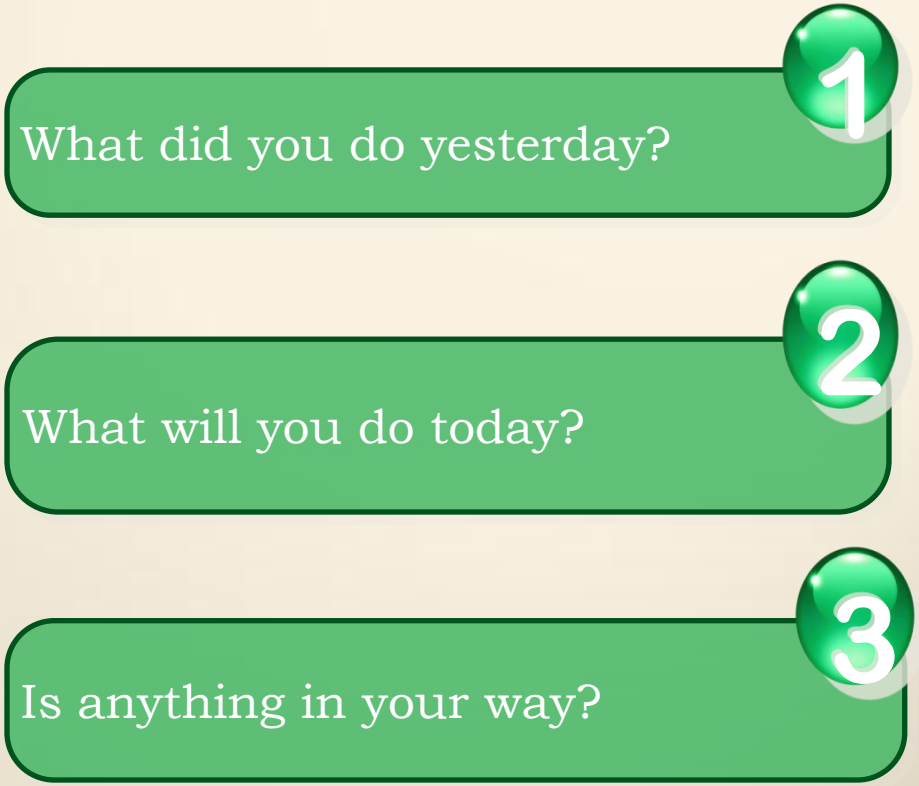
Code the middle tier (8 hours)
Code the user interface (4)
Write test fixtures (4)
Code the foo class (6)
Update performance tests (4)

# The Daily Scrum

- Parameters
  - Daily
  - 15-minutes
  - Stand-up
- Not for problem solving
  - Whole world is invited
  - Only team members, ScrumMaster, product owner, can talk
- Helps avoid other unnecessary meetings

# Everyone Answers 3 Questions

- These are *not* status for the ScrumMaster
  - They are commitments in front of peers



# The Sprint Review

- Team presents what it accomplished during the sprint
- Typically takes the form of a demo of new features or underlying architecture
- Informal
  - 2-hour prep time rule
  - No slides
- Whole team participates
- Invite the world

# Sprint Retrospective

- Periodically take a look at what is and is not working
- Done after every sprint
- Whole team participates
  - ScrumMaster
  - Product owner
  - Team
  - Possibly customers and others

# Start / Stop / Continue

- Whole team gathers and discusses what they'd like to:

Start doing

Stop doing

Continue doing

This is just one of many ways to do a sprint retrospective.

# Scrum Framework

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- Sprint backlog
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# Product Backlog


This is the product backlog

- The requirements
- A list of all desired work on the project
- Ideally expressed such that each item has value to the users or customers of the product
- Prioritized by the product owner
- Reprioritized at the start of each sprint

# A Sample Product Backlog

| Backlog Item | Estimate |
|---|---|
| Allow a guest to make a reservation | 3 |
| As a guest, I want to cancel a reservation. | 5 |
| As a guest, I want to change the dates of a reservation. | 3 |
| As a hotel employee, I can run RevPAR reports (revenue-per-available-room) | 8 |
| Improve exception handling | 8 |
| … | 30 |
| … | 50 |

# The Sprint Goal

A short statement of what the work will be focused on during the sprint

**Life Sciences**

Support features necessary for population genetics studies.

**Database Application**

Make the application run on SQL Server in addition to Oracle.

**Financial services**

Support more technical indicators than company ABC with real-time, streaming data.

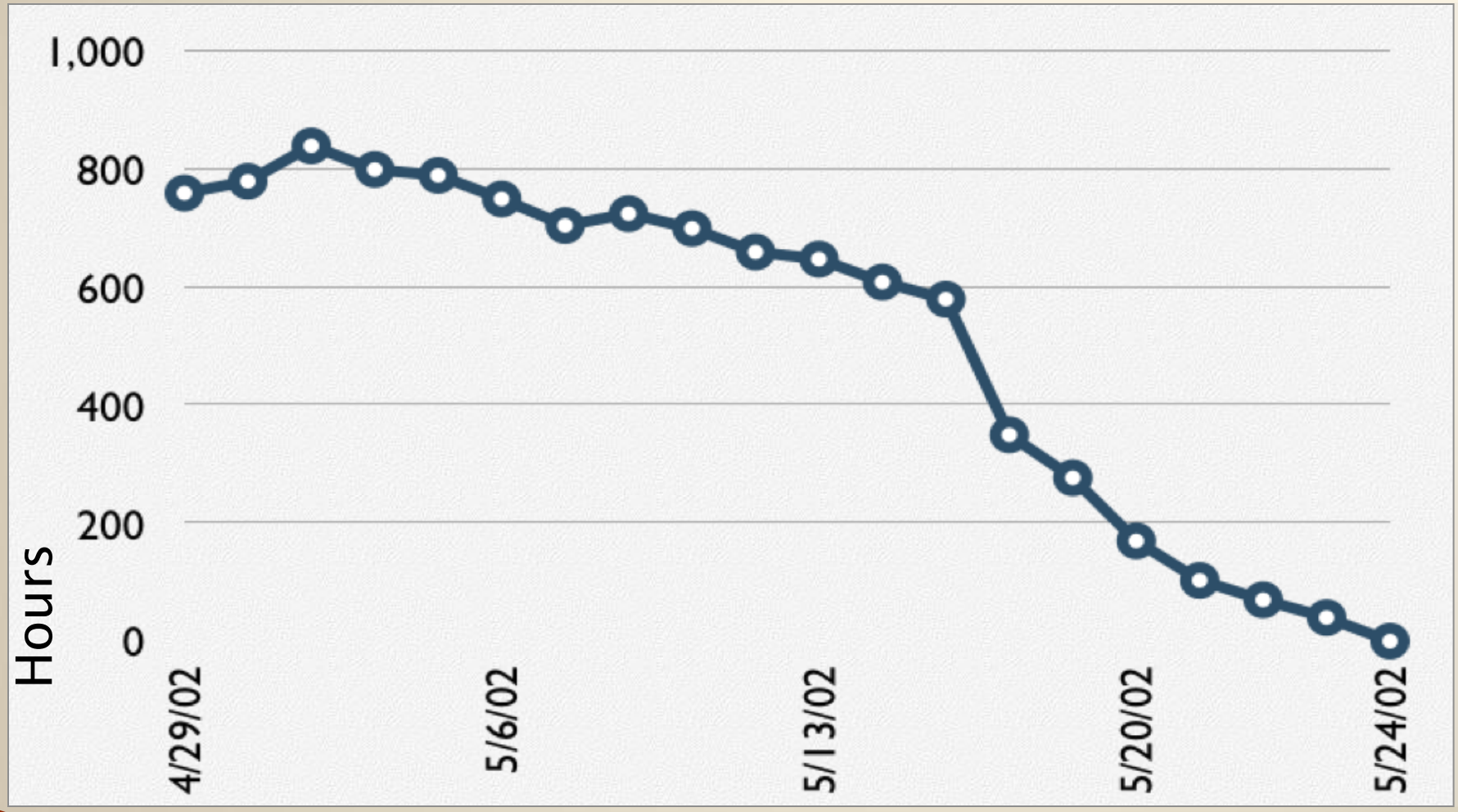
# Managing The Sprint Backlog

- Individuals sign up for work of their own choosing
  - Work is never assigned
- Estimated work remaining is updated daily
- Any team member can add, delete or change the sprint backlog
- Work for the sprint emerges
- If work is unclear, define a sprint backlog item with a larger amount of time and break it down later
- Update work remaining as more becomes known

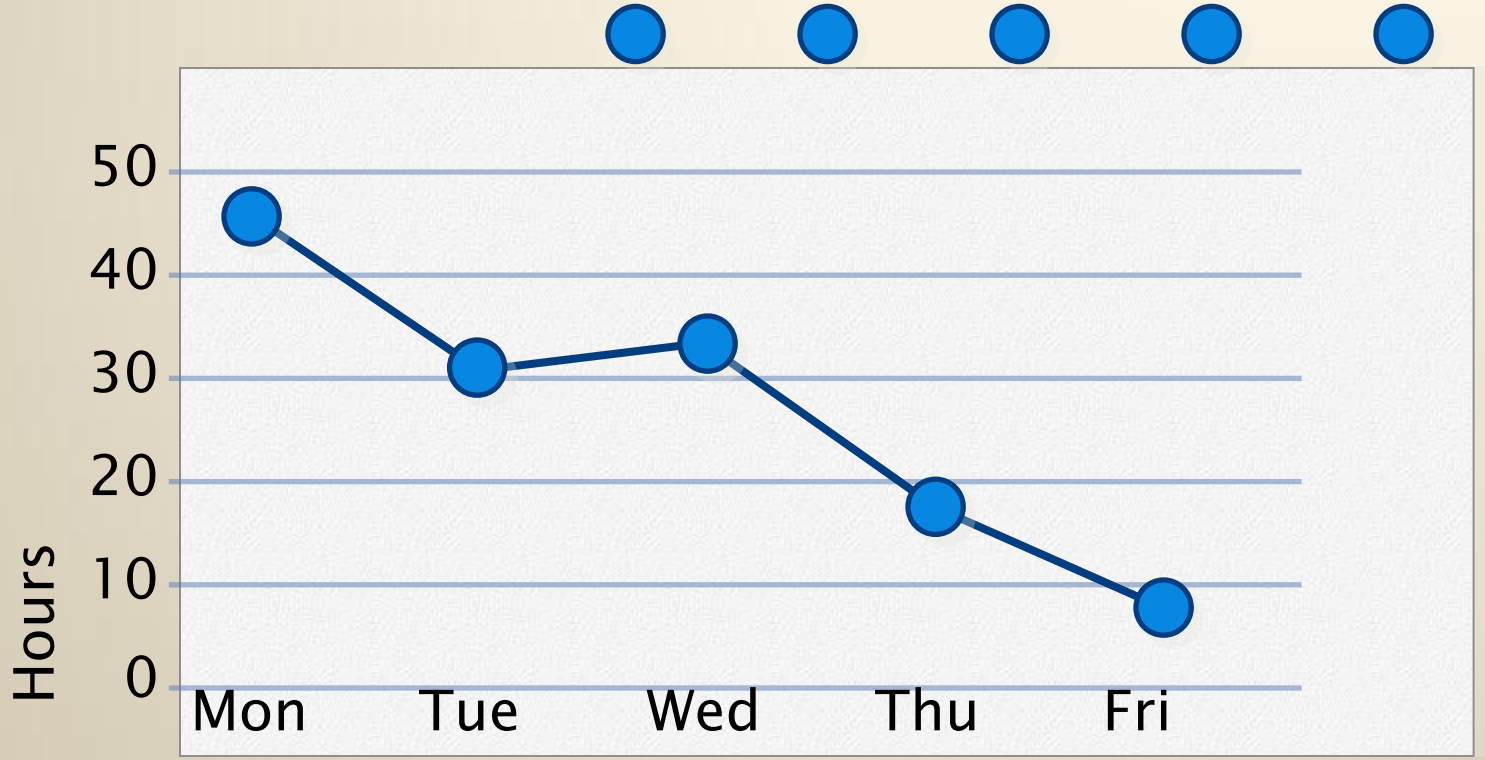
# A Sprint Backlog

| Tasks | Mon | Tues | Wed | Thur | Fri |
|---|---|---|---|---|---|
| Code the user interface | 8 | 4 | 8 | | |
| Code the middle tier | 16 | 12 | 10 | 4 | |
| Test the middle tier | 8 | 16 | 16 | 11 | 8 |
| Write online help | 12 | | | | |
| Write the foo class | 8 | 8 | 8 | 8 | 8 |
| Add error logging | | | 8 | 4 | |

# A Sprint Burndown Chart



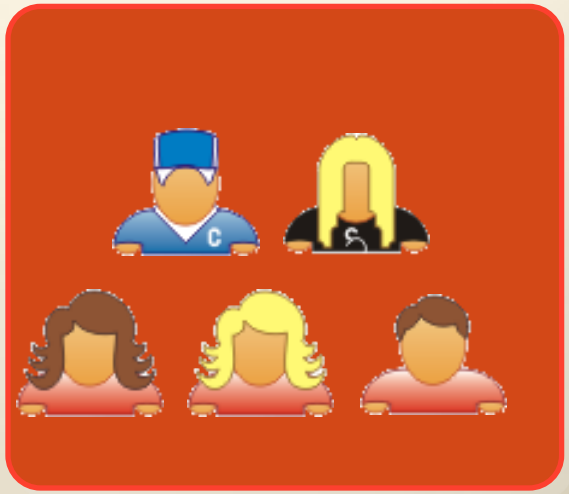
| Tasks | Mon | Tues | Wed | Thurs | Fri |
|---|---|---|---|---|---|
| Code the user interface | 8 | 4 | 8 | | |
| Code the middle tier | 16 | 12 | 10 | 7 | |
| Test the middle tier | 8 | 16 | 16 | 11 | 8 |
| Write online help | 12 | | | | |



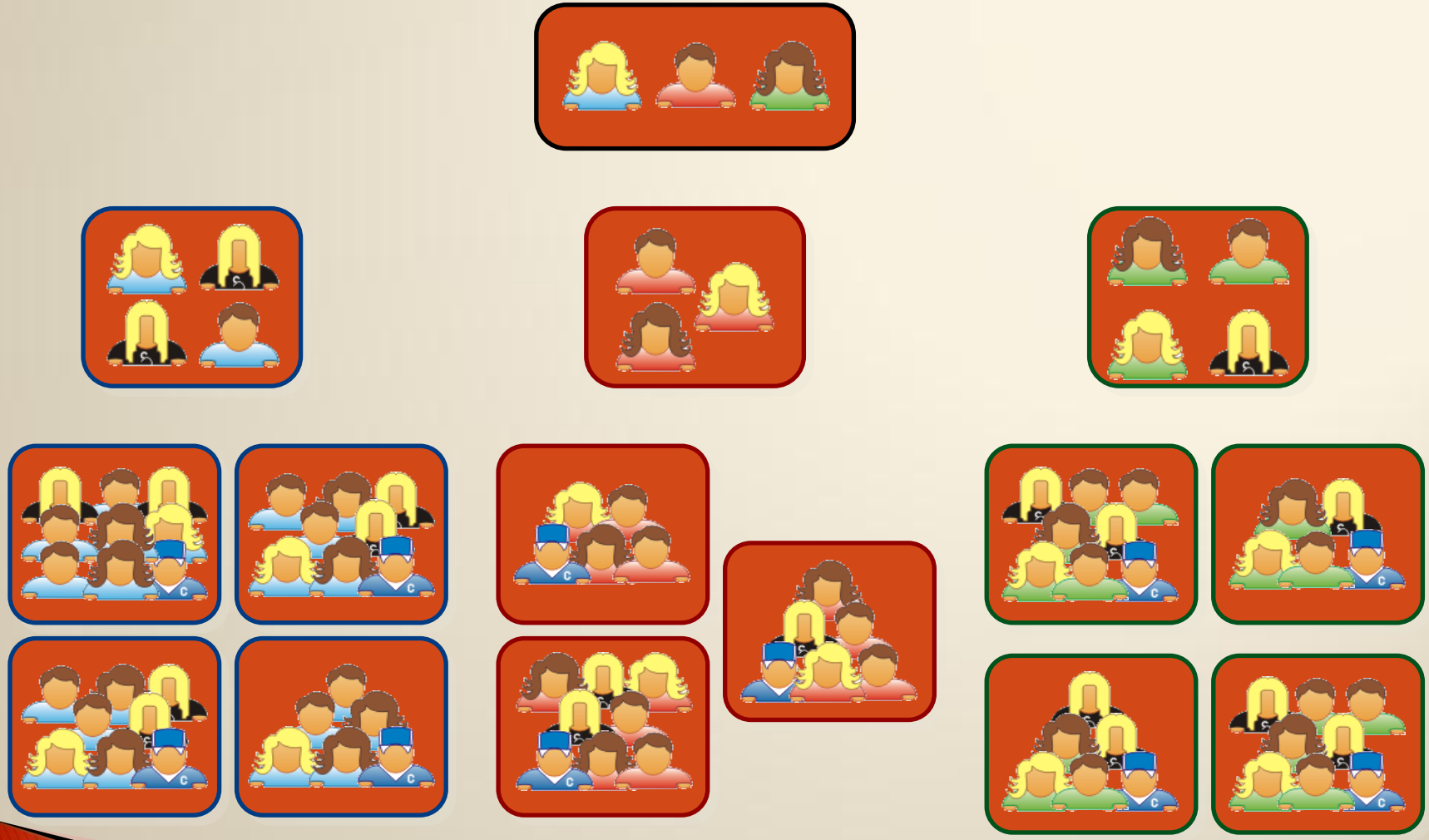
# Scalability

- Typical individual team is 7 ± 2 people
  - Scalability comes from teams of teams
- Factors in scaling
  - Type of application
  - Team size
  - Team dispersion
  - Project duration
- Scrum has been used on multiple 500+ person projects

# Scaling Through The Scrum Of Scrums



# Scrum Of Scrums Of Scrums



# Reference

This Presentation includes extract from Mike Cohn's Presentation

www.mountaingoatsoftware.com

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