



ДАТА МЕНЕДЖМЕНТ

ТЕСТИРОВАНИЕ ПРОГРАММНОГО ОБЕСПЕЧЕНИЯ

КИЕВ 2012

AGILE Scrum Methodology

Основные понятия

Что такое Scrum

- Scrum – это гибкая методология, которая фокусируется на business value
- Позволяет быстро и последовательно предоставлять работающие части проекта заказчику
- Каждые две недели любой заинтересованный человек может участвовать на показе текущей версии
- Заказчик задает приоритеты. Команда самоопределяется, чтобы производить наиболее важную для заказчика функциональность
- Scrum задает только общие правила управления проектом

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”

THE AGILE MANIFESTO—A STATEMENT OF VALUES

Individuals and
interactions

over

Process and tools

Working software

over

Comprehensive
documentation

Customer
collaboration

over

Contract negotiation

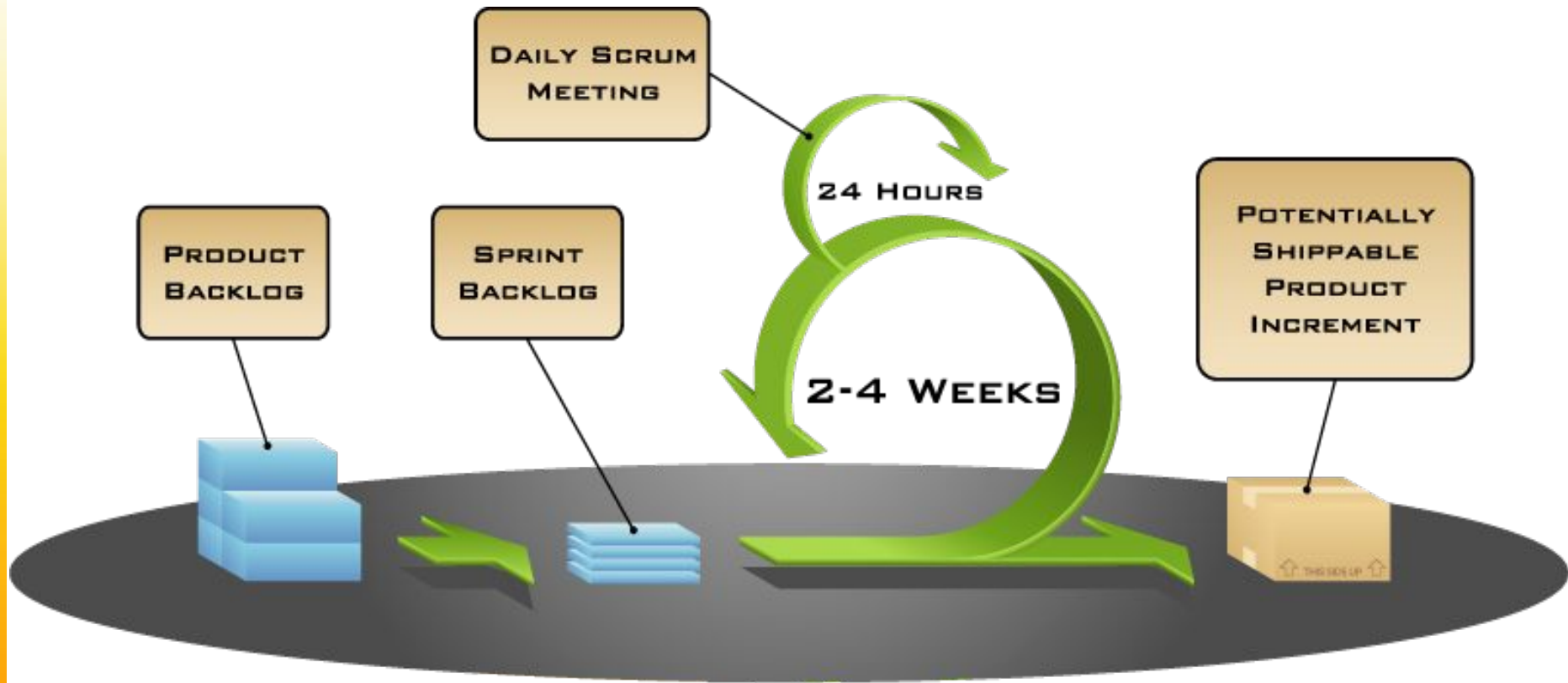
Responding to change

over

Following a plan

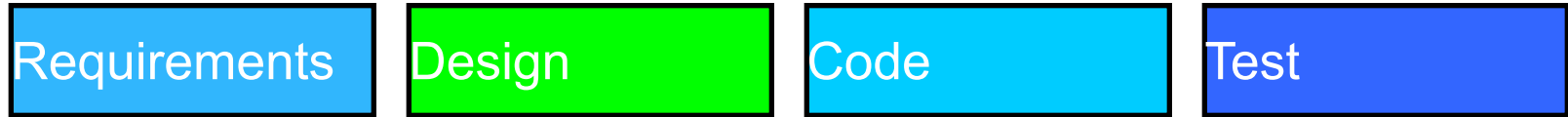
Source: www.agilemanifesto.org

PUTTING IT ALL TOGETHER



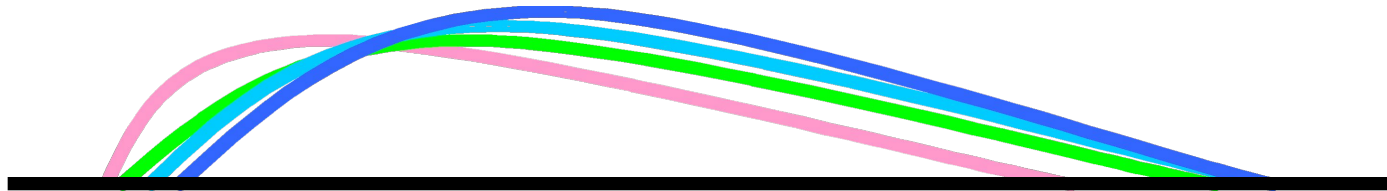
SPRINTS

- Scrum projects make progress in a series of “sprints”
- 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



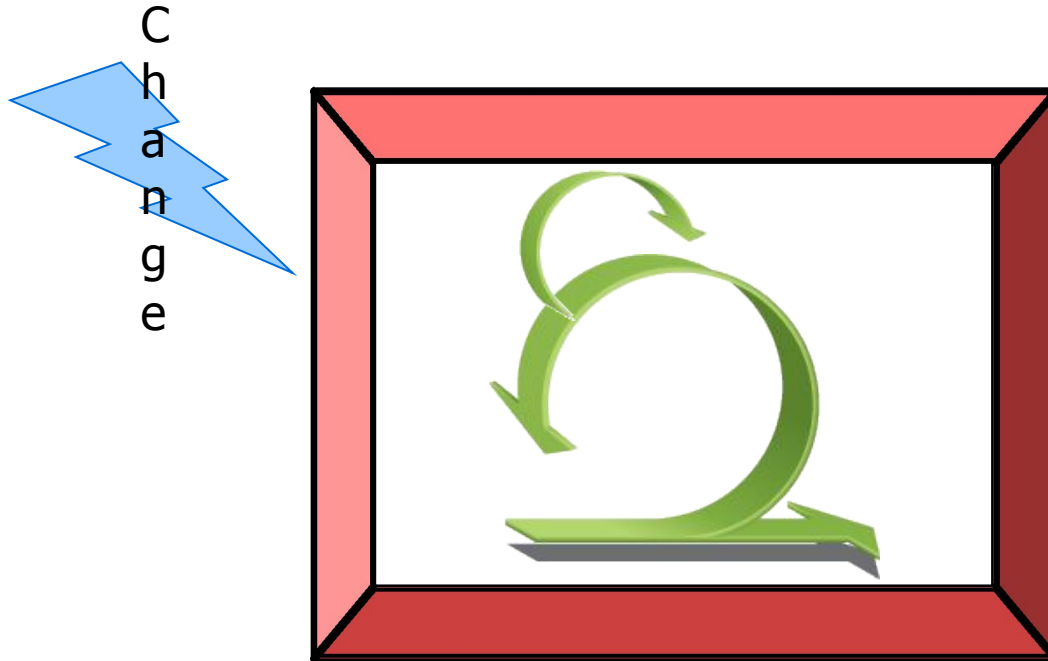
Rather than doing all of one thing at a time...

...Scrum teams do a little of everything all the time



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
- ScrumMaster
- Team

Ceremonies

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

Artifacts

- Product backlog
- Sprint backlog
- Burndown charts

SCRUM FRAMEWORK

Roles

- Product owner
- ScrumMaster
- Team

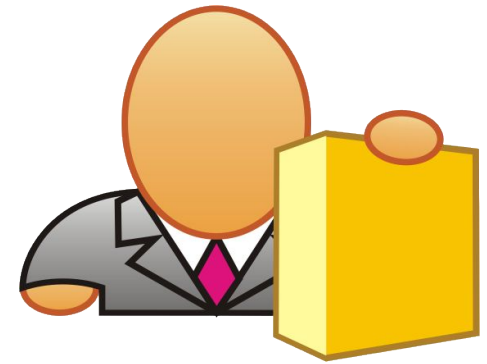
Ceremonies

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

Artifacts

- Product backlog
- Sprint backlog
- Burndown charts

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 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

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

SCRUM FRAMEWORK

Roles

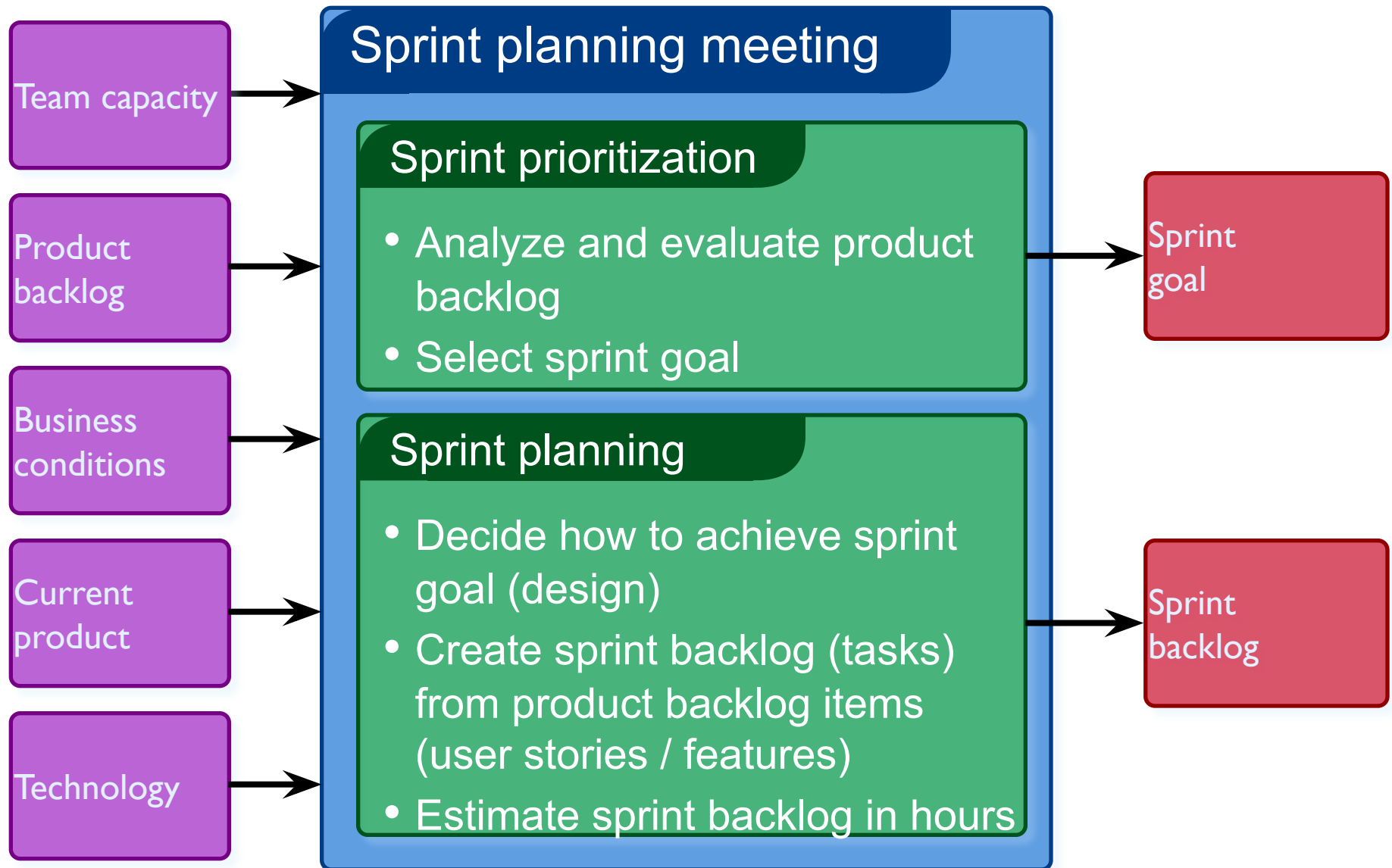
- Product owner
- ScrumMaster
- Team

Ceremonies

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

Artifacts

- Product backlog
- Sprint backlog
- Burndown charts



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

1

What did you do yesterday?

2

What will you do today?

3

Is anything in your way?

- These are *not* status for the ScrumMaster

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
- Typically 15–30 minutes
- 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

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

Continue doing

SCRUM FRAMEWORK

Roles

- Product owner
- ScrumMaster
- Team

Ceremonies

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

Artifacts

- Product backlog
- Sprint backlog
- Burndown charts

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

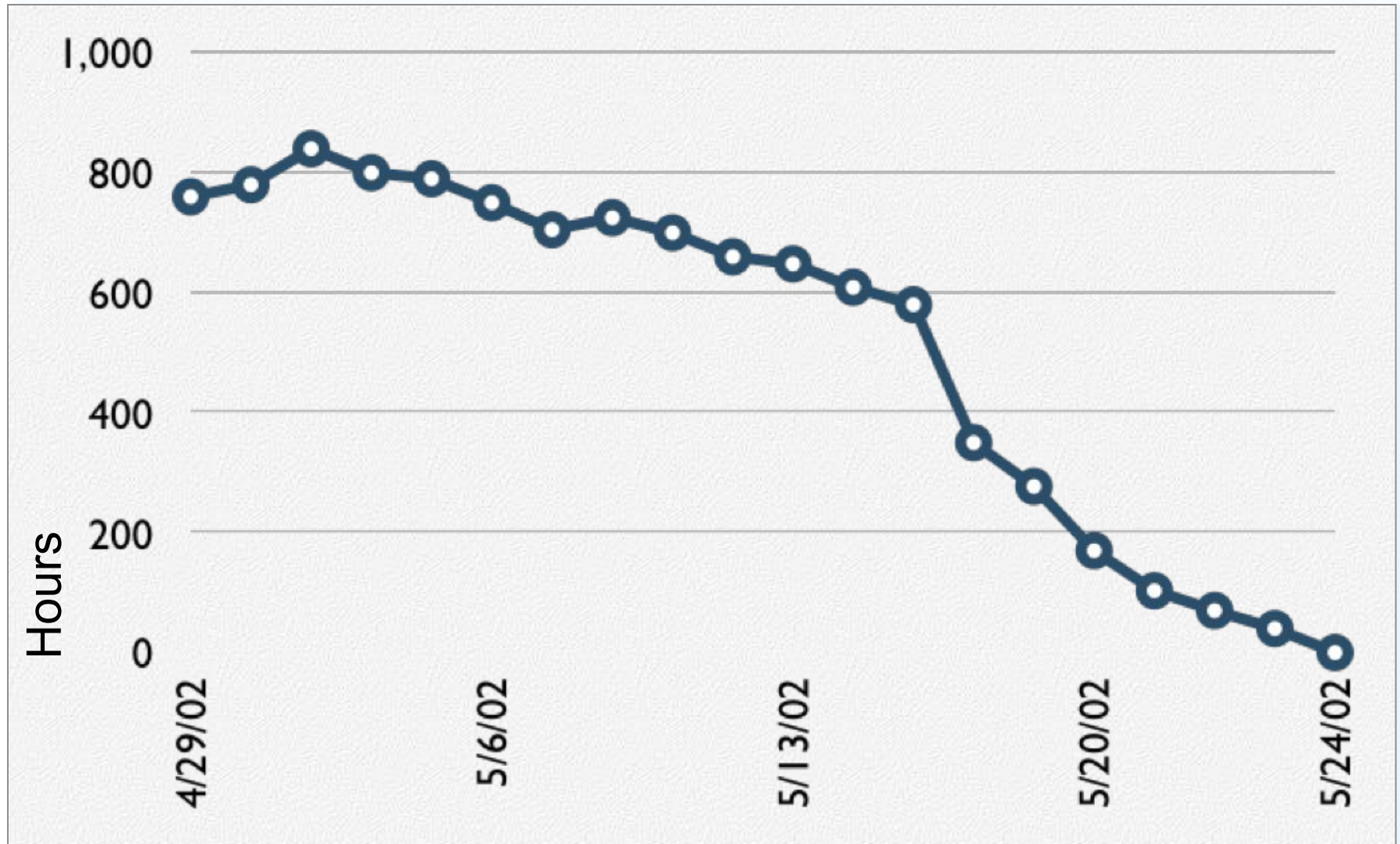
MANAGING THE SPRINT BACKLOG

- 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

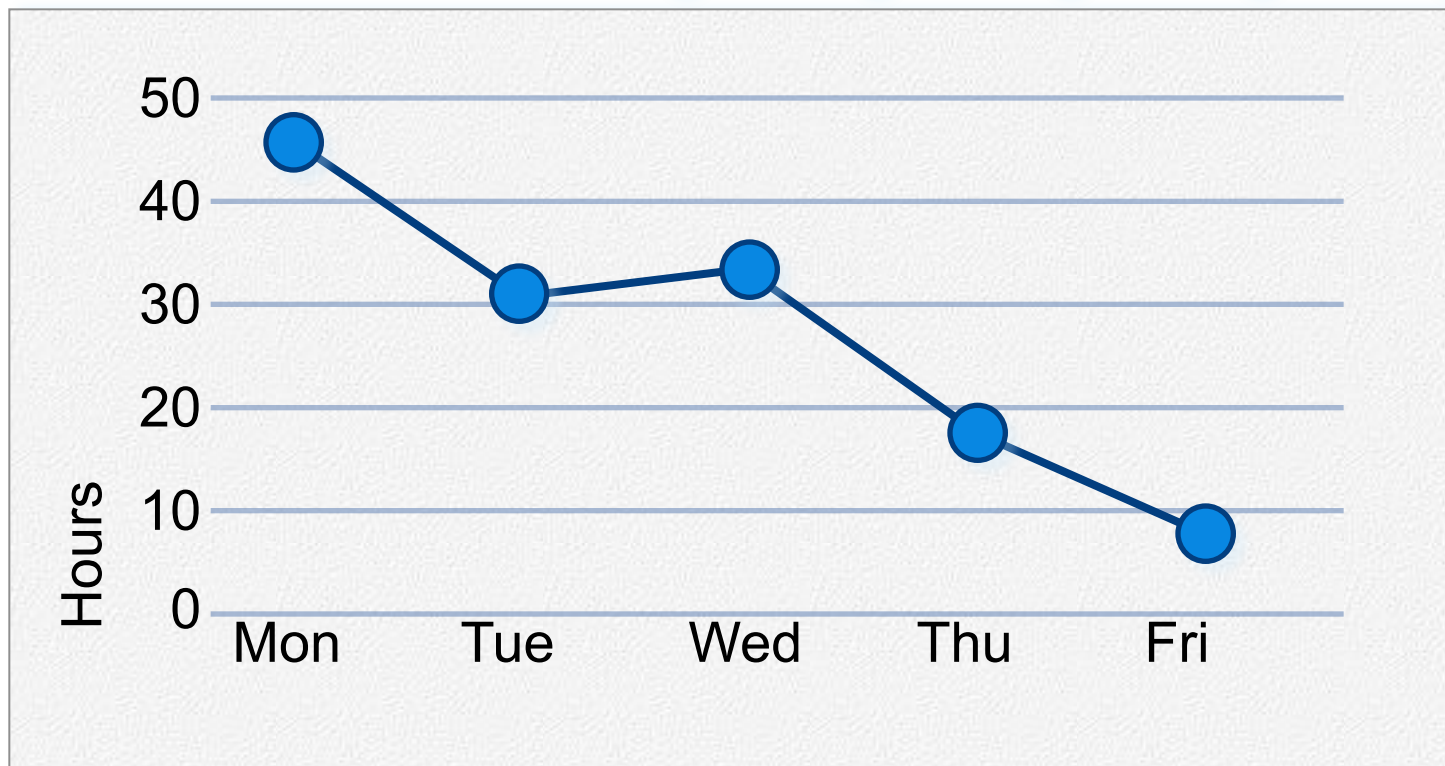
A SPRINT BACKLOG

| 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



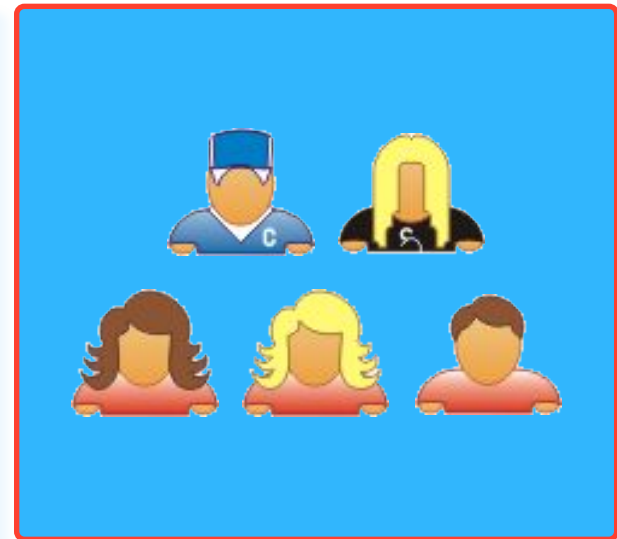
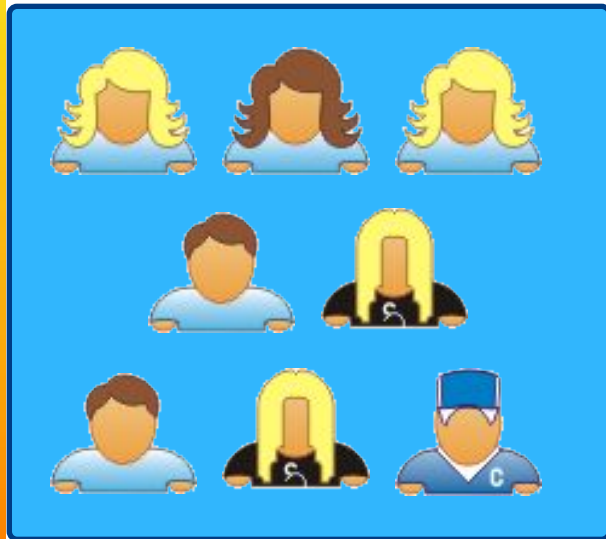
| Tasks | Mon | Tues | Wed | Thur | Fri |
|-------------------------|-----|------|-----|------|-----|
| Code the user interface | 8 | 4 | 8 | | |
| Code the middle tier | 16 | 12 | 10 | 7 | |
| Test the middle tier | 8 | 16 | 16 | 11 | 8 |
| Write online help | 12 | | | | |



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

