SCRUM:
An Introduction

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SCRUM: An Introduction - Outline

- Introducing SCRUM and SCRUM Concepts
  - The Agile Manifesto
  - What is SCRUM?
  - The SCRUM Framework
  - SCRUM Artifacts
    - Product Backlog
    - Sprint Backlog
    - Release Burndown Chart
    - Sprint Burndown Chart

SCRUM: An Introduction - Outline

- Introducing SCRUM and SCRUM Concepts
  - SCRUM Roles
    - The SCRUMMaster
    - The Product Owner
    - The SCRUM Team

SCRUM: An Introduction - Outline

- Introducing SCRUM and SCRUM Concepts
  - Time Boxes
    - Release Planning
    - The Sprint
    - The Sprint Planning Meeting
    - The Sprint Review
    - The Sprint Retrospective
    - The Daily SCRUM

SCRUM: An Introduction - Outline

- Agile Planning and Estimation
  - Working with User Stories and Velocities
  - Steps in Planning an Iteration
  - Estimation
  - Communicating Progress and Plan

SCRUM: An Introduction - Outline

- How not to mess up SCRUM

The Agile Manifesto

Individuals and interactions over processes and tools

Working software over comprehensive documentation

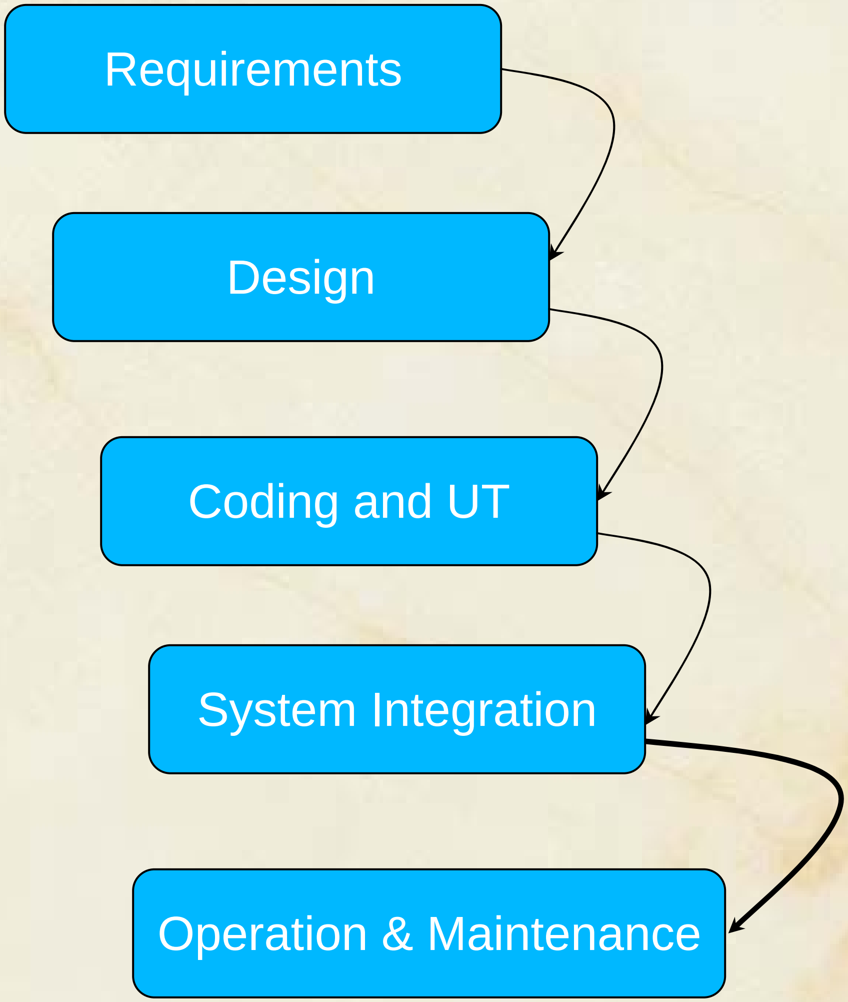
Customer collaboration over contract negotiation

Responding to Change over following a plan

“ That is, while there is value in the items on the right, we value the items on the left more. ”

* www.agilemanifesto.org

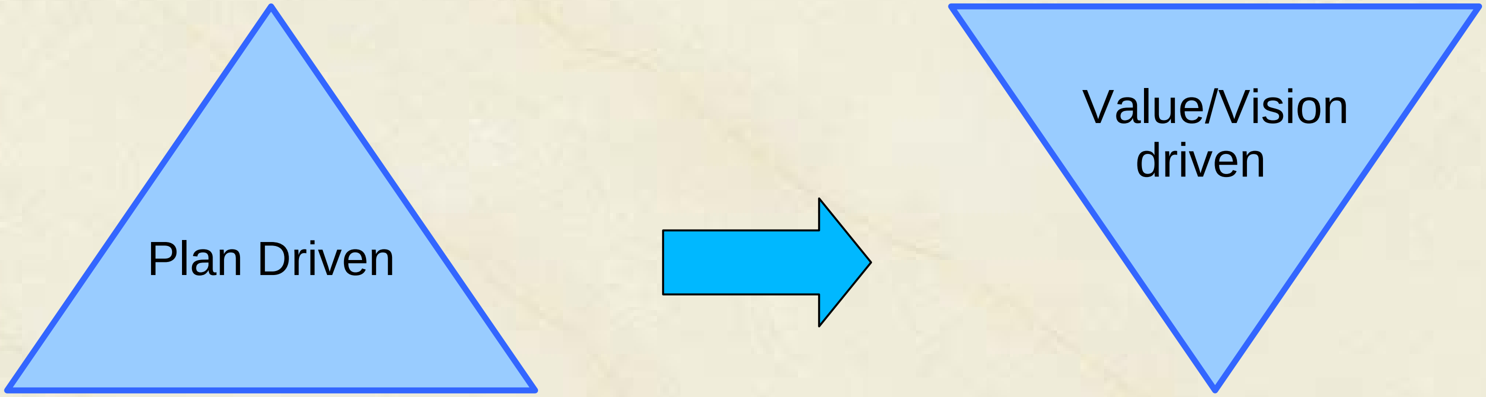
Characteristics : Waterfall Developments



- Information up front
- Manage and reduce risk
- Change is expensive
- Contractual sign-off
- Document-centric

Agile Development: Project Vision drives the Features

Fixed: **Features** **Cost** **Schedule**



Cost **Schedule** **Features** *Estimated*:

Waterfall ***Agile***

What is SCRUM ?

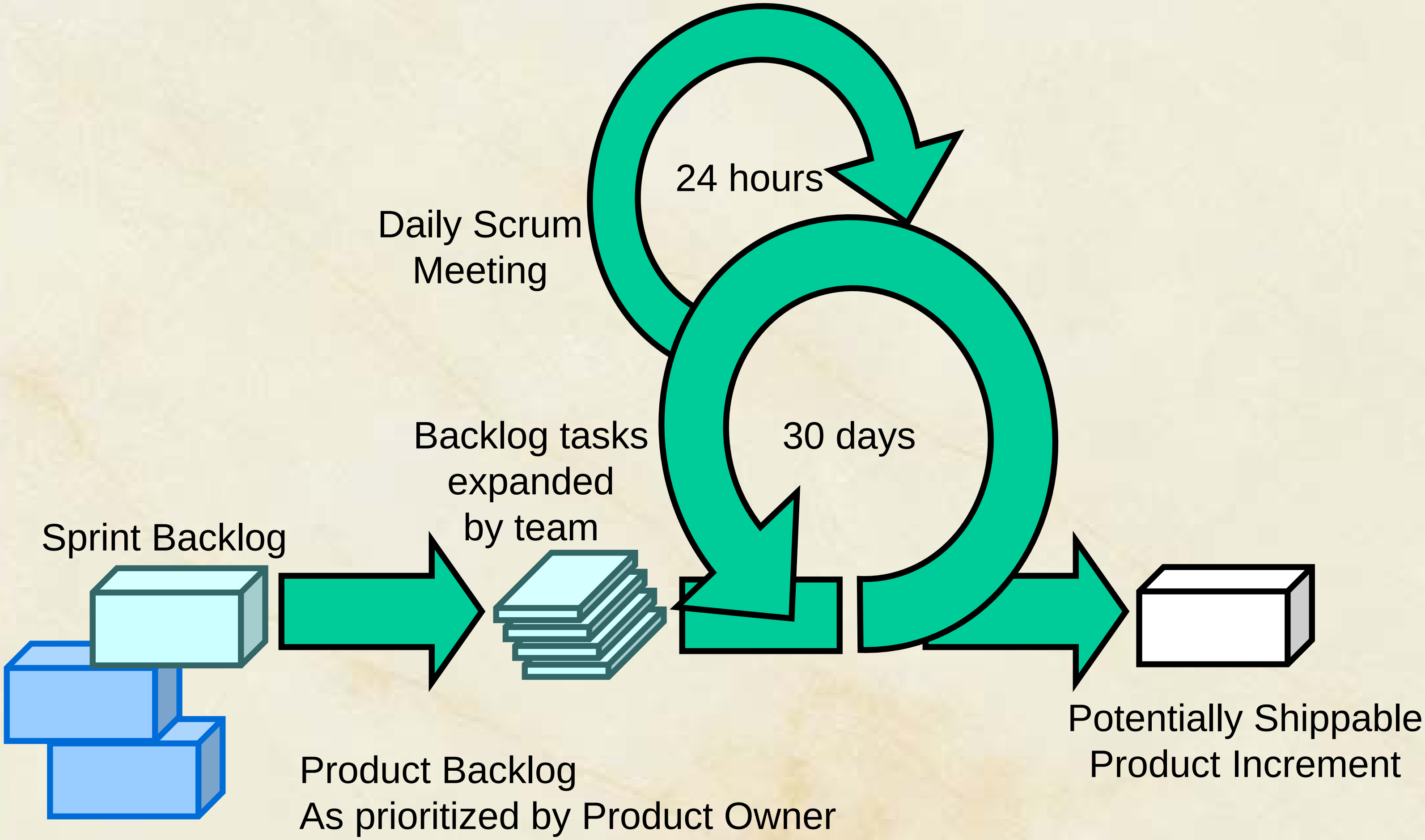
- From Wikipedia, the free encyclopedia:

Scrum is an iterative incremental framework for managing complex work (such as new product development) commonly used with agile software development.

What is SCRUM?

- agile, lightweight process
- way of managing and controlling software and product development
- is incremental, is iterative
- increases productivity
- work is focused on what will give value
- is empirical and adaptive by nature
- shorter time to benefits

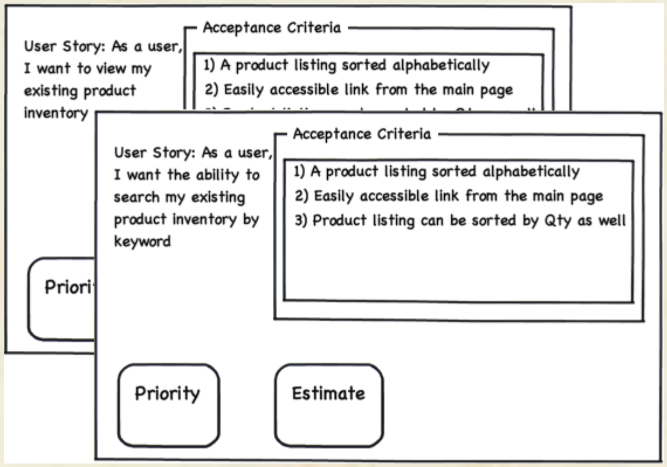
The SCRUM Framework



Source: Adapted from *Agile Software Development with Scrum* by Ken Schwaber and Mike Beedle.

Scrum Artifact:
The Product Backlog

" The ***Product Backlog*** is a prioritized list of what may be needed in the product."



User Story: As a user, I want to view my existing product inventory

Acceptance Criteria

1) A product listing sorted alphabetically
2) Easily accessible link from the main page

Priori

User Story: As a user, I want the ability to search my existing product inventory by keyword

Acceptance Criteria

1) A product listing sorted alphabetically
2) Easily accessible link from the main page
3) Product listing can be sorted by Qty as well

Scrum Artifact:
The Sprint Backlog

“ The ***Sprint Backlog*** is a list of tasks to turn the Product Backlog for one Sprint into an increment of potentially shippable product ”

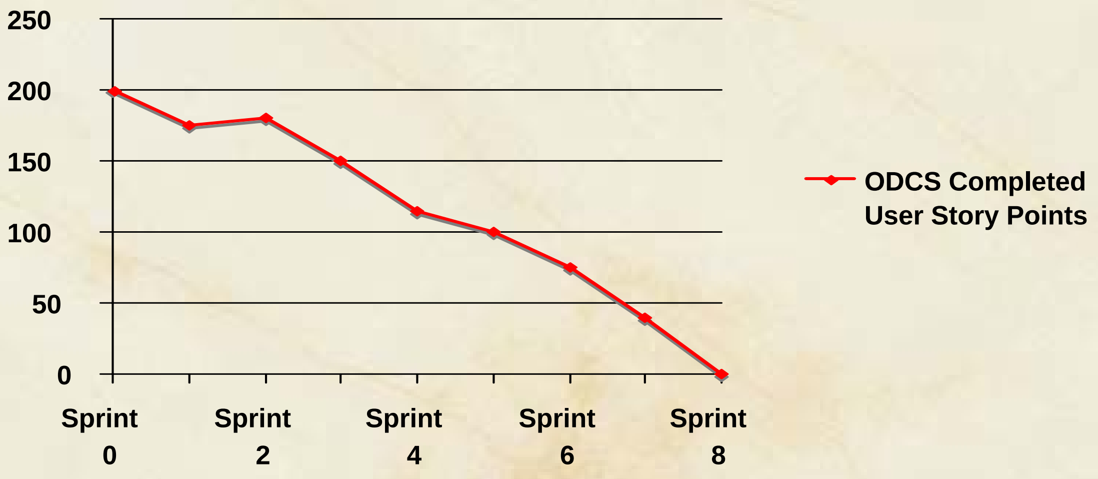
User story point	User story description	Start Date	Completed Date
3	User is able to create an account in the system by providing an email address that will be used to validated.		
	* Implement Login page UI		
	* Implement email generator for each new account.		
1	User needs to pass the captcha used when creating accounts.		
	. . .		

Scrum Artifact: The Sprint Backlog

- Defining a Sprint Goal
  - The Sprint Goal defines what is the focus of the sprint.
  - Example: Easier management of users and their groups.
- Managing the Sprint Backlog
  - Work is never assigned.
  - Remaining work needs to be updated daily.
  - Update remaining work as more becomes known.

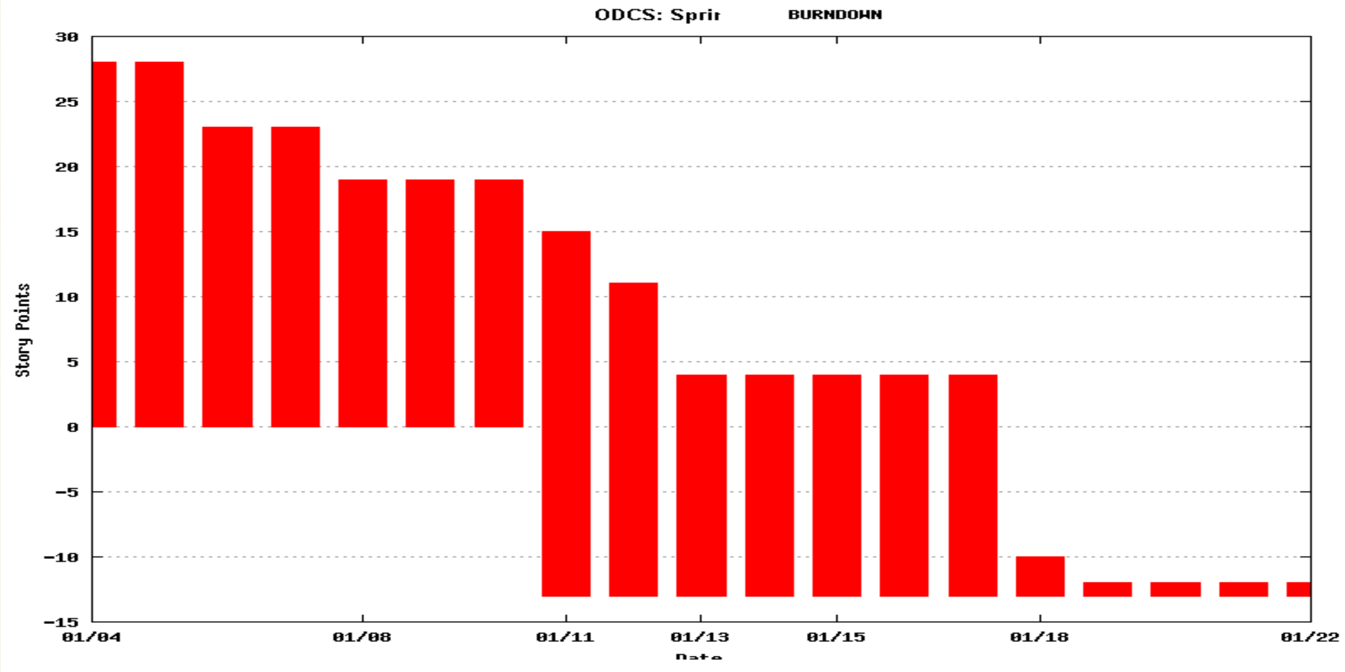
Scrum Artifact:
The Release Burndown Chart

“ The ***Release Burndown*** measures remaining Product Backlog across the time of release plan.”



Scrum Artifact:
The Sprint Burndown Chart

- “ The **Sprint *Burndown*** measures remaining Sprint Backlog items across the time of a Sprint.”



Scrum Roles:
The SCRUM Master

- Champion of SCRUM, SCRUM coach
- Removes blockers, impediments
- promotes understanding of self-management and cross-functionality
- The Scrum Master can be a pig :), but should not be the Product Owner.

Scrum Roles:
The Product Owner

- Responsible for defining the product features.
- Decides release dates and release content.
- Concerned with ROI
- Accepts/rejects completed backlog item.
- Owns the Product Backlog
- Can be be a pig as well, but should never be the SCRUM Master :)

Scrum Roles:
The SCRUM Team

- cross-functional
- self-organizing
- 7 members (+/- 2)
- team size does not change during the sprint
- main skill: addressing a requirement and turning it into a usable product

Scrum Roles:
The SCRUM Team

- How do we scale SCRUM Teams?

  →Scaling is done by organizing team of teams.

  * Stick to the 7 (+/- 2) rule as much as possible.

  * Assemble a team of teams, with each SCRUM Master eventually doing a Scrum of Scrums.

- When do you scale?

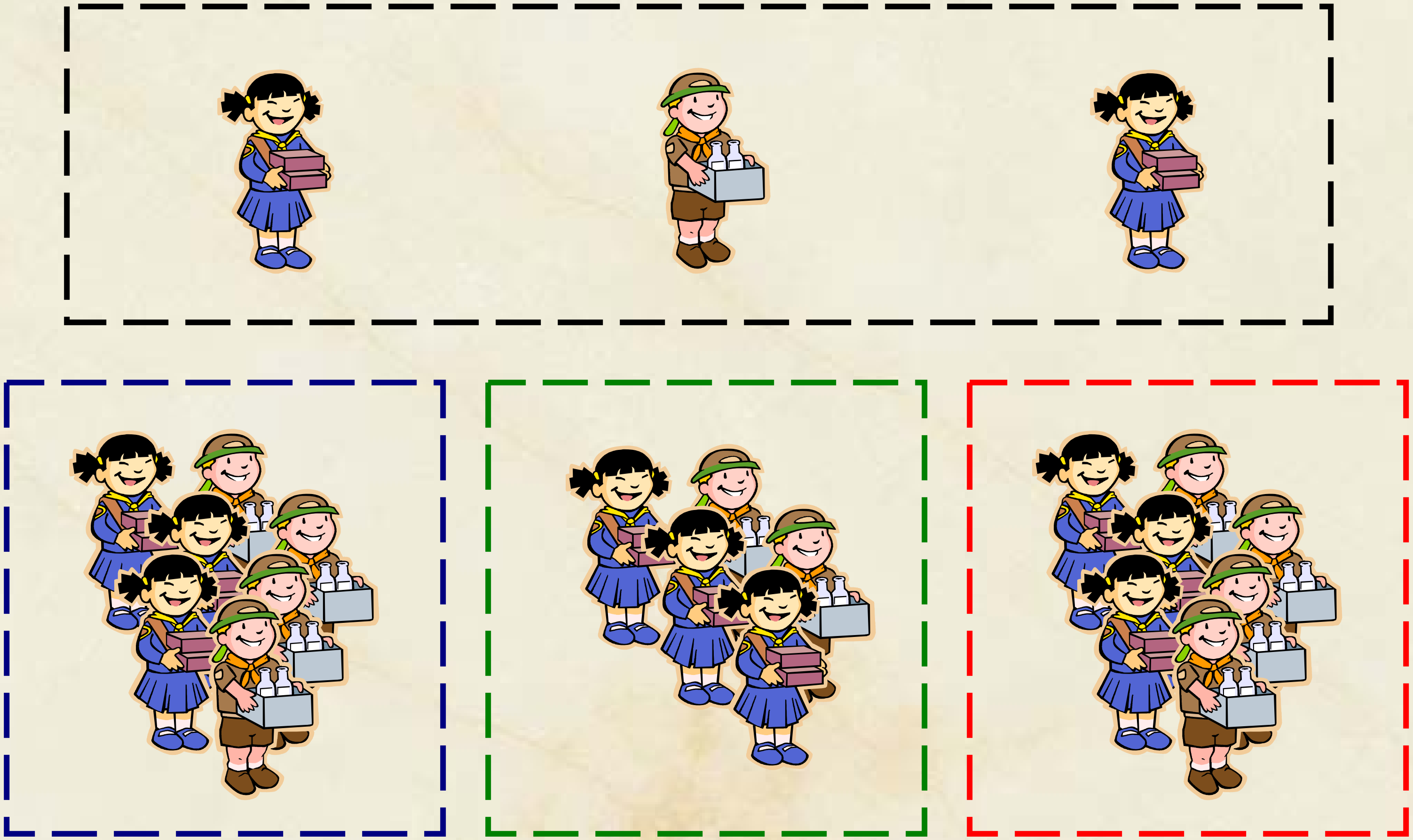
  → Application Type

  →Team size

  → Team dispersion

  →Project Duration.

Scrum Roles:
Scaling SCRUM Teams



Time Boxes: Release Planning

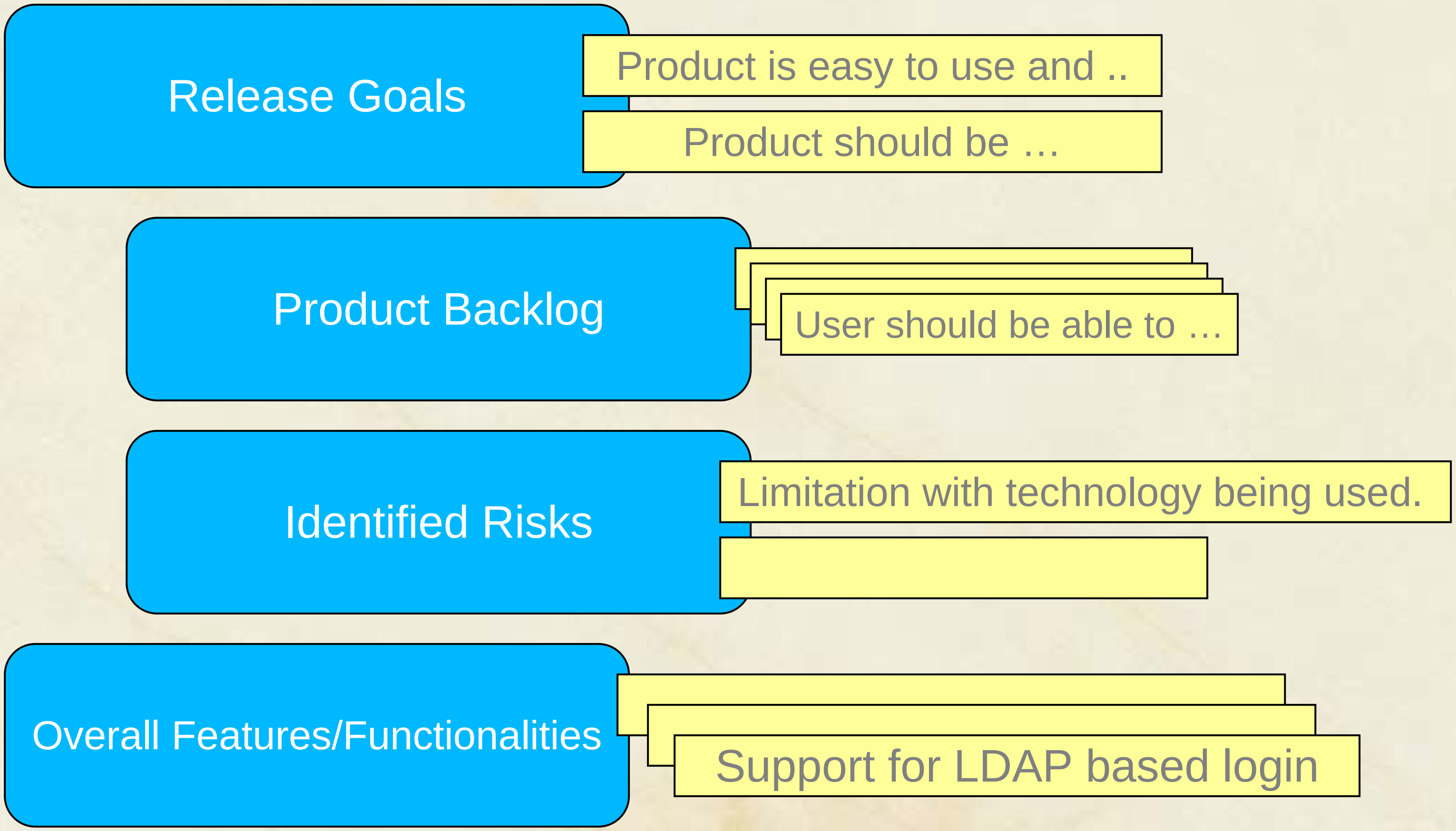
- Release Plan:
  - ✓ Goals for the release
  - ✓ Prioritized Product Backlog
  - ✓ Major risks
  - ✓ Overall features for the release
  - ✓ Target delivery date and cost
- Release plan is regularly checked and updated (as needed) based on the results of the sprints.

Time Boxes: Release Planning

- Questions:
  → How can we turn this (product) vision into a winning product?

  → How can we meet or exceed the desired customer satisfaction and Return on Investment?”
- Establishment of plan and goals for the entire development
- Estimation and prioritization of Product Backlog for the release.

Time Boxes: Release Planning



Release Goals

Product is easy to use and ..

Product should be …

Product Backlog

User should be able to …

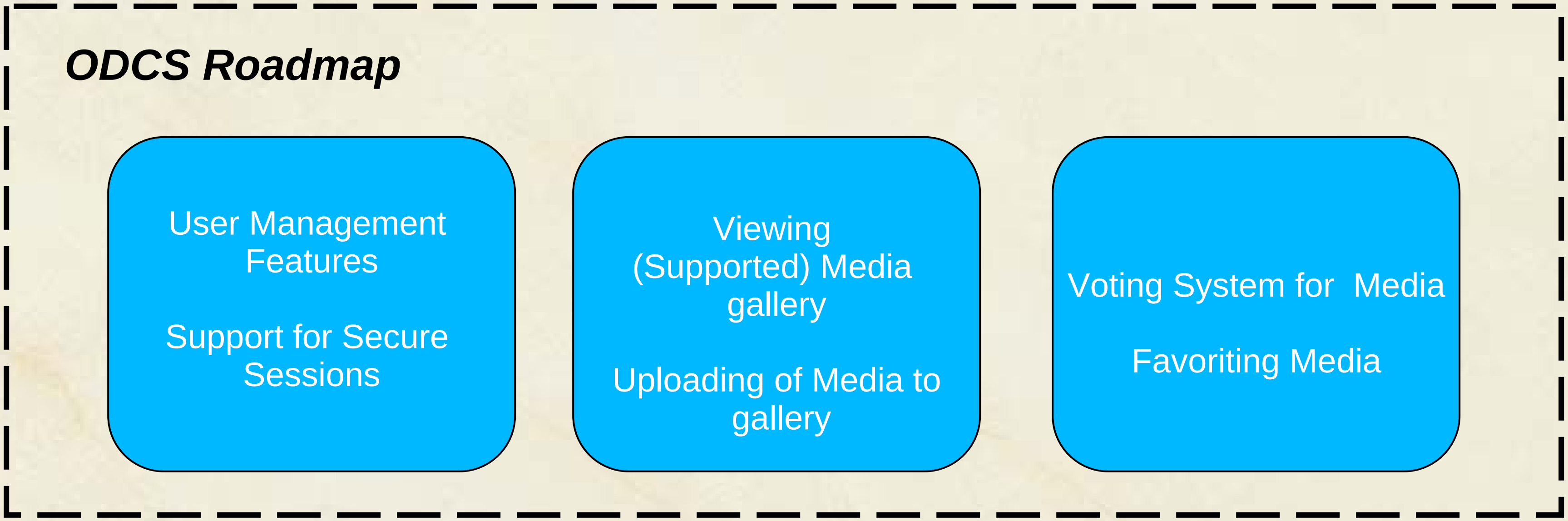
Identified Risks

Limitation with technology being used.

Overall Features/Functionalities

Support for LDAP based login

Time Boxes: Release Planning



ODCS Roadmap

User Management Features

Support for Secure Sessions

Viewing (Supported) Media gallery

Uploading of Media to gallery

Voting System for Media

Favoriting Media

Time Boxes: Sprint Planning

- Planning on what will be included in the iteration.

→ 8 hours for a 1 month sprint or 5% of the total sprint length.

- Sprint planning parts:

Part 1: WHAT?

→ Team decides on what will be included from the product backlog

Time Boxes: Sprint Planning

- Sprint planning parts:

Part 1: WHAT?

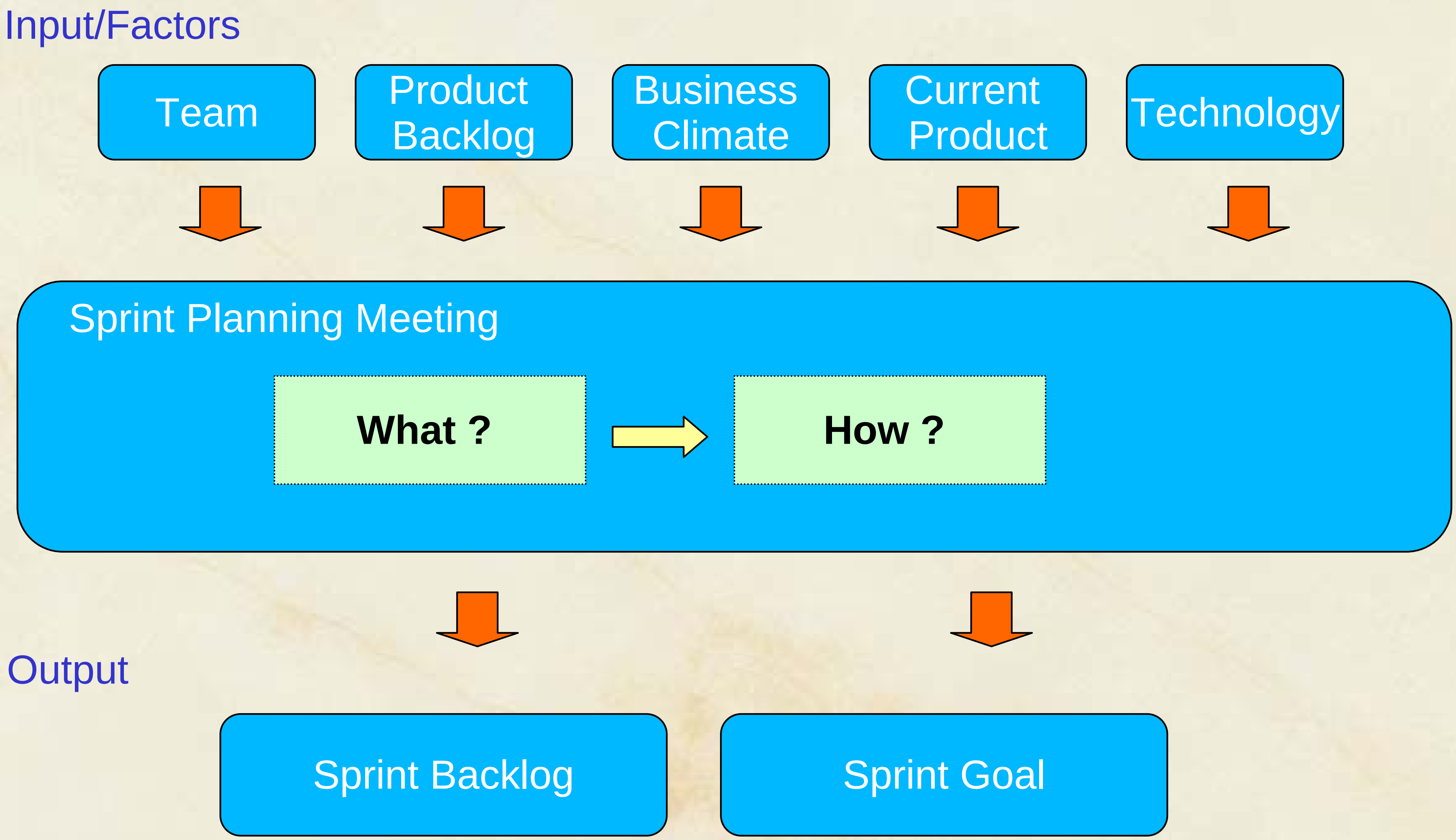
→ Define the Sprint Goal that captures the work to be done/achieved.

Part 2: HOW?

→ Determine ways to deliver the selected product backlog item

✓ Design, identify specific tasks (doable in < 1 day).

Time Boxes: Sprint Planning



Input/Factors

Team

Product Backlog

Business Climate

Current Product

Technology

Sprint Planning Meeting

What ?

How ?

Output

Sprint Backlog

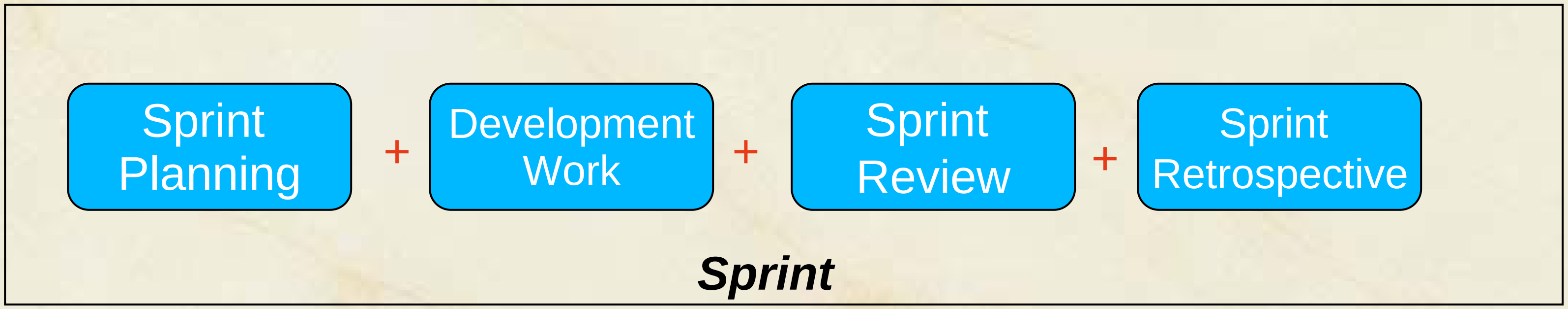
Sprint Goal

Time Boxes: The SPRINT

- Sprint length is from 2 weeks to a month.
  - ✓ Sprints are projects in itself.
- Work is done based on the prioritized items in the Sprint Backlog.
  - ✓ Team members need to pick work items based on the Sprint backlog.
  - ✓ No changes during sprint!

Time Boxes: The SPRINT

- Team size remains constant.
- Team's goal remains the same



Sprint Planning + Development Work + Sprint Review + Sprint Retrospective

Sprint

Time Boxes: The SPRINT

- Team can discuss with Product owner in cases of “overcommitment” or “undercommitment”.

→ Overcommitment → reduce scope of Sprint backlog

→ Undercommitment → get prioritized item from the Product Backlog

Note: Reducing scope can mean reducing “definition of done”.

Any undone work needs to be logged and added to a Product backlog item marked as undone.

Time Boxes: The SPRINT

- Yes, a sprint can be cancelled.

  → market is gone or changed

  → technology is changed.

- What happens to the Sprint backlog for cancelled sprints?

  → “done” items are reviewed and evaluated if they can be “shipped”

  → “undone” items are moved back to the product backlog with initial estimates.

Time Boxes: Daily SCRUM/Standup

- Daily SCRUM is for the Team, not for providing status to other stakeholders

Rules:

- Daily, 15 minute meeting
- Same time, same place, everyday
- Stand-up, no problem solving!
- Team member answers 3 main questions:
  - What did I do yesterday?
  - What am I doing today?
  - What are my blockers?
- Only the pigs can talk.

* Product owners meet with the ScrumMaster offline for certain concerns.

Time Boxes: Sprint Review

- Whole team participates, no slides, 4 hours for 1 month-sprints, 5% of total sprint for shorter sprints.
- Did the SCRUM team deliver committed user stories?
  - ✓ Stories : committed vs accomplished
  - ✓ Definition of Done
- Invested effort : More or Less than planned?

Time Boxes: Sprint Review

- Is the (overall) project still on track?
  - How is the Release Burndown Chart looking?
- Does the project have rising technical debt?
  - Are the number of bugs/issues being reported rising?
  - Are the unit tests and functional tests complete?

Time Boxes: Sprint Review

- Did the delivered user stories/functionality meet the definition of done?
  - ✓Team demos the completed user stories.
  - ✓Product owner discusses with team whether completed user stories are accepted or not.
  - ✓Identify any enhancements that can be addressed in future sprints.

Time Boxes: Sprint Retrospective

- Team works through the list of problems.
- Team determines the priorities of problems to be solved for the next sprint.
- Team develops the action plan to address problems.
  - ✓ Improves how the team works.

Definition of Done

- ✓ *Unit/Integration Tested*
- ✓ *Ready for Acceptance Testing*
- ✓ *Deployed on Staging site*

- ✓ Releaseable
  - Acceptance tested
  - Release notes written
- ✓ No increased technical debt
  - Did not mess up codebase :)

How not to mess up with SCRUM

What we should bear in mind when doing SCRUM!

How not to mess up with SCRUM

- ScrumMaster
  - ✓ is not the Scrum Master
  - ✓ is the guru
  - ✓ does not have an impediment backlog.
  - ✓ is too busy
  - ✓ is not dedicated to the team
- Velocity
  - ✓ What velocity? :)
  - ✓ is used/misused
  - ✓ team is forced into committing dates
  - ✓ Done stories are not done!

How not to mess up with SCRUM

- Retrospective
  - ✓ No retrospective!
  - ✓ no improvements seen, executed, or followed up
  - ✓ No one talks
- Team Commitment
  - ✓ Pressured into committing
  - ✓ Always undercommitting, Always overcommitting
  - ✓ 0 Velocity

How not to mess up with SCRUM

- Technical Debt
  - ✓ Test coverage issues
  - ✓ Code is not readable
  - ✓ Duplicated code
  - ✓ Team should ensure that:
    - ➢ Technical Debt Tracking in place
    - ➢ When technical debt is rising, team should stop the slide
    - ➢ Work on repaying the technical debt

How not to mess up with SCRUM

- Teamwork
  - ✓ team is not working together or helping each other
  - ✓ too many sprint backlog items started with nothing being done
  - ✓ work is being duplicated
  - ✓ team members are reporting to external management
- Product Backlog and Product Owner
  - ✓ No Product Backlog or Product Backlog is not visible
  - ✓ Stories are too big, never ending
  - ✓ Product owner is not prioritizing the Product backlog or is not maintaining it properly.

How not to mess up with SCRUM

- Mergophobia
  - ✓ No daily (continuous) integration
  - ✓ no one is taking responsibility
  - ✓ no branching policies

- Sprint backlog
  - ✓ Sprint backlog is not being followed during the daily scrum
  - ✓ The team does not own the Sprint Backlog
  - ✓ No burndown, not being updated daily
  - ✓ too difficult for the team

References

- Scrum101.ppt – Mountain Goat Software, LLC
- SCRUM Guide – Ken Schwaber