

Introduction to Agile/SCRUM

Clarity NYC User Group meeting

June 2011

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Agenda

- ❑ What is Agile and SCRUM?
- ❑ Agile Manifesto / Agile Thinking
- ❑ Agile x Waterfall
- ❑ The SCRUM flow and framework
- ❑ Requirements, user stories and more!
- ❑ Estimation and planning – points and hours
- ❑ Sprint daily stand up meeting format
- ❑ Measuring progress during a Sprint
- ❑ Definition of DONE

What is Agile and SCRUM?

- ▶ Iterative approach to incrementally deliver high-value features to our customers
- ▶ Not a hype or silver bullet that should be applied to all projects
- ▶ The key here is to enable an organization (product, development, testing) to embrace the SCRUM values:
 - Focus – work on the right things that will be perceived as value by our customers
 - Commitment – deliver based upon what has been prioritized
 - Courage – feel empowered to suggest and make changes
 - Openness – if things are not doing well, speak up – be transparent
 - Respect – provide constructive feedback, build team spirit

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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.



What does this mean?

- ▶ Communication among team members is expected to discuss projects and issues
- ▶ The delivery of working code takes precedence over lots of documentation and processes.
- ▶ Customer is part of the process, and his/her participation is welcomed
- ▶ Change is inevitable – Change will happen and we will review our plans when change is needed
- ▶ “Planning is everything. Plans are nothing.” (Field Marshal Helmuth Graf von Moltke)

Agile thinking

- ▶ Team decides the best course of action vs. project Manager commands the team
- ▶ Planning is important vs. following a plan with expectations
- ▶ Changes are welcome and can be accommodated vs. plan needs to be followed by all means
- ▶ Inspect and adapt work vs. change control process
- ▶ Deliver features to customer along the way vs. follow a plan to deliver something at the end (hoping the customer will like it)

Agile thinking



X



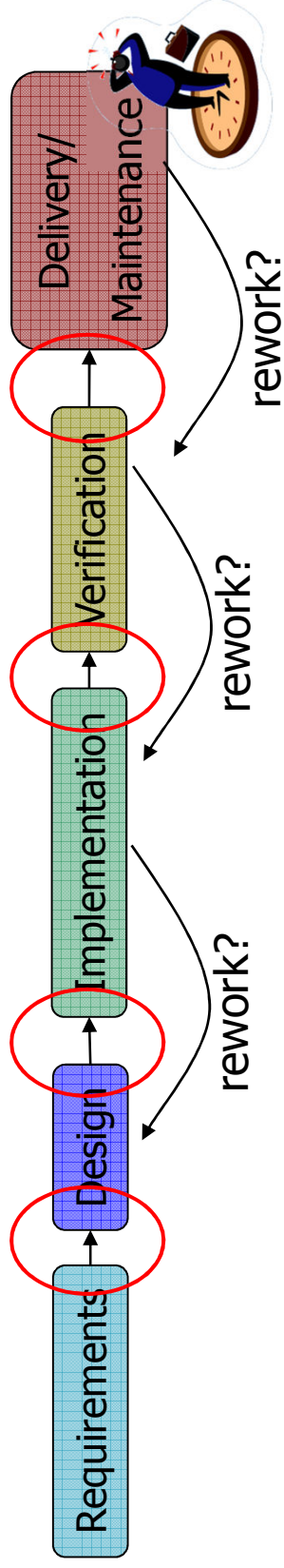
Aim, aim, aim,
aim and fire!

Aim, fire and
Adjust trajectory

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Agile x Waterfall: The Waterfall model



Risk

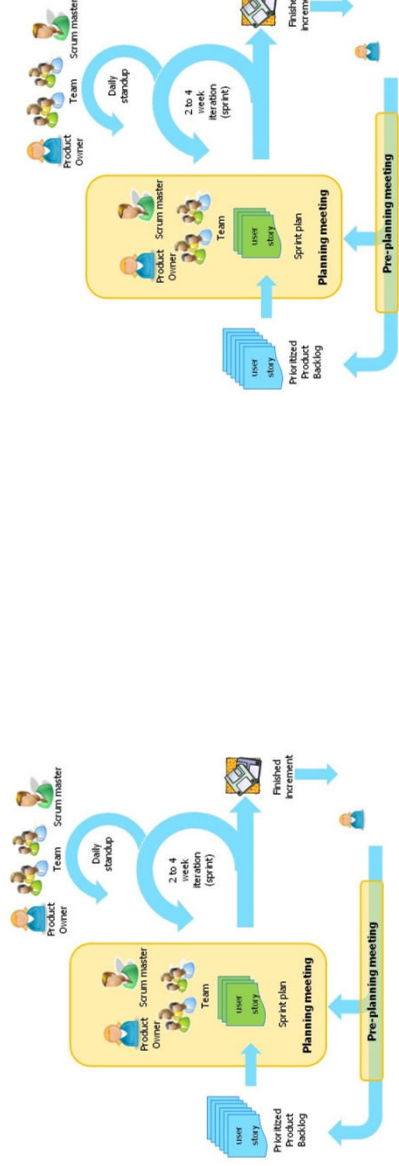
Visibility

Agile x Waterfall: The Agile model

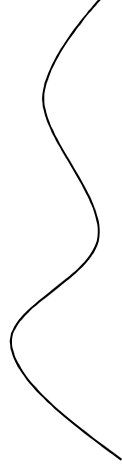
Iteration 1

Iteration n

...



Risk



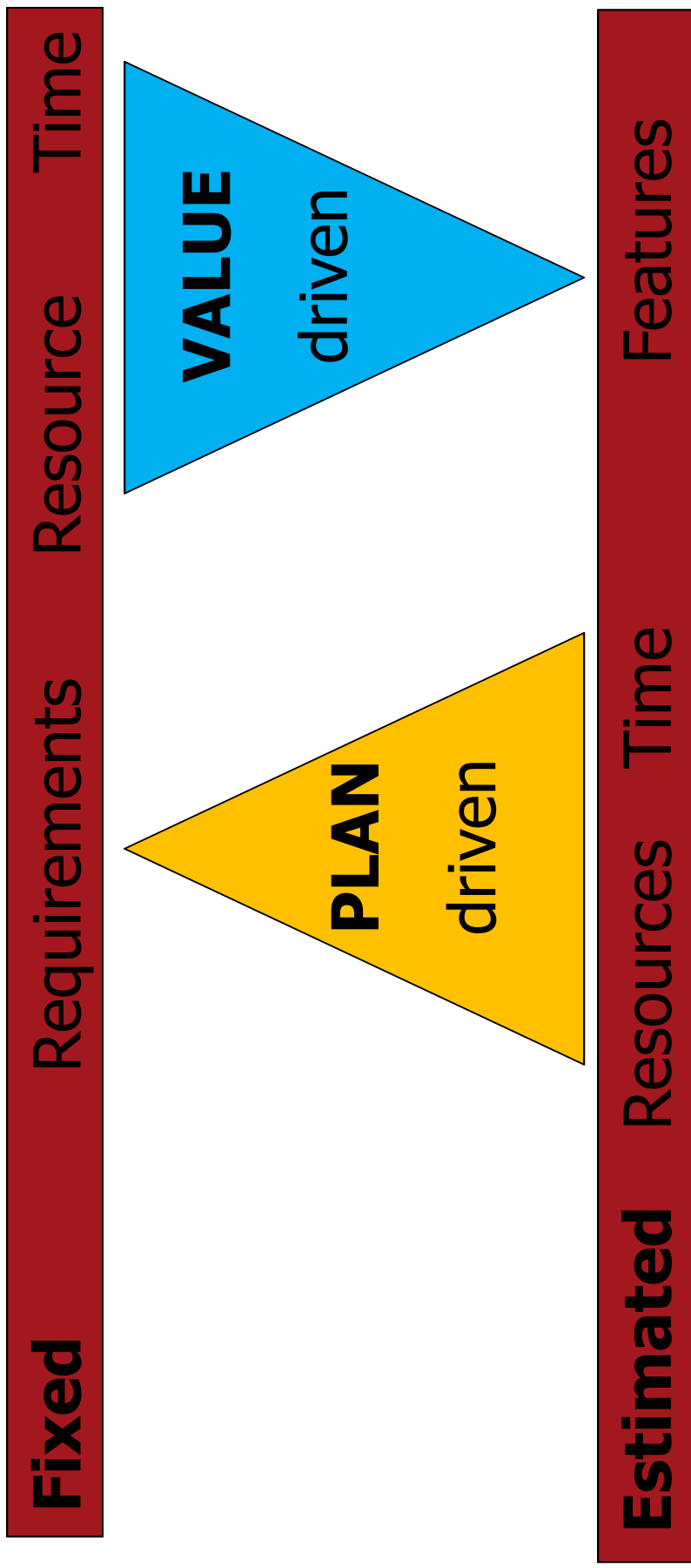
Visibility



Agile x Waterfall – Paradigm Shift

Waterfall

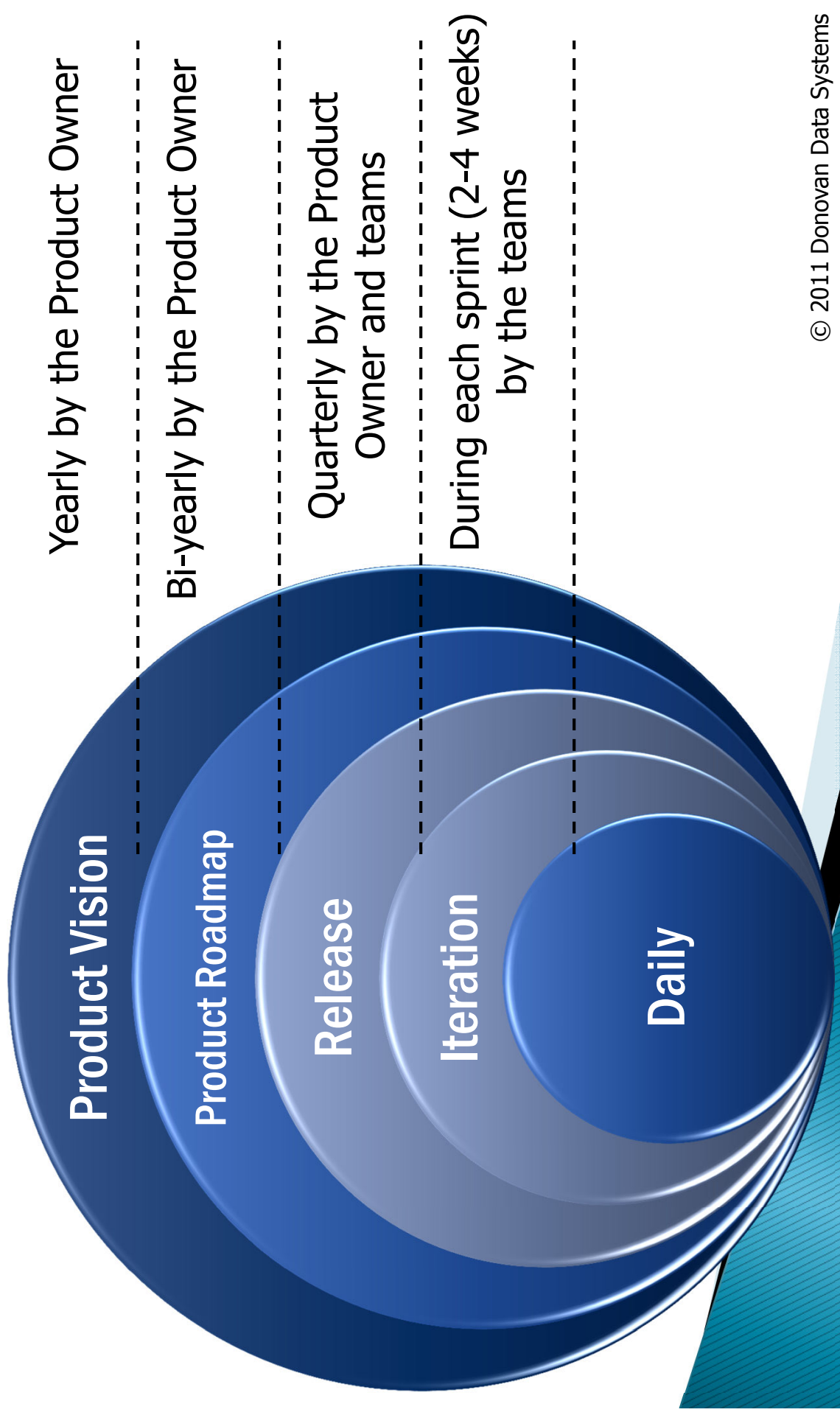
Agile



Agile and SCRUM: what is the difference?

- ▶ Agile is an innovative approach to getting work done
→ frequent delivery of high value items to our customers
- ▶ Different frameworks implement an “agile thinking”:
 - ▶ Lean
 - ▶ XP
 - ▶ SCRUM
- ▶ Where does SCRUM come from?
- ▶ “In a scrum (rugby) the team tries to go the distance as a unit, passing the ball back and forth”

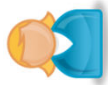
SCRUM: 5 Levels of Planning



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The SCRUM framework – main players



Product Owner: provides the vision for the product, based on understanding what customer wants/needs. Makes product/feature level decisions and shapes releases and roadmaps for the product. Provides clear information to team members to help them work on stories during the sprint.



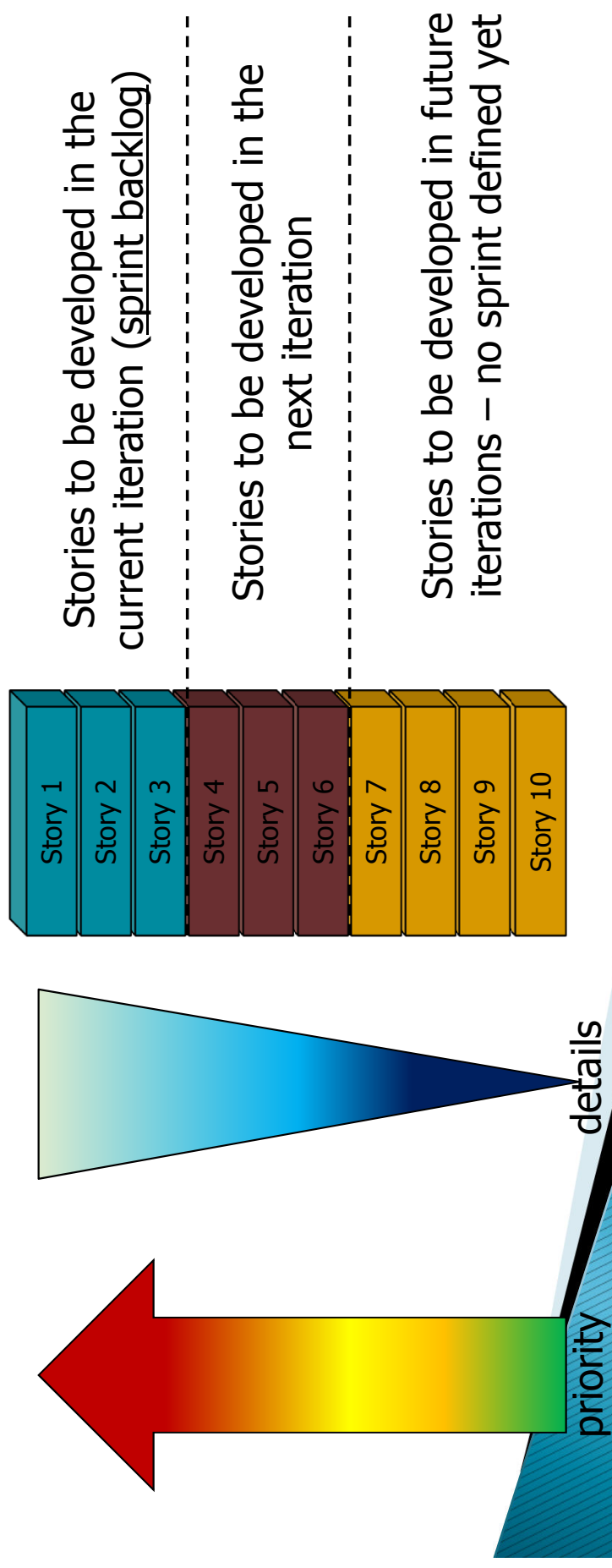
Scrum master: responsible to facilitate SCRUM processes and to remove roadblocks that may interfere with the team's ability to deliver artifacts at the end of a sprint. Also reviews the project progress with the Product Owner.



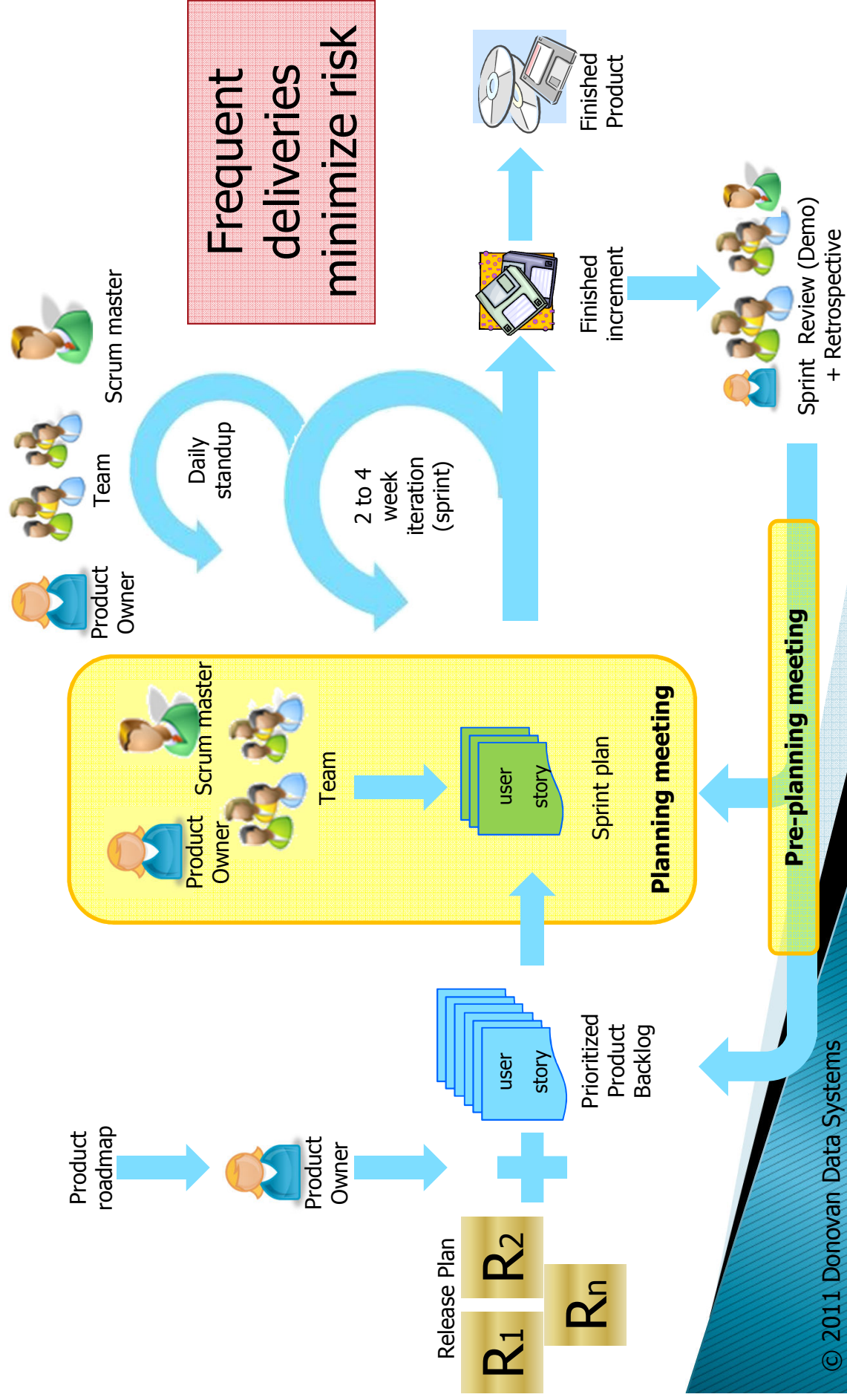
Team members: Discuss the work expected to be accomplished during a sprint with the Product Owner, provide work estimates and on a daily basis, status and risks/issues/impediments.

The SCRUM framework: Product Backlog

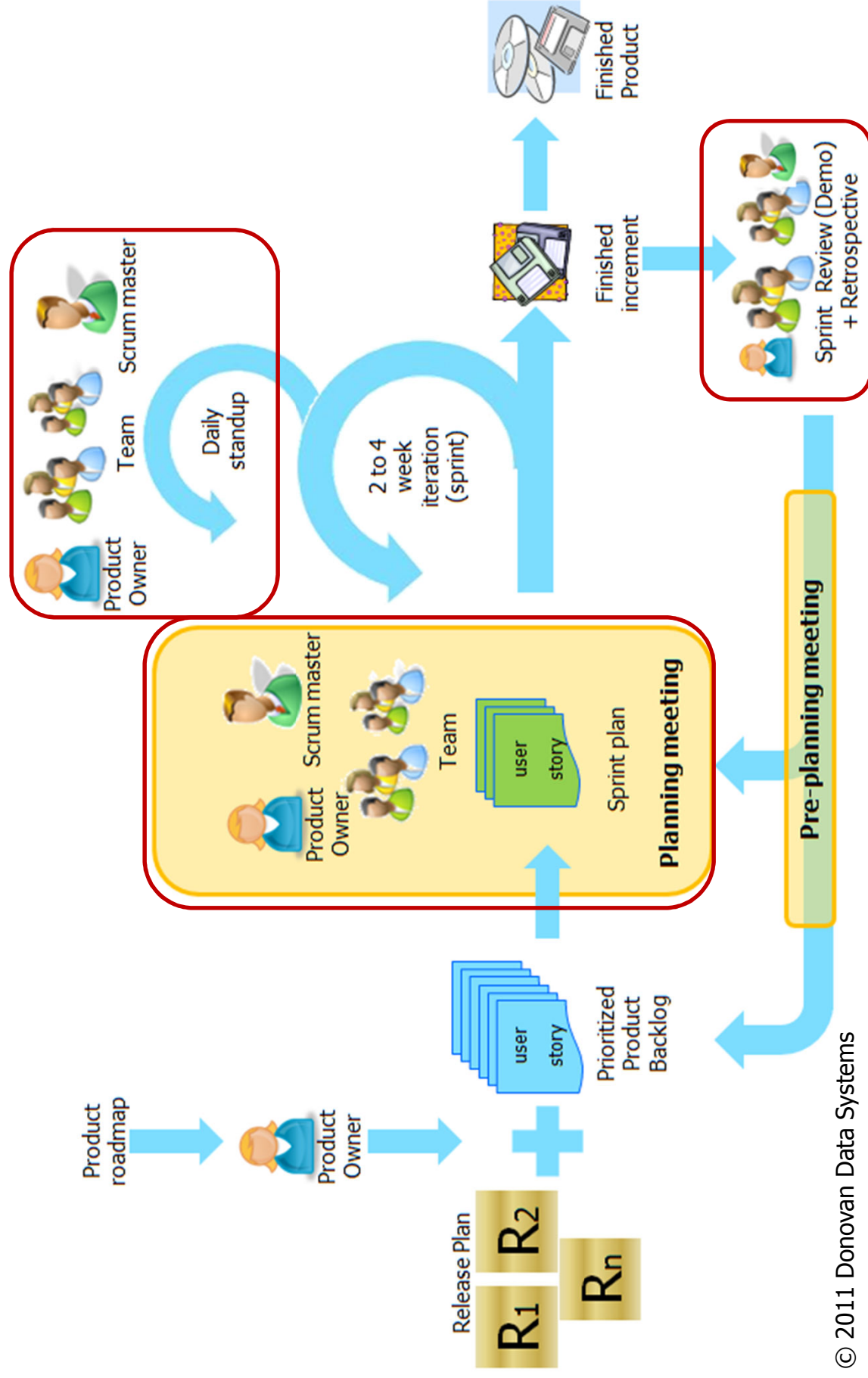
- Product Backlog (PB) is a set of stories that will, iteratively, deliver a product to a customer over time
- The stories in a PB are prioritized and detailed as follows:



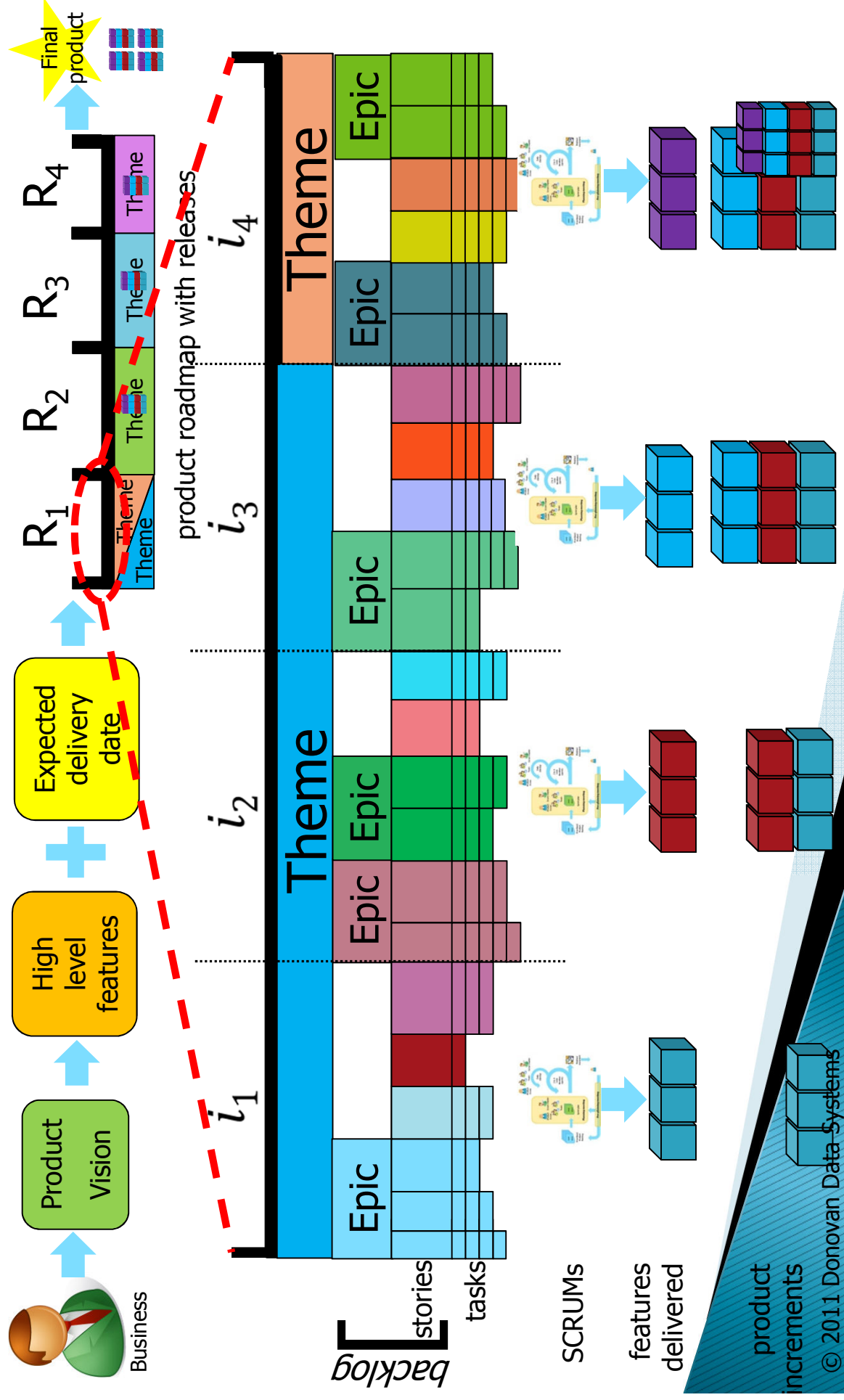
The SCRUM flow



The SCRUM ceremonies

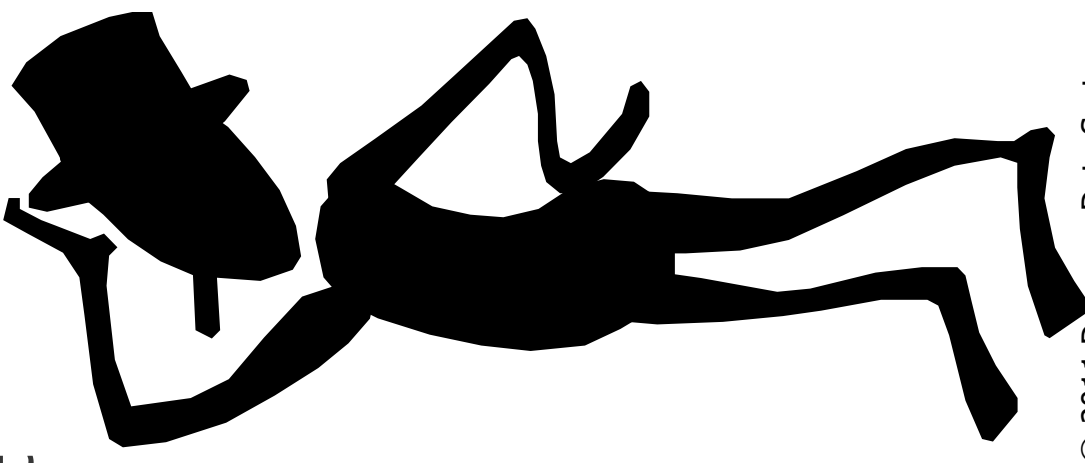


From product vision to delivery



SCRUM and the “Silver Mirror”

- 
- ▶ Because of the rhythm that will naturally evolve during a sprint, project data will start showing that technical, organizational and behavior issues may be hindering your Agile project → **Transparency.**
 - ▶ How the company and the team react to these issues will define the success of your Agile project.



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Guidelines for Agile Requirements

- ▶ Requirements emerge and evolve as software is developed. Requirements live as stories in the product backlog, and will be refined when they are moved into the sprint backlog.
- ▶ Agile requirements are “barely sufficient”. Having a locked-in requirements document is not guarantee that there won’t be any changes throughout the project!
- ▶ Requirements are developed in small, bite-sized pieces. Many times users don’t know all requirements when a project starts!

Requirements always change.

What can we do?

- ▶ Team makes decision based on available information, **but do it often**
- ▶ Instead of making all decisions upfront when writing requirements, **the decision-making process is spread across the project, minimizing risk**

User stories

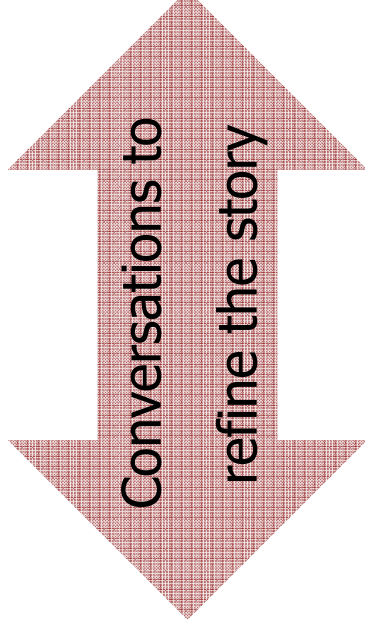
- ▶ User stories are scenarios that will provide a functionality required by an user in the application
- ▶ User stories must contain an acceptance criteria (how do we know this user story is complete from the user's perspective?)
- ▶ User stories are small enough to be completed in one iteration
- ▶ User stories are starters for the team to have conversation to establish what the customer wants
- ▶ Structure: "As a <user>, I want to <functionality>, so that <benefit>."

User stories example

As a user, I want to be able to cancel a flight reservation.



Team

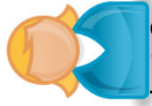


Product Owner

- ▶ Does the user get a full or partial refund?
- ▶ Is the refund going to be a site credit?
- ▶ Do premium users pay a cancellation fee?
- ▶ How far in advance an user can make a cancellation without paying a fee?

User stories example – acceptance criteria

As a user, I want to be able to cancel a flight reservation.



Product Owner

- ☐ Verify that user accepts conditions of cancellation in order to proceed. Conditions will vary according to user level.
- ☐ Verify that platinum members can cancel without a fee if cancellation occurs at least 3 days before departure date.
- ☐ Verify that non-platinum members will be charged a \$150 fee
- ☐ Verify that an e-mail confirmation is sent
- ☐ Verify that airline is communicated electronically

- Acceptance criteria: the product owner's conditions of satisfaction
- Acceptance Criteria is important to help QA to estimate the testing effort to validate a story

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Estimation and planning – why points?

- ▶ Assigning points to stories will serve to estimate their size and complexity, and ultimately, the effort involved. A systems of points (1,2,3,5,8,13,20) is used.
- ▶ Ideally, the team should have a “standard story”: one that is easy to understand, has been developed before and its size (1,2,3,5...) will serve to compare other stories
- ▶ Stories with > 10 points are candidates to be split into smaller stories, or are not clear enough to the team
- ▶ Sizes are important to assess how good the team is to deliver stories throughout a sprint, and will serve as a measure of **estimated** capacity for future sprints

Estimation and planning - Tasks

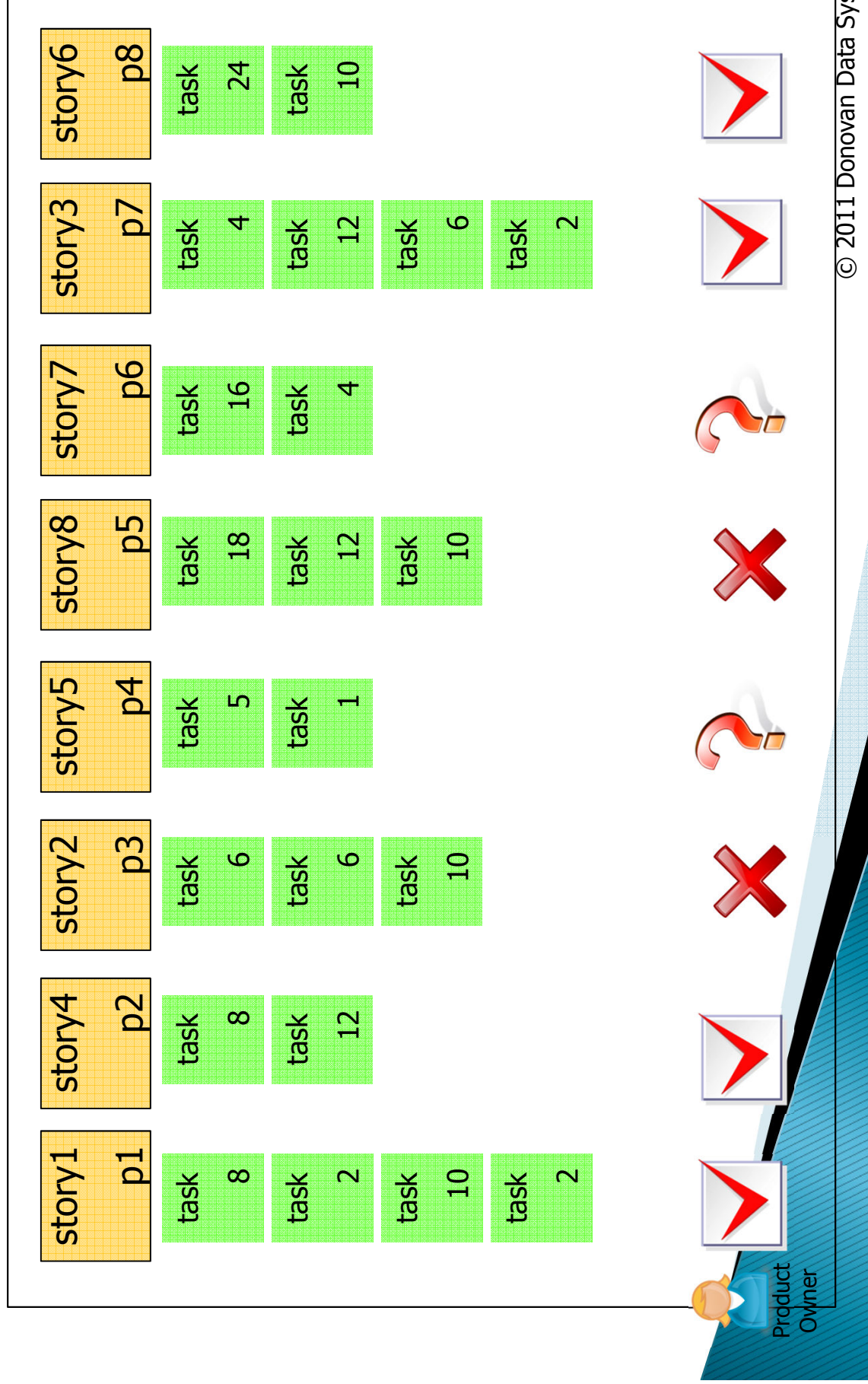
- ▶ Once stories have been sized and prioritized, the team starts creating tasks for each story
- ▶ It is NOT expected that all stories will be tasked out in one sitting – tasks can (and will) be added later
- ▶ Tasks are measured in ideal hours (duration)
- ▶ The duration of tasks can (and should) be reviewed by the entire team, and adjusted as work on the sprint progresses

Tasking out stories

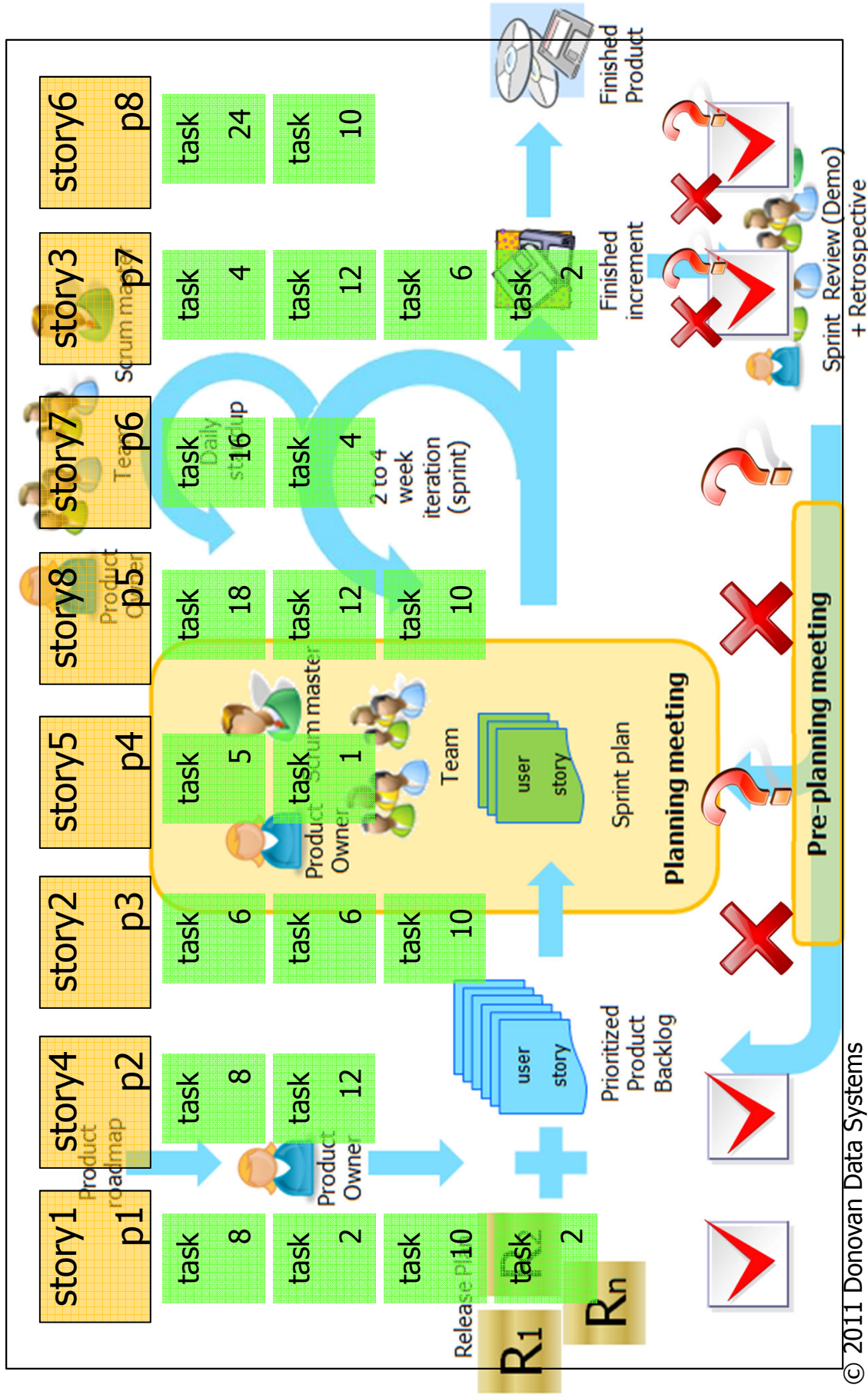
3	5	8	13	20
story1 p1	story5 p4	story2 p3	story4 p2	story6 p8
task 8	task 5	task 6	task 8	task 24
task 2	task 12	task 4	task 12	task 10

- Interactive process involving different teams during planning session
- Tasks can be refined/added during sprint – team involvement
- The sprint backlog is now “frozen”: adding/removing stories – if really needed – will be part of a discussion between Product Owner and Scrum master
- Team will be better focused on executing tasks, knowing that sprint backlog will not change (only if really necessary)

Finished Sprint Backlog



Unfinished/not approved stories



Stories sized, tasks defined and estimated... What's next?

- ▶ Agile values: Transparency, Accountability, Commitment
- ▶ "Fist of five" exercise – checking commitment from the team



Can't vote:
need more
info



I am
against this
plan -
period



I do not
support this
plan, but
want to
discuss it



Well... I will
be
compliant
with this
plan



The plan
has some
issues, but
I commit
to it!



Yes, this
plan will be
a success –
I'm
committed!

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Sprint daily stand up meeting

Yesterday I finished coding the "Save" button, and today I will start coding the "Print" button. I'm still waiting for UX to send me the report layout, but **it may become an issue if I don't receive it until EOD today.**

Nothing to report...



There is always something to report, unless you were not working yesterday

If you had to work on something outside of the sprint, REPORT IT

If you need help, ASK

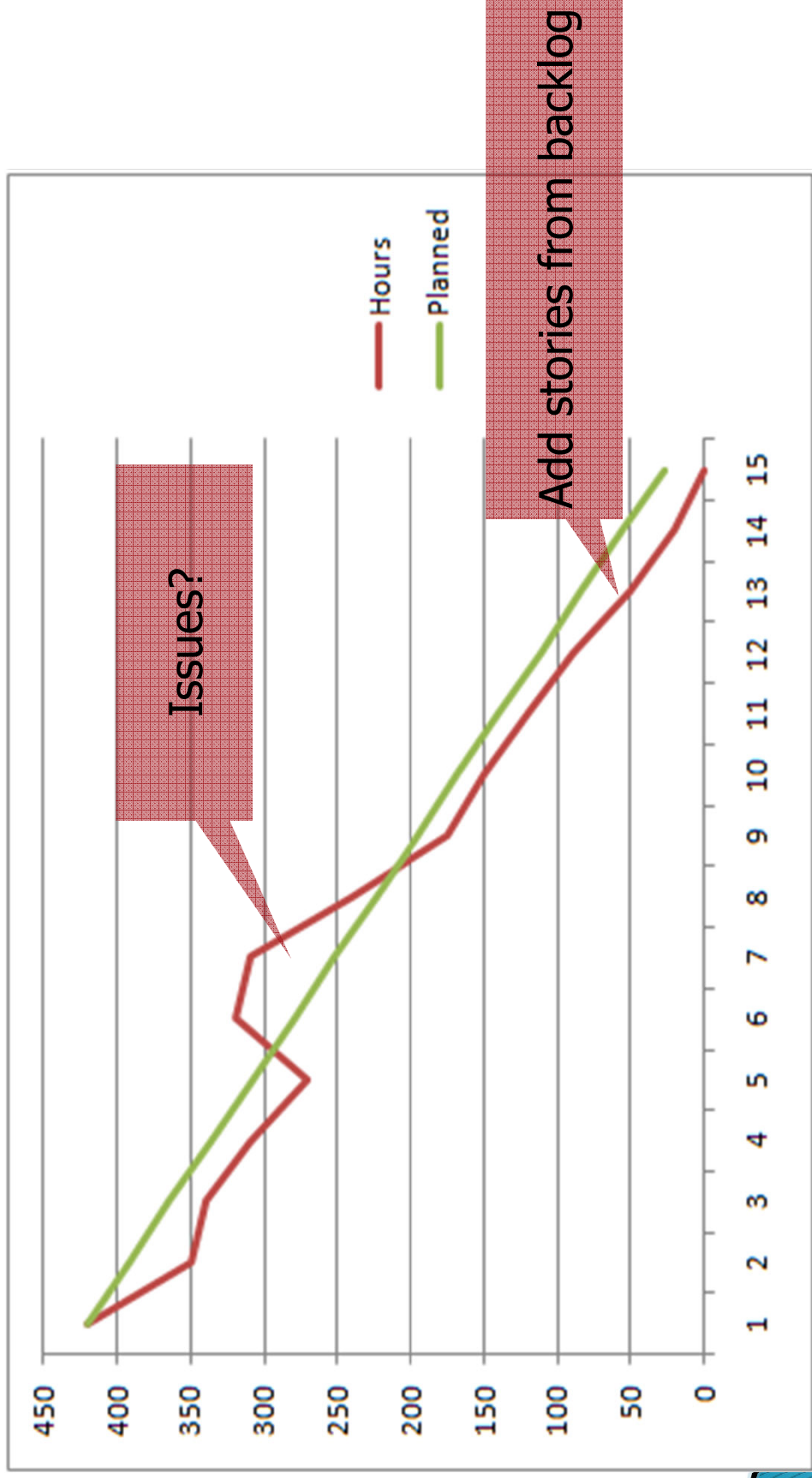
If you finished your tasks, HELP OTHERS, or check with the Scrum master

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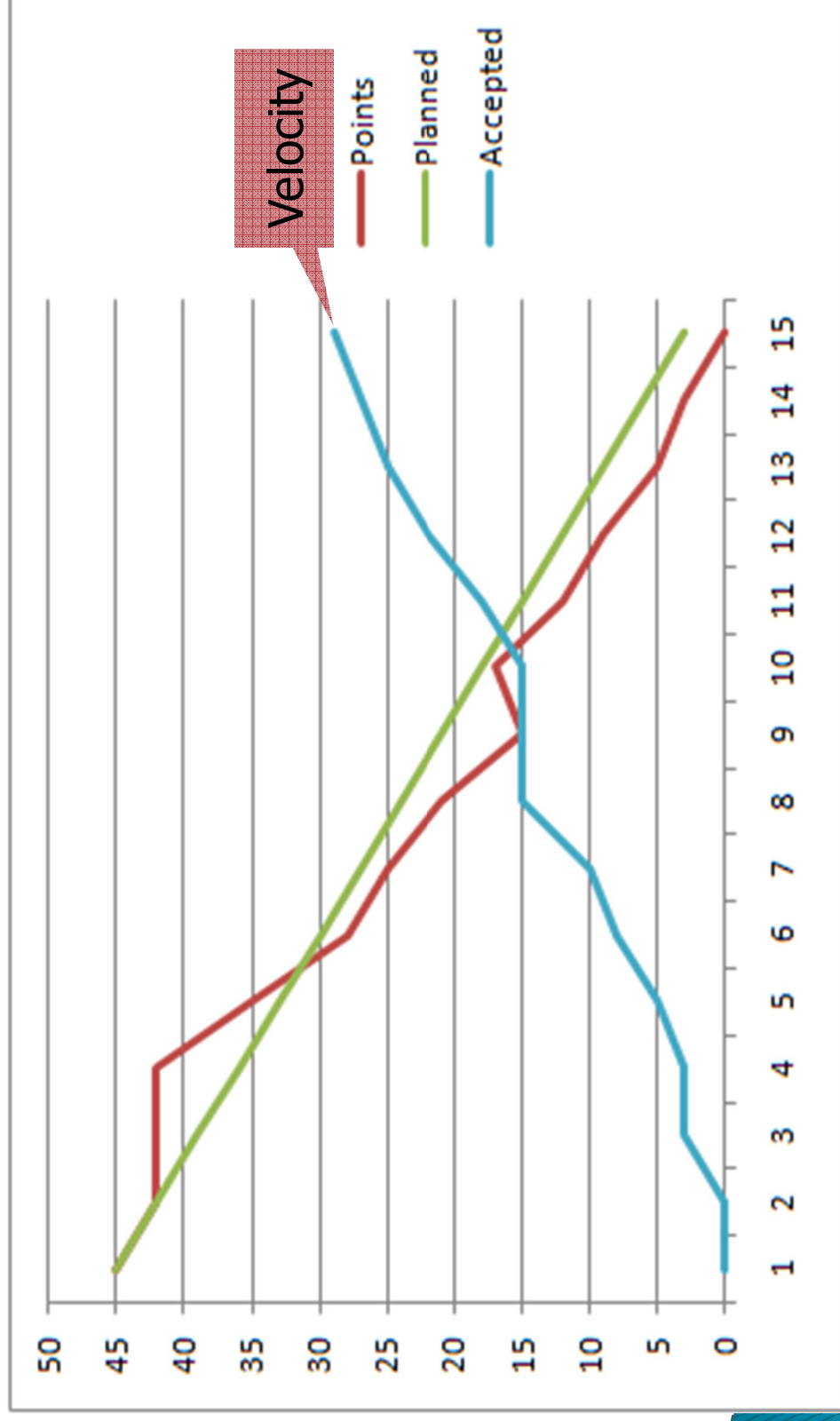
Measuring progress during a Sprint

Burndown chart - hours



Measuring progress during a Sprint

Burndown chart - points



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Definition of DONE

- ▶ When can we say “the work on this story is DONE”?
- ▶ A story can be considered DONE when the Product Owner accepts it (anytime during the sprint)
- ▶ But there is some work before that, and this is what makes the definition of DONE (example):

Documented Unit tested

Planned Q&A tested

Coded Repaired

Approved by Product

Questions?

- ▶ Scrum Alliance: <http://scrumalliance.org>
- ▶ Mike Cohn's company:
<http://mountaingoatsoftware.com>

Thank you!

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