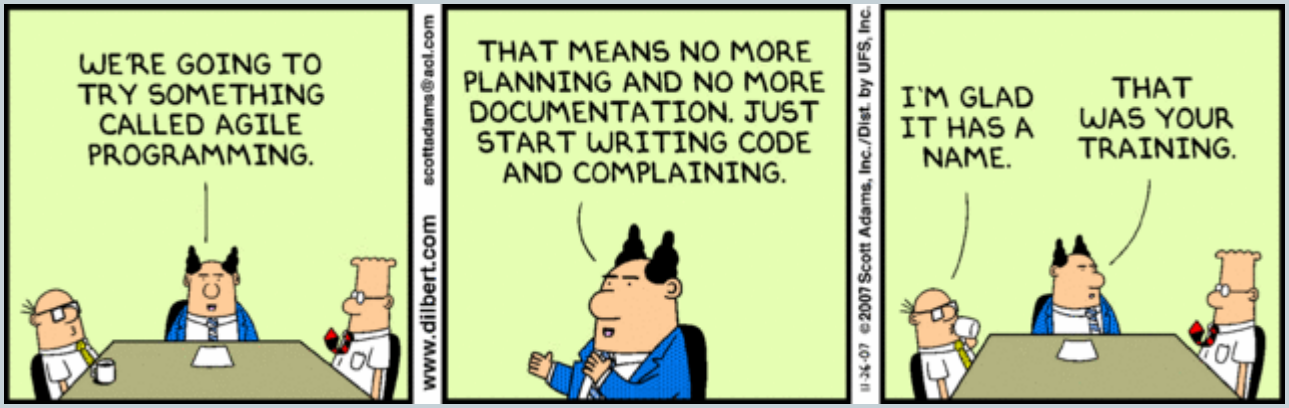
SCRUM

JONATHAN BROWN
DARRELL HAREFORD
SARAH PAULSEN
2/18/2014

What is Scrum?

- Agile software development method
- Focus on human factors rather than process oriented development (waterfall)
- Human factors – work with uncertainties associated with human behavior (embraces uncertainty and change)



Why Scrum?

- Traditional software development is like a relay race. The next task must be completed and handed off to the next phase.

Why Scrum?

- Traditional (i.e. waterfall) software development focuses on up front requirements gathering, analysis, and design
- Substantial up front costs incurred before a line of code is written.
- Changing requirements which occur during development, testing, or implementation drive cost up dramatically

Why Scrum?

- Scrum is more like rugby. The entire team scrambles, passing back and forth to get the ball over the goal line. Scrum is a term used in Rugby to denote a method for the restart of play. This is a fitting description as you see the structure of Scrum in action.

Scrum in Action

- Scrum uses incremental development with a minimum upfront design
- “Pay as you go” design with higher business value functions produced up front
- Product is designed, coded, and tested during a “sprint”
- Deliverable operable product with new functions every 30 days. Option to shut project down if impractical or “done and run” through frequently thoroughly tested code.
- Constant Scrum sprint duration allows for smoother rhythm of production
- No changes are imposed during a Scrum sprint.

Scrum vs. Traditional Method

Scrum	Traditional
• Individuals & Interactions • Working Software • Customer Collaboration • Respond to Change	• Processes & Tools • Comprehensive Documentation • Contract Negotiation (and re-negotiation) • Following the Plan

How is Scrum Implemented?

Scrum Structure:

- Vision
- Product Backlog
- Scrum Team
- Sprint Backlog
- Sprint
- Daily Scrum
- New Functionality; End of Sprint

Vision

- The Business Case
- The Product

Product Backlog

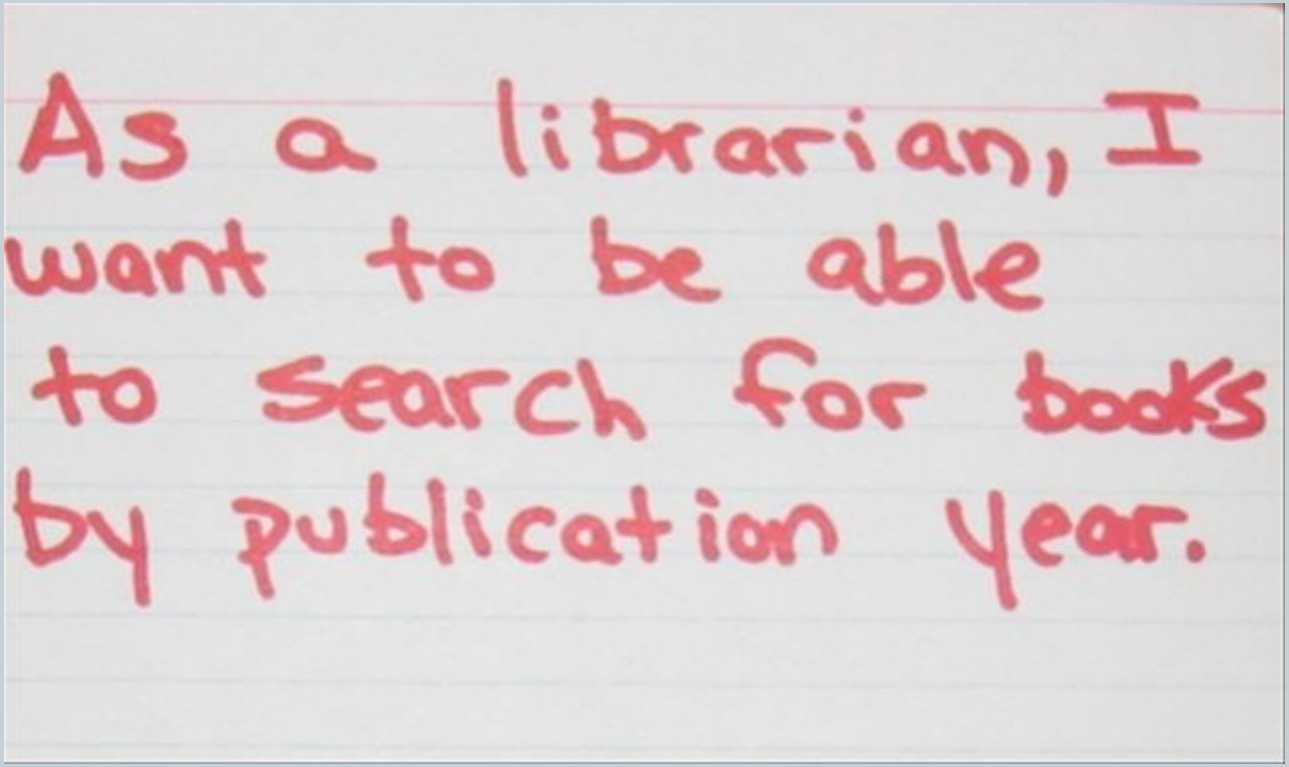
- Emerging prioritized product requirements
- Product requirements captured in the form of a “User Story”
- As an (actor), I want feature xxx, so I can derive benefit yyy.
- Collection of user stories are called the product backlog
- All desired user stories on product backlog are prioritized by product owner (and re-prioritized at the start of each sprint)
- Task are estimated in hours to deliver
- Product owner determines user stories which become part of Product Backlog and prioritizes.

Product Backlog

	A	B	C	D	E	F
1	**Project:** Dev10Demo **Server:** processbuild02\DefaultCollection **Query:** Product Backlog **List type:** Flat					
2	ID	Stack Rank	Story Points	Title	State	Iteration Path
3	65	1	3	As a meal provider that is a restaurant, I want my meals to link to my restaurant's web page to help attract in-person	Active	\Sprint 2
4	70	1	3	As a delivery provider, I want orders to be submitted to my business at least 45 minutes before we pick the order up	Active	\Sprint 2
5	69	2	5	As a returning customer, I want to be able to override my default location so that I can order from DinnerNow when	Active	\Sprint 2
6	64	3	6	As a customer, I want to save orders.	Active	\Sprint 2

Product Backlog | Iterations | Interruptions

User Story


As a librarian, I
want to be able
to search for books
by publication year.

Sprint Backlog

- Prioritized features of product
- Sprint Backlog is selected functionality and features for this release to be completed on this Sprint
- Individual team members select work they want to do from list; it is not assigned.
- Estimated work left is updated daily

Sprint Backlog

Sprint Backlog

Scrum Team

- **Product Owner** - Defines features, release dates, helps assign priorities to features, accepts/rejects work
- **ScrumMaster** - Represents project to management, protects the team, ensures productivity, removes road blocks, sets up meetings, monitors work is being done
- **Project Team** - Cross functional, self-organizing members on project full time, no team member changes during a sprint (developers, testers)

Sprint

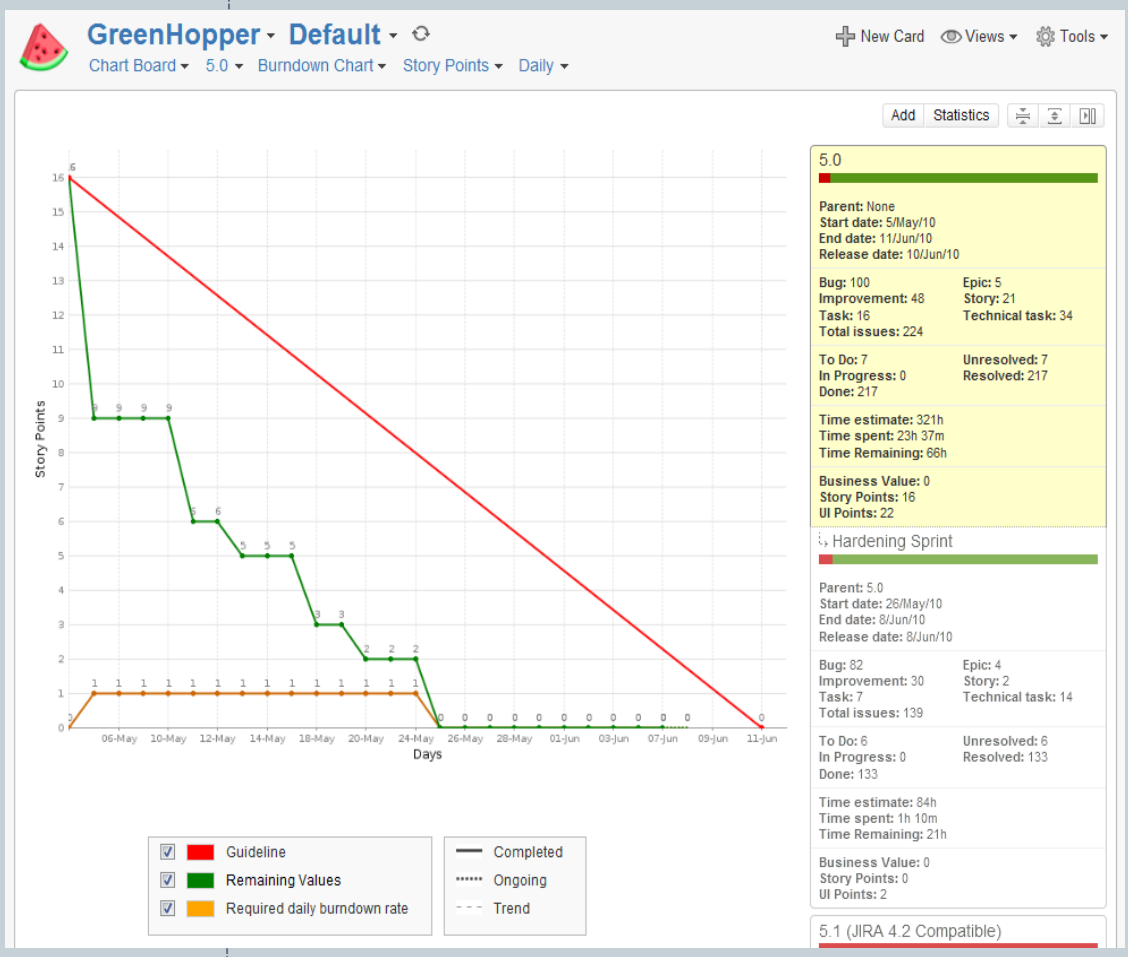
- Short duration milestones generally limited to a 30 day period
- Allow team to tackle a manageable amount of overall project and get it to a ship ready state.
- Team members select items from Sprint Backlog, complete them, unite them, test them to integrate into a final deliverable product
- Team members continue to draw from Sprint Backlog until all requirements are met for this Sprint (Sprint Backlog has zero items remaining)

Burndown Chart

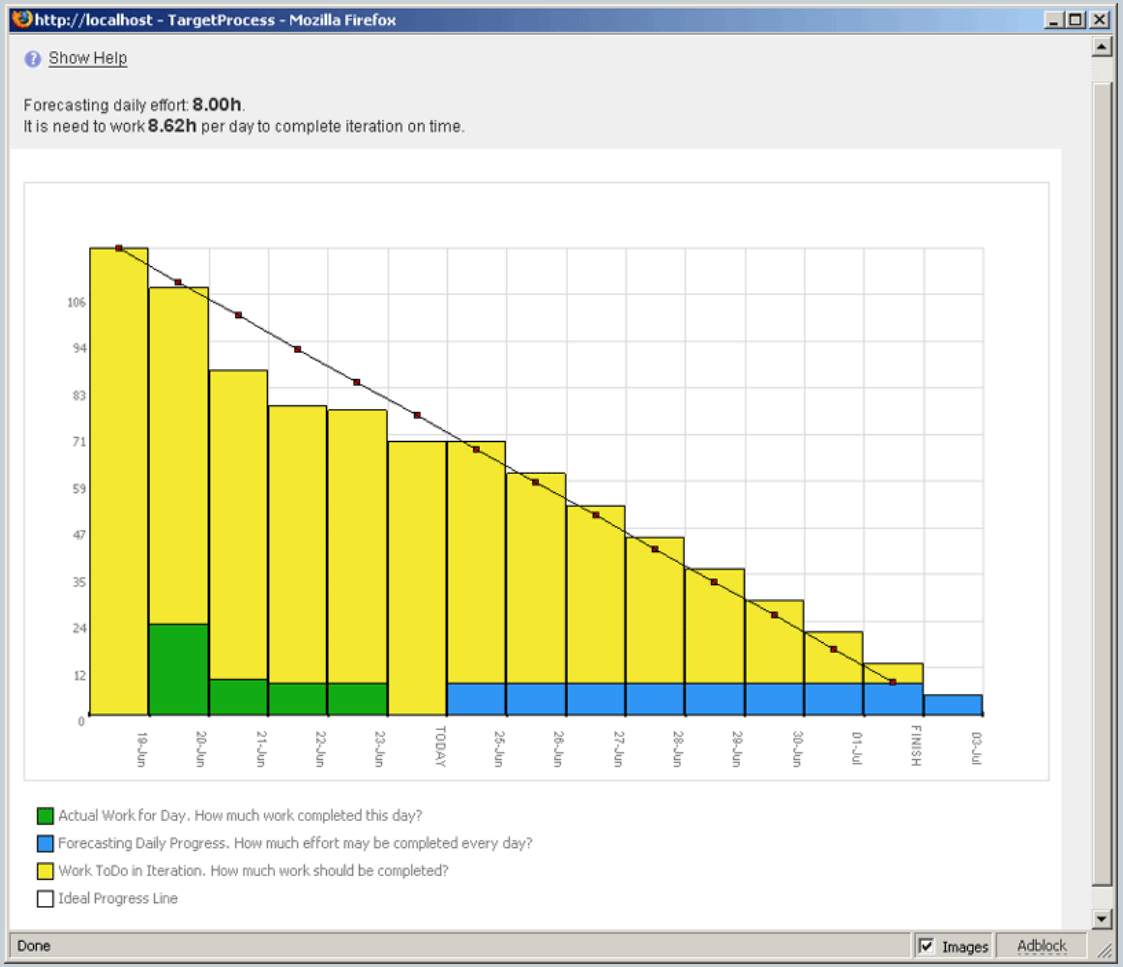
- Visual representation of sprint progress
- Burndown velocity is slope of the actual chart point deliverables
- Clear indication if project is on track or going to be late.
- Provides information early to make adjustments to get project back on track
- Data comes from Sprint backlog has hours estimated on each segment to produce
- As team members work on and complete task, hours remaining to complete remainder of work create the legs of the chart for each day

Burndown Chart

*Note: This one is done by story points, not hours.



Burndown Chart



The Daily Scrum

- Fast Paced Morning Meeting (15 minutes)
- Led by ScrumMaster
- What did you do yesterday?
- What are you going to do today?
- What obstacles are in your way?
- Does anyone have solutions too xxx?
- Integrity and Commitment expected
- Whole world is invited

Completion of Sprint

Sprint Review:

- Typically takes form of demo of new features
- Informal
- 2 hour prep time enforced
- No slides
- Whole world invited

Sprint Lookback:

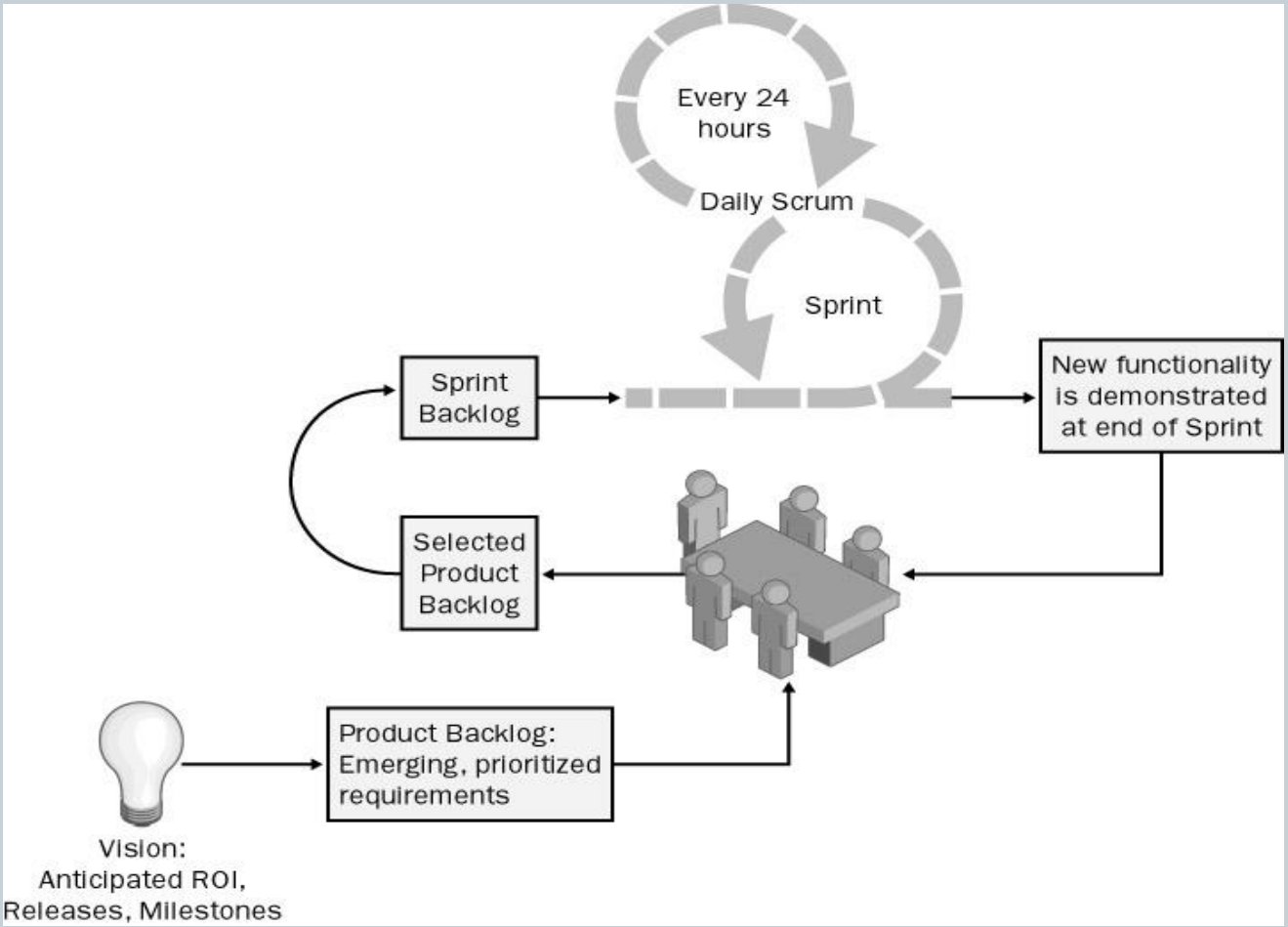
What should we…

- Start doing?
- Stop doing?
- Continue doing?

Issues with Scrum

Cons - Scalability	Pros
1. Teams are 5 – 9 people typically 2. Scalability results from team of teams 3. Scrum has been used in projects with more than 1000 team members 4. It may not be an effective solution for some large scale undertakings	1. Continuous involvement of primary stakeholder – product owner 2. Usable ready to ship product delivered every 30 days

Overview of Scrum Process



For More Information:

- Intro to Agile Scrum in Under 10 Minutes - What is Scrum? http://www.youtube.com/watch?feature=player_embedded&v=XUollRltyFM

- CIS 3001 – Managing Information Technology Projects
  - GSU CIS Department Course (3 credit hours – Traditional and online available)

Bibliography

- Agilemanifest.org
- http://msdn.microsoft.com/en-us/library/dd380682(v=vs.100).aspx
- http://www.eylean.com/blog/2013/01/never-ending-fight-physical-task-boards-vs-kanban-scrum-software
- confluence.atlassian.com /display/AGILE /Viewing+the+Statistics+Burndown+Chart
- http://www.targetprogress.com
- http://www.qualitytesting.info/profiles/blogs/introduction-to-scrum