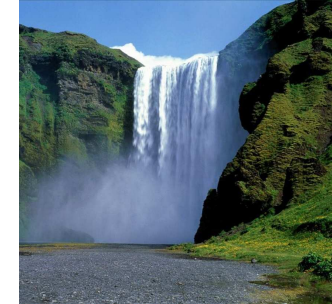


Scrum for Games

CSC404 Tutorial Slides

Sturdy Methodologies

- “Sturdy” (also known as “traditional” or “non-agile”).
 - Underlying philosophy: Measure twice, cut once.
 - Or: The cheapest bug to fix is one that doesn’t exist.
 - Inspired by traditional engineering methods, where planning and budgeting is key to winning contracts, and where late changes are expensive and unpopular.
- **Not for game design.**

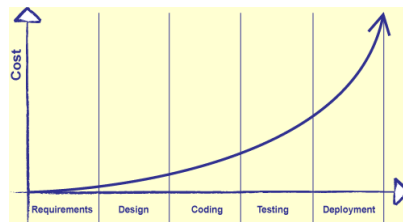


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Sturdy vs Agile

- Differences in practice are much less than differences in rhetoric.
- Example: Boehm’s Curve.



- Need a methodology that responds to this issue.

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Agile Methodologies

- “Agile” is a relative term.
 - Lots of small steps, with continuous testing and refactoring.
 - Underlying philosophy: Change is inevitable, so plan for it.
 - Or: “No battle plan ever survives contact with the enemy”
 - » Helmuth von Moltke
 - Refers to the sturdy camp (unflatteringly) as BDUF (“Big Design Up Front”)
 - Inspired by open source and 1990s web development.



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Agile Motivation

- Agile home ground:
 - Low criticality
 - Senior developers
 - Requirements change often
 - Small number of developers
 - Culture that thrives on chaos



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Sturdy vs Agile

- "Reality is that which, when you stop believing in it, doesn't go away." -- Philip K. Dick
- It's hard to get customers to sign off on "we'll make it up as we go along" and "trust me".
 - The waterfall method feels familiar and credible.
 - On the other hand, most scientific research is agile.
 - The second agile project is easier to sign off on than the first.
- "Adapting to change" is good, but "constant change" seems sloppy.
 - Is "continuous refactoring" the same thing as "better late than never", or a sign of "code first, ask questions later"?

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Implications for you

- So what does this mean for you (individual), you (group) and your project?
 - Your system is *always* buildable and releasable.
 - Easy for us to loop over your commits and check this ☺
 - Regular meetings *with minutes*.
 - Both with client and within group.
 - Issue tracking and prioritization.
 - Comprehensive testing.
 - Refactoring.
 - Collective code ownership.
 - We reserve the right to quiz you on *your team's code* as a part of any exercise.

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Scrum Methodology

- All about *iterative, incremental* development.
- Roles in scrum:
 - **Scrum Master**
 - Maintains the scrum process
 - **Product Owner**
 - Who this program is for, or who's paying for it.
 - **Team**
 - A group of about 7 people who do the actual work.



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Before You Can Scrum

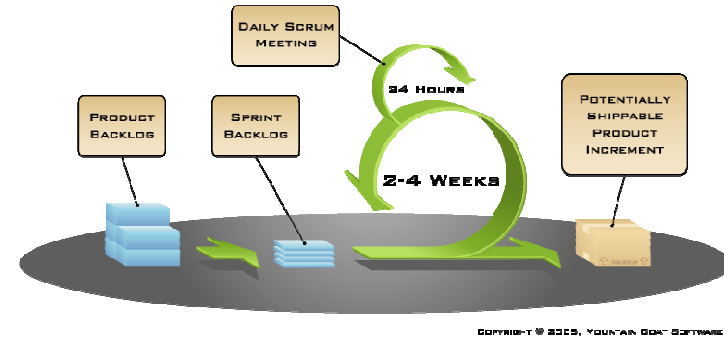
- Selling your product (sometimes before it's been made).
 - The vision statement, aka the "elevator pitch".
 - Helps to keep everybody headed in the same direction.
 - A good way for project members to introduce themselves, or to define their (self-)importance at conferences.



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Scrum at a Glance



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Elements of Scrum

- Product Backlog:
 - A list of things the team hasn't yet implemented
 - Stays forever there until project is done
 - Each item has a priority
 - Visible by client
- Sprint Backlog:
 - Basically, a "to do" list
 - Smaller list of things needed to be done
 - Property of the team
 - Due by next sprint

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More Elements of Scrum

- Sprint:
 - Typically 2-4 weeks long (hence the 30 days)
 - During this time the team gets to finish the sprint backlog items
 - No one is allowed to change the sprint backlog during a sprint
 - Ideally, a team should meet every 24 hours to discuss where they are at in the development



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Justification for Scrum

- Scrum takes into account:
 - Things will fall apart because humans are involved.
 - Accept that this problem can't be solved.
 - Work to instead get as much done as possible.
 - Tools
 - Does not discriminate (backlog can be in Excel)
 - Organization
 - Lots of communication is required (lots of meetings/updates)
 - Everybody needs to know how the project is doing.

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Scrum Example: Thanksgiving Dinner

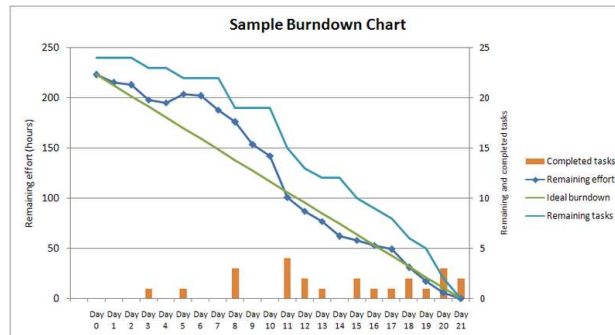
- Roles
- User stories
 - No technical details.
 - When complete, no further consultation with user necessary.
- Product backlog
 - User-side requirements.
 - User sets priority of each item.
- Sprint goals, backlog
 - Developer-side items.
 - Team sets priority of items (prioritization chart).
- Burn down chart
 - Chart of work remaining in sprint backlog.



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Burn Down Chart



- If Steve was more diligent, this would be filled with dinner items. Oh well.

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