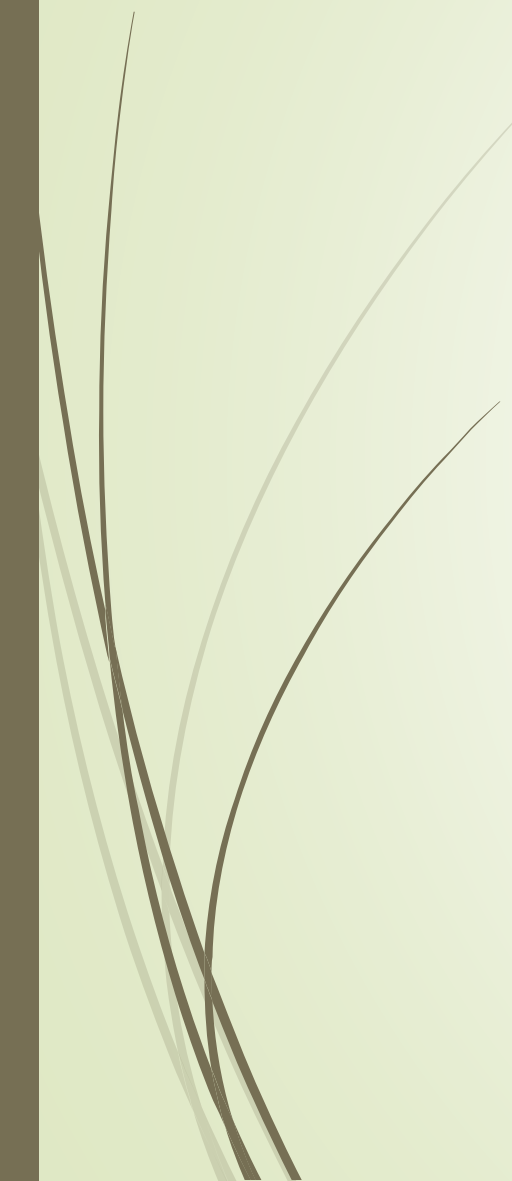# Getting Ready

Agile Activities for User Stories

Bill McNamara, CSM, PMP
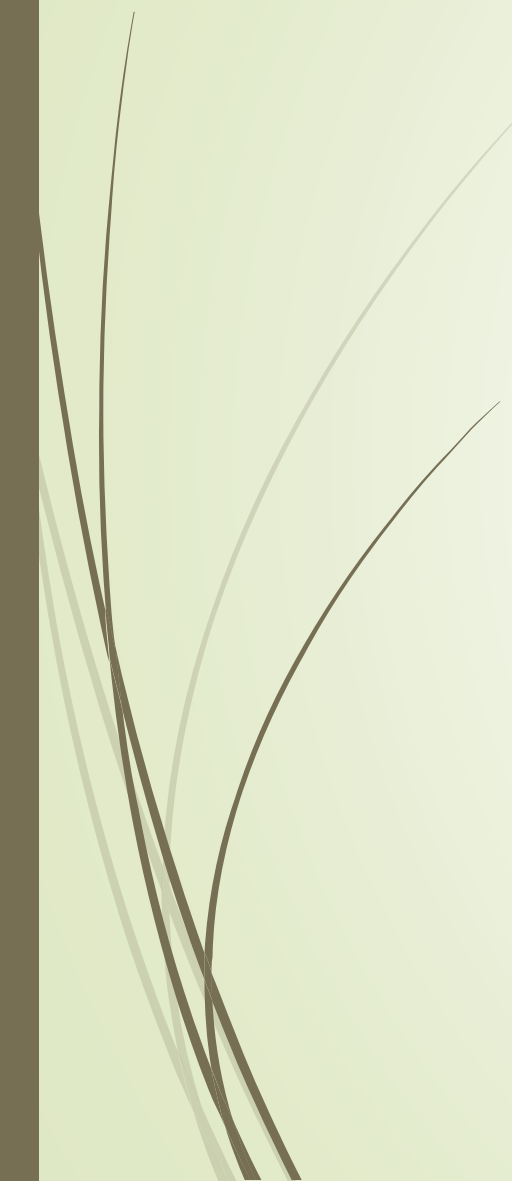
Agenda

- Bio
- The Environment

- User Story – A Brief History

Presenter Bio

Certified Scrum Master (CSM); Certified PMP. San Diego Charger fan since 1966. Proven track-record of managing enterprise-level business solutions and technology implementations that are high visibility, with diverse stakeholders and executive management engagement across large organizations. Practices a leadership style that enhances his application of project management processes while incorporating his knowledge of agile methodology. Combines excellent analytical processes and communication skills with extensive understanding of business processes from various industries and regulated clients. Applies adaptive project management planning and execution to deliver programs on time and within budget. Experienced managing and tracking project results while leading distributed teams. Leverages a leadership focus on vision, inclusion and teamwork to achieve optimum productivity & cooperation from project teams.

The Client – Aerospace Industry & The Product – Employee Portal

Multinational engineering and manufacturing organization serving defense, commercial aerospace, power generation and general industrial markets. Aligned into three LOBs: Commercial/Industrial, Defense and Power and further divided into Divisions, this firm designs, builds and markets products that keep power plants running, airliners flying and Defense needs satisfied.

Products marketed require a very, very high quality standard. This high standard culture permeates everything other LOB/Division within the organization.

These highest-level quality standards are expected for any project within the organization.

These standards have infected the Scrum Team.

Origins

User Stories originate with Extreme Programming, their first written description in 1998 only claims that customers define project scope "with user stories, which are like use cases".

Rather than offered as a distinct practice, they are described as one of the "game pieces" used in the "planning game".

However, most of the further writing centers around all the ways user stories are "unlike" use cases, in trying to answer in a more practical manner "how requirements are handled" in Extreme Programming (and more generally Agile) projects.

This drives the emergence, over the years, of a more sophisticated account of user stories.

Definition of User Story

In consultation with the customer or product owner, the team divides up the work to be done into functional increments called "user stories".

Each user story is expected to yield, once implemented, a contribution to the value of the overall product, irrespective of the order of implementation; these and other assumptions as to the nature of user stories are captured by the INVEST formula.

To make these assumptions tangible, user stores are reified into a physical form: an index card or sticky note, on which a brief descriptive sentence is written to serve as a reminder of its value. This emphasizes the "atomic" nature of user stories.

Characteristics of a "Good" User Story

- Unique ID
- Name – description of what will be achieved. Names should be short and unique.
- Brief Description – a brief description captures the purpose of the User Story in a couple of sentences.
- Actor(s) – could be a real person or a position with a role or it could be another system interacting within the User Story.
- Sequence of events with a focus on the Outcome – This is the body of the User Story. Often captured as Acceptance Criteria. Each condition in the User Story producing an Outcome or Result is the result of the system response.

User Story may also contain:

- Pre-conditions
- Post-conditions

These define the required system states before and after the conditions in the User Story are produced.

Agile vs Waterfall – an Observation

Agile is very different when it comes to requirements management. As opposed to traditional requirements methods, the lighter weight methods of applying User Stories and prioritized Backlog management are often more than adequate at the team or team component level.

But at scale, these methods must be extended to coordinate the development of larger scale systems or systems with many, many diverse end user groups.

Teams must apply a lean, scalable requirements pattern that consist of dimensions at the level of "vision" and "roadmap" along with just-in-time elaboration. This method brings the benefits of agility to a larger scale team and to team of teams building larger systems.

Expected Benefits

For most Agile teams user stories are the main vehicle of **incremental** software delivery, and offer the following benefits:

- mitigating the risks of delayed feedback, all the more so if the increments are small

- if the software is **released** to production frequently for the customer or product owner, the option to change their mind on the details or the schedule priority of any user story not yet implemented

- for developers, being given clear and precise **acceptance criteria**, and ongoing feedback as they complete work

- promoting a clear separation of responsibilities between defining the **"what"** (province of the customer or product owner) and the **"how"** (province of the technical team), leveraging the skills and creativity of each

Grooming Process

Define Stories Eligible for the Sprint
- ScrubDev
- ScrubUX
- ScrubTest
- Acceptance Criteria locked down

Pre-Grooming
- Identify the Stories Eligible for the Sprint
- Stack Rank adjusted for Sprint

Grooming
- Review stories by Stack Rank – adjust Stack Rank as needed (consensus)
- Read the Details and the Acceptance Criteria
- If any update to the User Story Acceptance Criteria, story moves to the Backlog
- Discuss round table as much as needed until each Scrum Team member is ready to add their Groom Tag
- Ask Testers if they have any questions

Grooming Steps

For Tech Grooming (by Tech Lead & Dev Team)
- Identify child Tasks
- Estimate effort hours to complete the Tasks
- Attach GroomedDev Tag

Basic agenda for each User Story
- Read & clarify Details, Acceptance Criteria, Wireframes & other key info (links, attachments)
- If any changes to above, Scrub Tags will be removed and Story will revert to not Scrubbed status
- Allow testers & others to ask clarifying questions
- Identify testing needs or confirm Testing Tags attached for each type of testing to be performed
- Update the Iteration Path & other fields as needed
- Briefly discuss Stack Rank priority to collect Scrum Team members input – final Stack Rank will be set by Tech Lead
- If any changes to above, Scrub Tags will be removed and Story will revert to not Scrubbed.

User Story Example 1

- **Unique ID**: 9975

- **Title**: News Aggregator shows social metrics and feeds

- **Description**: As a team member, I want to see the 'number of comments and number of shares of news articles and video articles that are in the feature spot (on any given page) while browsing news and videos.

- **Acceptance Criteria**:

1. News Aggregator displays shares count and "Shares" for featured news articles or video articles.

2. News Aggregator displays comments count and "Comments" for featured news articles or video articles.

3. Featured articles Items without shares or comments will not display these metrics.

4. Shares quantity displays the correct total number of shares (as sourced from third party tool).

5. Comments quantity displays the correct total number of comments (as sourced from third party tool).

- This story has an external dependency on an API to consume social metrics.

Potential Costs

Incremental development in general, and the "nano-incremental" strategy embodied in user stories in particular, has significant impacts on projects' testing strategies, and in particular it mandates significant test automation.

This follows from the so-called "quadratic growth" problem: after implementation of feature F1 it is normal to test that feature. After implementation of feature F2, the risk of regression dictates re-testing F1 as well as testing F2. A test sequence assuming incremental development therefore goes: F1,F1+F2,F1+F2+F3, etc. - this grows as the square of the number of features, and can therefore quickly become unmanageable as projects grow in size.

Test automation (in particular **unit testing** and **acceptance testing**) mitigates this effect, although it does come at a cost.

User Story Example 2

- **Unique ID**: 9389

- **Title**: Banner Priority

- **Description**: As a Rocket Scientist or site admin, I can specify banner priority, so that based on the set priority the banner will follow certain rules defined in the Acceptance Criteria.

- **Acceptance Criteria**:

1. Priority can be specified by the Rocket Scientist or an site admin but Rocket Scientists or Enterprise admins can only select critical.

2. The banner cycle will begin with the most recently published banner.

3. If a banner has 'Critical' priority, it will be the only banner to display. All other banners in queue will not display until the banner with 'Critical' priority no longer has a value of 'Critical' for the priority field.

4. If a banner has a priority value of 'High', the banner should be the first banner to display in the cycle, even if it is not the most recently published. If more than one banner has a priority value of 'High', the banner with the most recently published date and time should display first, with the rest of the 'High' priority banners displaying in sequential order by published date and time.

5. Banners with a priority value of 'Normal' will cycle as expected in sequential order by most recent published date with all other 'Normal' priority banners.

Appendix

- **INVEST** *(attributed to William West – 2003)* **-** A good user story should be:
- "I" ndependent (of all others)
- "N" egotiable (not a specific contract for features)
- "V" aluable (or [vertical](#))
- "E" stimable (to a good approximation)
- "S" mall (so as to fit within an iteration)
- "T" estable (in principle, even if there isn't a test for it yet)

Contact info:

- William McNamara – cell 919.602.3203
- wmtmcnamara@gmail.com