Lab 4: Story Mapping and Splitting

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Context and Motivation

This is a ChatGPT summary of Jeff Patton's original article.

> "Jeff Patton's article,"The New User Story Backlog is a Map," critiques the traditional flat backlog used in Agile development for its inadequacy in conveying the system's overall functionality. He introduces the concept of a story map—a two-dimensional model that organizes user stories both horizontally and vertically. Horizontally, it outlines user activities in the sequence they occur, capturing the user's journey through the system. Vertically, it breaks down these activities into detailed user tasks, allowing for prioritization and incremental development. This structure not only maintains the big picture but also facilitates better communication among stakeholders and more effective release planning. By mapping stories in this manner, teams can focus on delivering user value and adapt more readily to changes, ensuring that the product evolves in alignment with user needs and business goals."

This is a ChatGPT summary of story splitting.

> "The Humanizing Work Guide to Splitting User Stories offers a comprehensive framework for breaking down large user stories into smaller, valuable, and testable units to enhance agile development practices. It emphasizes the importance of creating"vertical slices"—stories that deliver end-to-end value from the user's perspective, rather than focusing solely on technical components. A good user story should adhere to the INVEST criteria: Independent, Negotiable, Valuable, Estimable, Small, and Testable. The guide introduces several patterns for effective story splitting, including Workflow Steps, Operations (CRUD), Business Rule Variations, Simple/Complex, Defer Performance, and Spikes for research. A meta-pattern involves identifying core complexities and reducing variations to create focused, manageable stories. By applying these techniques, teams can achieve more frequent feedback, better risk management, and improved prioritization, ultimately leading to more efficient and user-centered product development."

Learning Objectives

Having completed this lab, participants are able to:

- Explain when and why to apply Story Mapping and Story Splitting.
- Map and split stories according to the instructions given in the book "User Story Mapping"(Patton 2014) and in the online resources https://www.humanizingwork.com/the-humanizing-work-guide-to-splitting-user-stories/.
- Place the two practices in the collaborative end-to-end analysis and design process.

Steps Overview

This lab exercise has the following steps:

0. Review results from Lab 1, Lab 2 and Lab 3.
1. Create a story map, starting with the horizontal time axis, initially populated from pivotal events in the event storming output.
2. Split stories that do not meet INVEST criteria to populate the vertical axis of the story map: details, release/sprint planning (see the book "User Story Mapping" (Patton 2014): opening game, mid-game, end game).

Step 0: Review results from Lab 1, Lab 2 and Lab 3 (10 mins)

Task: Recapitulate your solutions to the previous labs, or screen the sample solutions to them.

> *Hints:* Time box this task; it is also possible to start with a single story epic (of your choice).

Question: Why is a flat backlog with epics that do not meet the INVEST criteria not enough for efficient and effective sprinting?

Step 1: Create Story Map (40 mins)

Task: Populate the horizontal axis of a story map for the realization project in the sample scenario with user stories, preferably on a rather high level of abstraction (epic "altitude").

> *Hint:* You may want to use the results from domain storytelling (DST, Lab 2) and event storming (ES, Lab 3) for this effort.

Questions:

1. Where did you get the timing information from?
2. Are there variations?
3. What makes a good story?

Step 2: Split stories not meeting INVEST criteria (40 mins)

Task: Populate the vertical axis of the story map from Step 1 by applying story splitting to one or more existing stories, for instance those from Labs 2 (and, a bit more indirectly/implicitly, Lab 3). To do so, apply one or more of the first five story-splitting patterns in the article "The Humanizing Work Guide to Splitting User Stories" by Richard Lawrence and Peter Green to one or more stories that do not meet the INVEST criteria yet (for instance, the epic resulting from Lab 1 or the domain story from Lab 2).

> *Hints:* Consult the Story Splitting activity in DPR. The first five splitting patterns are particularly relevant for this lab step: workflow, operations, business rule, variations in data, interface variations. Chapter 15 "Using Discovery for Validated Learning" in Patton (2014) suggests a "good enough, better, best" approach to story mapping and splitting.

Questions:

1. Which patterns are particularly relevant when Domain Storytelling and/or EventStorming have been performed before?
2. Do the patterns meet the MECE principle (mutually exclusive and collectively exhaustive)?
3. Do story splitting and mapping overlap?

Tools

Any tool used to keep track of user stories as they go through the “three Cs” (card, conversation, confirmation) can be used to record mapping and splitting results:

- Issue trackers
- Backlog management tools, for instance those coming with version control systems such as GitHub and Gitlab.
- Even spreadsheet tools such as Excel

Summary and Conclusions

This CoMo Lab 4 featured and combined two established agile practice, user story mapping and story splitting.

Concepts Revisited

- User stories and role-feature-benefit template for them
- Two-dimensional story map (time, details)
- Five plus four splitting patterns

Reflection and Call to Action

Please review and recapitulate what you take away from this lab. Where and when can you apply the taught concepts?

Repetition Questions

Frequently Asked Questions (FAQ)

- *What is the difference between splitting and mapping? Why two practices?*
  Answer: These two practices have been developed independently to the best of our knowledge. Splitting is about making stories fit into sprints and meet the INVEST criteria, which is comparable to the vertical axis of the story map.
- *How does a story board differ from a Kanban board?*
  Answer: The time axis (horizontal) has different meanings: progression of workflow in domain vs. stages of completion (realization/development progress). Note that the vertical axis can be used in different ways in story mapping: details vs. iteration/release planning.

- *What does INVEST stand for?*
  Answer: The INVEST criteria for stories are: Independent, Negotiable, Valuable, Estimable, Small, and Testable.
- *Are the 5+4 splitting patterns MECE? And what does MECE stand for anyway?*
  Answer: They are not mutually exclusive or collectively exhaustive. https://en.wikipedia.org/wiki/MECE_principle explains the MECE princple, which works well elsewhere too.

More Information

> *Hint:* Each chapter of "User Story Mapping" (Patton 2014) is very worth reading; many examples are given and stories shared, with personas (or even real people) appearing. Chapter 1 sets the scene; Chapters 2 to 5 are about the map(ping) dimensions, the sprint/release slicing and iteration planning in particular. Chapters 6 to 8 are about writing (better: identifying stories and then discussing and confirming their cards in conversions). And so on.

Here are some additional (or already given) links:

- https://jpattonassociates.com/the-new-backlog/ and more recent articles such as https://jpattonassociates.com/5-story-mapping-mistakes/: "1. Losing the story 2. Getting lost in the details 3. Worrying too much about flow, branches, and what-abouts 4. Mapping the whole product when you're trying to add a single feature 5. Not anchoring releases on an outcome"
- https://www.easyagile.com/blog/the-ultimate-guide-to-user-story-maps and https://www.easyagile.com/blog/anatomy-of-an-agile-user-story-map/
- Story splitting is comprehensively covered in https://www.humanizingwork.com/the-humanizing-work-guide-to-splitting-user-stories/. (Zimmermann and Stocker 2024) provides additional examples and usage context information.
- https://www.mountaingoatsoftware.com/blog/five-simple-but-powerful-ways-to-split-user-stories and https://www.easyagile.com/blog/how-to-write-good-user-stories-in-agile-software-development/
- User stories in SAFe: https://framework.scaledagile.com/story

References

Patton, Jeff. 2014. *User Story Mapping: Discover the Whole Story, Build the Right Product*. O'Reilly Media.
Zimmermann, Olaf, and Mirko Stocker. 2024. *Design Practice Reference - Guides and Templates to Craft Quality Software in Style*. online: LeanPub. https://leanpub.com/dpr.