



Current Trends in Web Engineering

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Section://5

Creating a Backlog & other User Story Frameworks

(Not official Scrum but typical approach)





● Creating a Backlog

- Is not easy,
 - Is not easy,
 - Is not easy.
-
- Requires experience!
 - There are many different ways to start.
 - We will learn and apply different ones.



● First, there is an idea...

- If you think the idea fits, then...
- Define the product vision applying Moore's Elevator test
- The vision passes the test if it contains the following information
 - ▶ For <target customer>
 - ▶ who <statement of the need or opportunity>
 - ▶ the <product name> is
 - ▶ a <product category>
 - ▶ that <key benefit, compelling reason to buy>.
 - ▶ unlike <primary competitive alternative>
 - ▶ our product <statement of primary differentiation>.



Define User of your products

- User?
- Are there different users?
 - ▶ Are there classes of users (audiences)?
 - ▶ Are there users with different roles?
- What are their **Needs**?
 - ▶ "Human Scale Development" developed by Manfred Max-Neef, e.g., Security/Protection, Affection (German: Zuwendung), Understanding
 - ▶ Needs vs Wants: In economics, a want is something that is desired – a need is usually something that is necessary for survival
- And even more important: **What are their jobs to get done?**



Questions regarding Opportunities

- From "**Inspired: How To Create Products Customers Love**", by **Marty Cagan**, SVPG Press, ISBN 978-0-981904-0-7
- Fortunately, it's really not that hard to do a useful opportunity assessment. I ask product managers to answer ten fundamental questions:
 1. Exactly what problem will this solve? (**value** proposition)
 2. For whom do we solve that problem? (target **market**)
 3. How big is the opportunity? (market size)
 4. How will we measure success? (**metrics/revenue** strategy)
 5. What alternatives are out there now? (**competitive** landscape)
 6. Why are we best suited to pursue this? (our **differentiator**)
 7. Why now? (market window)
 8. How will we get this product to market? (go-to-market strategy)
 9. What factors are critical to success? (**solution requirements**)
 10. Given the above, what's the recommendation? (go or no-go)



From Needs to Stories

- What are themes / features corresponding to needs
- Define Stories to corresponding themes and features
- Story Template
 - ▶ **<Title>:**
 - ▶ **As a <user/role>**
 - ▶ **I want <functionality/goal/desire>**
 - ▶ **so that <business value/benefit received>.**
- Stories have different sizes
 - ▶ Epic story
 - ▶ Big Story
 - ▶ Story



● INVEST in good stories

- Ron Jeffries about stories (in XP): **Three C**
 - ▶ **Cards** (their physical medium)
 - ▶ **Conversation** (the discussion surrounding them)
 - ▶ **Confirmation** (tests that verify them)
- Stories are good enough for both sides
 - ▶ For customers/stakeholders and programmers
 - ▶ To work together effectively
- Characteristics: INVEST



● INVEST in good stories (2)

- INVEST in detail
 - ▶ I – **Independent** (no dependencies between stories)
 - ▶ N – **Negotiable** (no contract, captures the essence)
 - ▶ V – **Valuable** (value to the *customer only*)
 - ▶ E – **Estimable** (written good enough to be ranked)
 - ▶ S – **Small** (good stories tend to be small – but think of it in this way: Alistair Cockburn described the cards as tokens promising a future conversation)
 - ▶ T – **Testable** (good story is a promise: “I can write a test for it” – if customer does not know what done means who will know at all?)



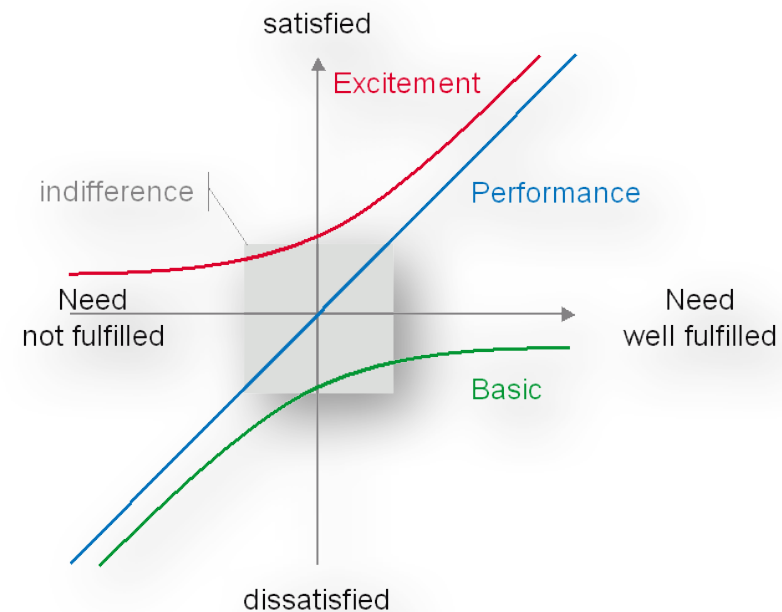
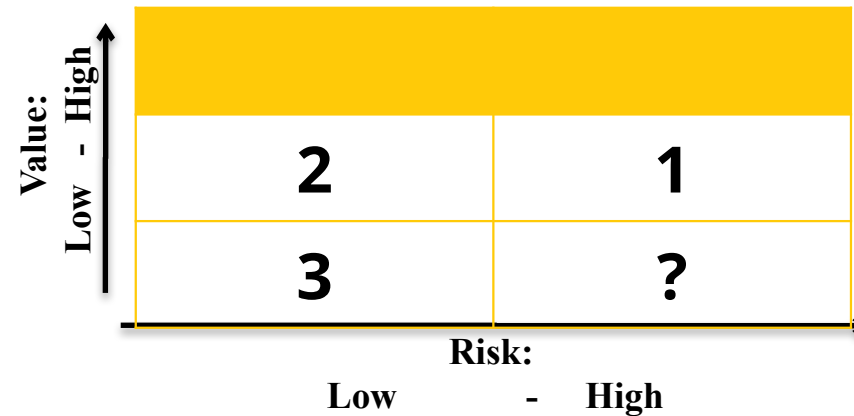
Invest in Stories and Smart Tasks

- For Sprint Planning
 - ▶ Mapping from Story to Tasks
- A task should be smart
 - ▶ S – **Specific** (do you understand what's involved)
 - ▶ M – **Measurable** (can we decide on done)
 - ▶ A – **Achievable** (can a member solve the task)
 - ▶ R – **Relevant** (can you explain and justify the task)
 - ▶ T – **Time-boxed** (is it small enough)



Product Backlog Order

- Different techniques for ordering the backlog, e.g., by prioritization based on ROI
- Different approaches might be applied
 - ▶ ROI – Risk-Value matrix
 - 1,2,3,4
 - ▶ Kano Model
 - Define mixture of basic, performance, and excitement characteristics
- MoSCoW Method
 - ▶ Must, Should, Could and Won't have





Beyond traditional user story frameworks

- Scrum:
 - ▶ **As a <user/role>**
 - ▶ **I want <functionality/goal/desire>**
 - ▶ **so that <business value/benefit received>.**
- Behavior Driven Development
 - ▶ **In Order To... <receive benefit>**
 - ▶ **As A... <user/role>**
 - ▶ **I Want... <goal/desire>**
- Hypothesis Driven Development (HDD)*
 - ▶ **We believe <*this capability*>**
 - ▶ **Will result in <*this outcome*>**
 - ▶ **We will know we have succeeded when <*we see a measurable signal*>**

* <http://barryoreilly.com/2013/10/21/how-to-implement-hypothesis-driven-development/>



HDD Example

Hypothesis Story Card Example:

- **We Believe That**
increasing the size of hotel images on the booking page
- **Will Result In**
improved customer engagement and conversion
- **We Will Know We Have Succeeded When**
we see a 5% increase in customers who review hotel images who then proceed to book in 48 hours.
- Combining Agile and HDD*:
 - ▶ Effective monitoring and evaluation tools are required to measure the impact of testing efforts
 - ▶ Agile software development focuses on “working software” as the primary measure of progress.
 - ▶ Combining Hypothesis-Driven Development with Continuous Delivery, we define “working software” and “validated learning” as the primary measures of progress.

* <http://barryoreilly.com/2013/10/21/how-to-implement-hypothesis-driven-development/>



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Example Backlog (1st approach)





As Student

- (simplified Example...)
- I want to attend the lecture, ...
- Need:
 - ▶ Acquire new knowledge / Understanding
 - To be better than competitors
 - ▶ Freedom
 - To have a freedom of choice for the job I like
 - ▶ Protection
 - To get a well-paid job



• HDD – any ideas? How to proceed?

- **We believe <*this capability*>**
- **Will result in <*this outcome*>**
- **We will know we have succeeded when <*we see a measurable signal*>**



Discussion

- What does the information that is presented when using the template from Moore's Elevator Test aim at?
- Why is there no clear answer to the Needs vs. Wants debate?
- Can you sufficiently cover all software requirements using a story template like "AS A ... I WANT ... SO THAT ..."?
- What are similar ideas behind the story/task quality criteria INVEST/SMART?
- How do you determine the right balance of features in the Kano model?