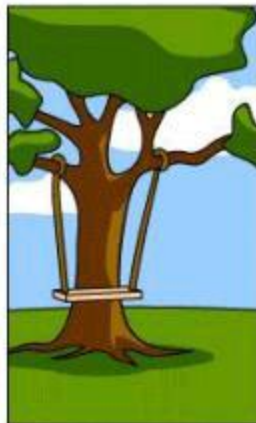# User-Centric Planning

Using Agile Planning Techniques

How the customer explained it
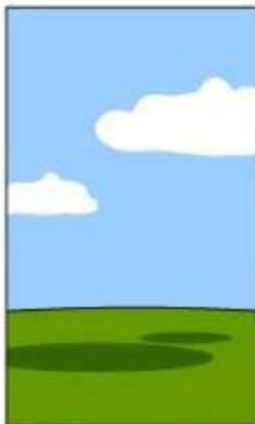
How the Project Leader understood it

How the Analyst designed it

How the Programmer wrote it

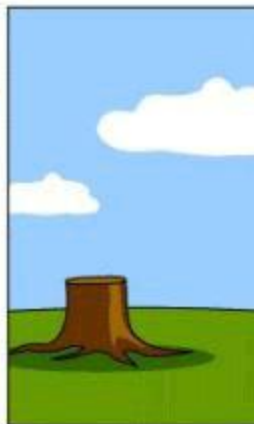How the Business Consultant described it

How the project was documented

What operations installed

How the customer was billed

How it was supported

What the customer really needed

- Remember this from our 1ˢᵗ lecture

- What challenges do we face when collecting/understanding the requirements of a software system

Project vs. Product

- Project Management - Structuring processes that allow a team to make decisions, and execute tasks, as well as possible.
- Product Management - Analyzing the benefit of our product to its users, deciding <u>what</u> needs to get built, prioritizing & categorizing product features.

Project vs. Product

- Organizational skills vs. Domain Expertise.
- Project Manager and Product Manager are complementary roles.
- In many small startups, both roles are played by the same person.

Product Management

- Product management (just like project management) is an on-going process:
  - Product decisions are made at the beginning/end of each iteration.
  - On-going market research, and learning from competitors.
  - In some cases, a dedicated team is required to apply advanced techniques for collecting and analyzing user feedback.

Product Management

- Our goals for this week are:
  - Examine a few common product management tools/techniques.
  - Use these tools/techniques to define/create a product, as well as learn how to use them to drive the development process.
- In other words, we will evaluate agile planning techniques.

Let's start ...

- My role: A university representative (i.e. the client).
- Your role: A software development team hired to build our University's online portal.
- Ask questions, suggest features, bring up concern, etc.
- Our goal is to "leave this meeting" feeling like you have a better understanding of what you need to build.

MVP

- Our goal should be to define our MVP - Minimum Viable Product.
- The simplest product we can build, and release to users.
- A product with the highest return on investment versus risk.

Our Goal - MVP

- In order to decide on a MVP, we need to understand the users who will interact with it.
  - The different types (e.g. Student, teacher, school admin staff, etc.)
  - What are their needs, preferences, and constraints?
  - Which users are we targeting first?

Personas

- A tool/technique to help us better understand our users.
- [A short descriptions or biographies of fictitious, archetypical customers.](#)
- Originally, a concept from the Marketing & Advertising world.
- [Examples](#), [More Examples](#)

Dan The Commuter

Dan is a 1st year Political-Sciences student at UofT's downtown campus. He is single. He commutes to school 4 days a week, always with his laptop. Because of the fairly long commute, Dan usually spends full days on campus: He goes to the gym regularly, studies at the library, he knows where to find a microwave to heat up his food, and where is a good place to take a mid-day power nap. Dan has always been an average student, and never found school to be too exciting. That being said, he enjoys the social aspect of university life, and likes visiting nearby cafes and comic book stores.

Dan McSmith
19 years old
From *Mississauga*

Registrar's Office Shelly

Shelly Ford
47 years old
Married + 2 children
From *Toronto*

Shelly has been working at Victoria College's Registrar's Office for the past 12 years (Mon-Fri, from 8:30 to 4). She lives in midtown Toronto, and usually takes the subway to work. She uses a computer all day at work, but she still shies away from the social web. Outside of work, Shelly enjoys Yoga at the gym, painting classes, and live Jazz. Shelly holds a B.A in Philosophy, and M.A in Fine Arts, both from UofT. She has been married for 22 years to Sam, who works in Finance. They have two girls, one starting her 2nd year at Western University, and the other in her senior year of high-school.

Personas

- Should be detailed:
  - Name, Photo, Age, Gender.
  - Personality
  - Skills
  - Environment (where do they live, what do they usually do, at what time, and where)
  - What drives/motivates them.

Personas

- Used to implement user-centric design:
  - Developed based user research.
  - Require us to better understand our users.
  - Focus on the customer's motivation, not their opinion.
  - [Good article about the goals and benefits of using personas](.)

Personas

- Try to think of a few more personas for our case study ...

Who vs. What

- Once we choose which personas to focus on, **we know who** our target users are.
- Next, let's try to **figure out what** our target users want ….

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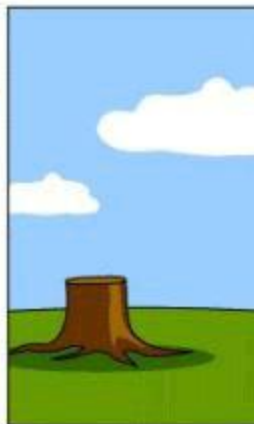
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User Stories

- Format:

  As *user*, I want *something*, so that *benefit*.

- The information is:
  - *Who* is the user? (e.g. role/persona)
  - *What* do they want to do?
  - *Why* do they want to do that?

User Stories - Examples

- Example:
  As *Dan*, I want to *receive important announcements via push notification* to my phone, so that I *don't miss any important information*.

- [More Examples](#) (starting from slide 16)

- [A detailed explanation](#)

User Stories

- A high-level definition of a requirement.
- Contains just enough information to allow developers to estimate "effort to implement".
- "A reminder to have a conversation with your stakeholders/customers"
- Very short - Often written on index cards.

User Stories

- User Stories are a tool that helps us "get things right" on the product aspect.
- They require both the customer and the development team to articulate their ideas using a common language.

User Stories

- Two main questions:
  - How to determine the scope of a story?
    Ex: A login system vs. A login page.

  - How to determine the level of details?

- The answer is … based on what works best for you team, for the current phase of the project.

User Stories

- User stories can drive our product creation as well as our development process:
  - Very high-level stories when planning MVP.
  - More details when planning the next release.
  - Even more detailed stories/tasks when planning the next iteration.

Back to our case study

- Come up with user stories, and plan our MVP, and first release.
  - Focus only on one persona.
  - Create very high-level stories.
  - Prioritize stories in order to decide which ones go into our MVP and first release.

User Stories & An Agile Process

- We've used user stories to define our product, now let's use them to drive our process:
  - First, we need to come up with a <u>very high-level</u> software architecture.
    - This will be our first iteration.
    - We may use user stories, but we don't have to.
  - Then, start building and create detailed user stories and/or tasks for each iteration.

User Stories & An Agile Process

- When driving an agile process, user stories should include more information:
  - Identifier (Ex: User Story #57)
  - Priority
    - Numbers (1-10)
    - Low/Med/High
    - MoSCoW (Must, Should, Could, Won't)
  - Difficulty/size (measure "effort to implement").
  - Acceptance tests/criteria.

User Stories & An Agile Process

- Priority is determined by the customer.
- Size is determined by the developer, and can be specified in points.
- A team's **Velocity** is the number of points completed by the team per iteration.

Velocity

- We track our velocity over time:
  - Use it to improve productivity - When we change our process, check the effect on velocity.
  - More accurate scheduling - If we know our velocity, it's easier to estimate the amount of work the team can complete in a single iteration.

User Stories & An Agile Process

- Some guidelines:
  - A story must fit in a single iteration.
    Otherwise, it needs to be broken into smaller stories.
  - Focus on a single feature.
  - The description should be short, and clear to a non-technical person.
  - Use any aids that you may find useful: Lists (e.g. acceptance criteria), images, audio, video, etc.

Summary

- Agile is about moving fast, but it doesn't mean "no planning at all".
- In fact, we use a number of planning tools:
  - Personas - Help us understand our users, and develop our product to fit their needs.
  - User Stories - Help us articulate requirements, communicate them efficiently between teams, and fulfill them on schedule.

Summary

- When planning an item, the further it is into the future, the less details we use:
  - Current iteration - Detailed.
  - Next few iterations - Less detailed.
  - Future release - Even less detailed.
  - Product vision - Very high level, almost no details.
- This approach is common to all Agile practices/tools.