HCI and Design

User Stories

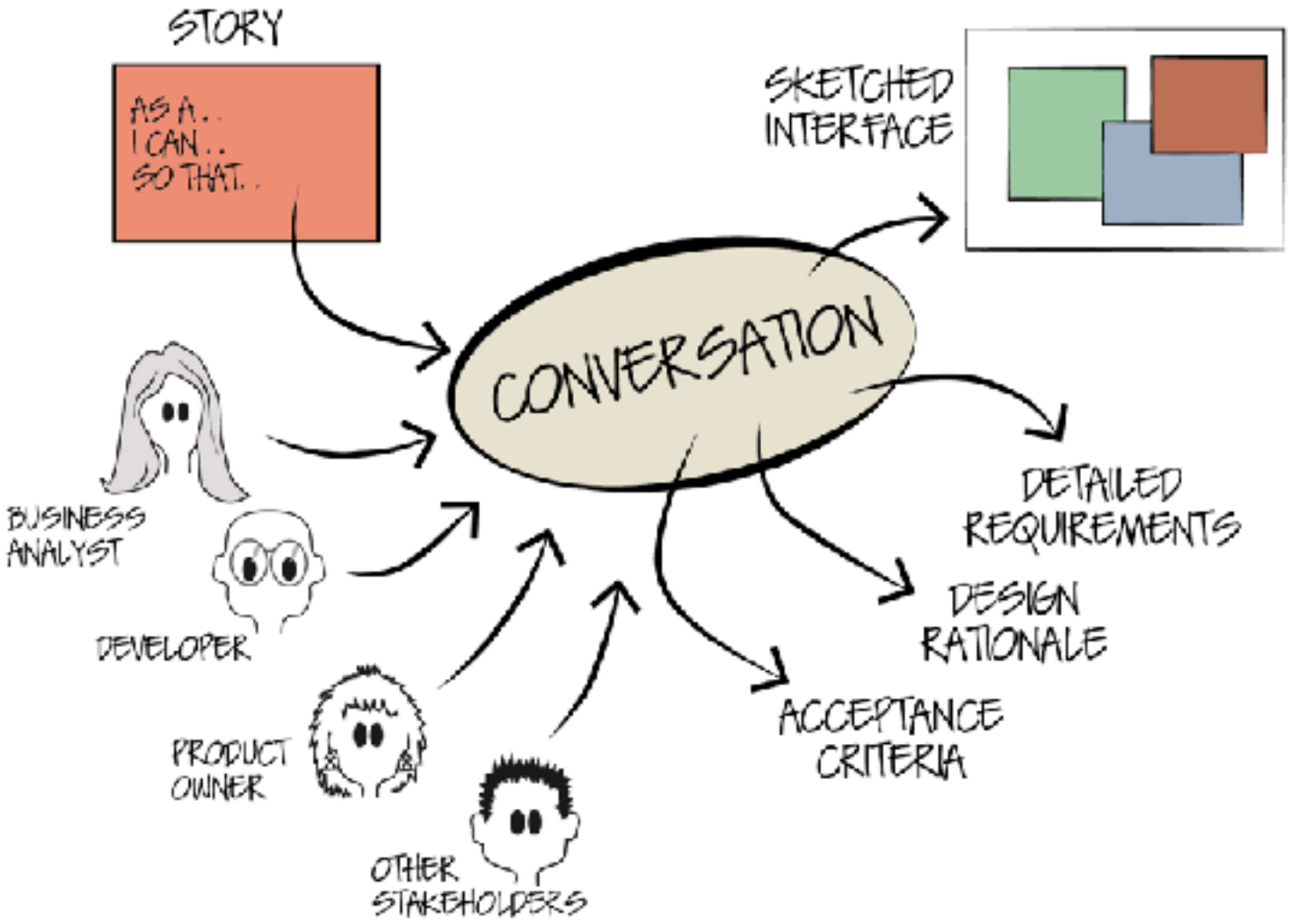
Last time: We learned to create personas

We will now use these personas to define user stories.

User stories:

- Describe functionality that will be valuable to user of software.
- A feature request from a user's point of view.
- It is NOT a bug report or a functional specification.
- It is NOT a technical design document.

User Stories as a Design Tool



User Stories as a Design Tool

Shifts the focus from the product to what the eventual owner / user needs or wants it to do.

A customer buys your product to help them do something.
Your stories must help them do it.

An user has to do something using your product.
Your stories must help them do it.

Components of a User Story

Persona; important and specific class of user

Goal, action, task

Reason, motivation. Never leave it out of your story! The rationale demonstrates the value to the eventual user / owner and determines its priority and the effort to be expended.

Example


Role is important to the eventual owner
AS A MUSIC FAN
I CAN ESTABLISH AN ACCOUNT
SO THAT I CAN LEGALLY STREAM AND DOWNLOAD MUSIC
Functionality enables the value to be achieved
Rationale demonstrates value to the eventual owner

Story Scope

- Too broad = impossible to test/code
- Too narrow = more time spent specifying than implementing
- Split long stories (“epics”) into smaller pieces
- Rather than specify small details, get those in conversations with customer & annotate story
- Big stories can serve as placeholders for areas of the system that still need to be discussed

Story Scope

"As an administrator I can manage posts to the site so that I can control the content our customers see"

— manage?
— what content?
— control?

This is called an Epic
Split into smaller stories

Writing Stories

- Customer writes stories
  - Written in language of business to allow prioritization
  - Customer is primary product visionary
- Good stories are INVEST
  - Independent
  - Negotiable
  - Valuable to users or customers
  - Estimable
  - Small
  - Testable

Independent

- Each story has it’s own value
- Don’t make stories depend on other stories
  - Stories that depend on other stories are difficult to prioritize and estimate

Negotiable

- Stories serve as reminders not contracts
- Details need to be fleshed out in conversation
- Stories should have a phrase or sentence to serve as reminder to have conversation & notes about conversation

Valuable

- Both to people using the software and paying for the software
- Avoid stories valued only by developers (make the benefits to customers/users apparent for these stories)
- Example
  - “All connections to the database are through a connection pool” could be rewritten as “Up to 50 users should be able to use the application with a 5-user database license”

Estimable

We must have enough information that we can properly size a story so that we plan properly and commit to our work.

Reasons why story might not be estimable:

- Designers lack domain knowledge
  - Get details from customer
- Story is too big
  - Split the story into smaller ones

Small

User Stories should be small enough that they are able to be completed within a sprint. (e.g., A few hours to a few days of design/ development time.)

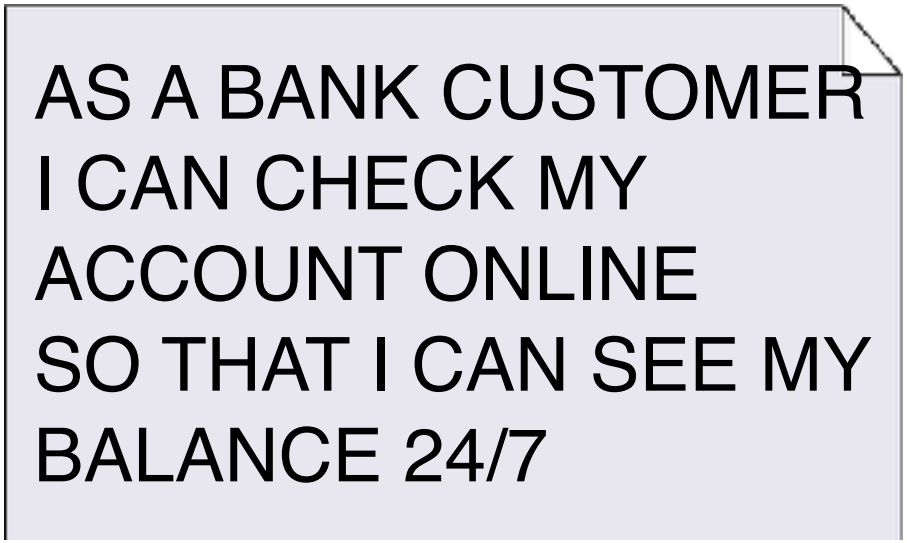
- Makes them easy to use in planning
- Split compound & complex stories
- Combine too small stories

Testable

All members of the team need a clear and precise way to verify whether or not a User Story has been completed.

- Can’t tell if story is done without tests
- Tests can be automatable or not

Examples



This technological solution hides the real requirement

Why does anyone want to know their current balance?

A Better Story

AS A BANK CUSTOMER
I CAN SEE MY AVAILABLE BALANCE AND ALL ANTICIPATED PAYMENTS FOR THE MONTH
SO THAT I CAN KNOW HOW MUCH IS AVAILABLE TO ME BEFORE NEXT PAYDAY

More Examples

This assumes that ALL restaurants serving raw ingredients will poison their customers

AS THE CHICAGO PUBLIC HEALTH DEPARTMENT
I WANT WARNINGS ABOUT RESTAURANTS THAT SERVE RAW INGEDIENTS
SO THAT TOURISTS DON'T GET SICK ON OUR DIME

What about Sushi restaurants?

Only unsafe restaurants are problematic. Not all of them

Why so concerned about tourists?
Surely the city taxpayers are a higher priority.

A Better Story

AS THE CHICAGO PUBLIC HEALTH DEPARTMENT
I NEED TO KNOW WHICH RESTAURANTS SERVING RAW FOOD HAVE FAILED INSPECTION CHECKS
SO THAT WE CAN MINIMIZE THE POSSIBILITY OF CONTAMINATED RAW FOOD

Guidelines for Good Stories

- Start with goal stories
- Write closed stories (stories that have a definite end point)
  - "A recruiter can review resumes from applicants to one of her ads" instead of "A recruiter can manage the ads she has placed"
- Size your story appropriately for the time frame it may be implemented in
- Don't rely solely on stories if some things are better expressed in other ways
- Include user roles/personas in stories rather than saying "user"
- Write for a single user ("A Job Seeker" not "Job Seekers"
- Use Active Voice

Prioritizing Stories

- Assign points to stories based on difficulty/ time required
- For each release, customer prioritizes stories
- Developers determine velocity (# of points per release cycle) for previous cycle and plan to implement the highest priority stories up to that number of points for the release

Story responsibilities: Designer

- Help the customers write stories that
  - Are promises to converse rather than detailed specs
  - Have value to the users or the customer
  - Are independent
  - Are testable
  - Are appropriately sized
- Describing the need for technology/ infrastructure in terms of value to users or customers
- Have the conversations with the customers

Story responsibilities: Customer

- Writing stories that
  - Are promises to converse rather than detailed specs
  - Have value to users or to yourself
  - Are independent
  - Are testable
  - Are appropriately sized
- Have the conversations with the designers/ developers

Let's fix these examples

AS A STUDENT I WANT TO CHECK MY GRADES ONLINE SO THAT I DON'T HAVE TO WAIT UNTIL THE MORNING

AS A STUDENT I CAN LEARN MY GRADES IMMEDIATELY THEY ARE AVAILABLE SO THAT I DON'T SUFFER LONGER THAN NECESSARY

Let's fix these examples

AS A PRODUCT OWNER I WANT TO DRAG AND DROP ALL THE PRODUCT BACKLOG ITEMS SO THAT I CAN EASILY ADJUST PRIORITIES

AS A PRODUCT OWNER I CAN BE MADE AWARE OF THE HIGHEST PRIORITY NEEDS SO THAT I CAN ALIGN BACKLOG ITEMS WITH PRIORITIES

Summary: Why User Stories?

Emphasize verbal communication

Comprehensible by everyone

Right size for planning

Good for iterative development

Encourage deferring detail

Encourage participatory design

Build up tacit knowledge

Your story must be right for the solution to be right.

Think about the non-functional needs – usability, convenience, security, cultural and so on.

Let's Practice!

Create a set of 5-10 user stories for your own project.

Base them on user data you have collected! (not your assumptions)

For each story you make:

- Size the story appropriately (Not too big! Not too vague!)
- Provide info on each role/persona (i.e., not "user")
- Include non-functional needs (e.g., values, ease-of-use)