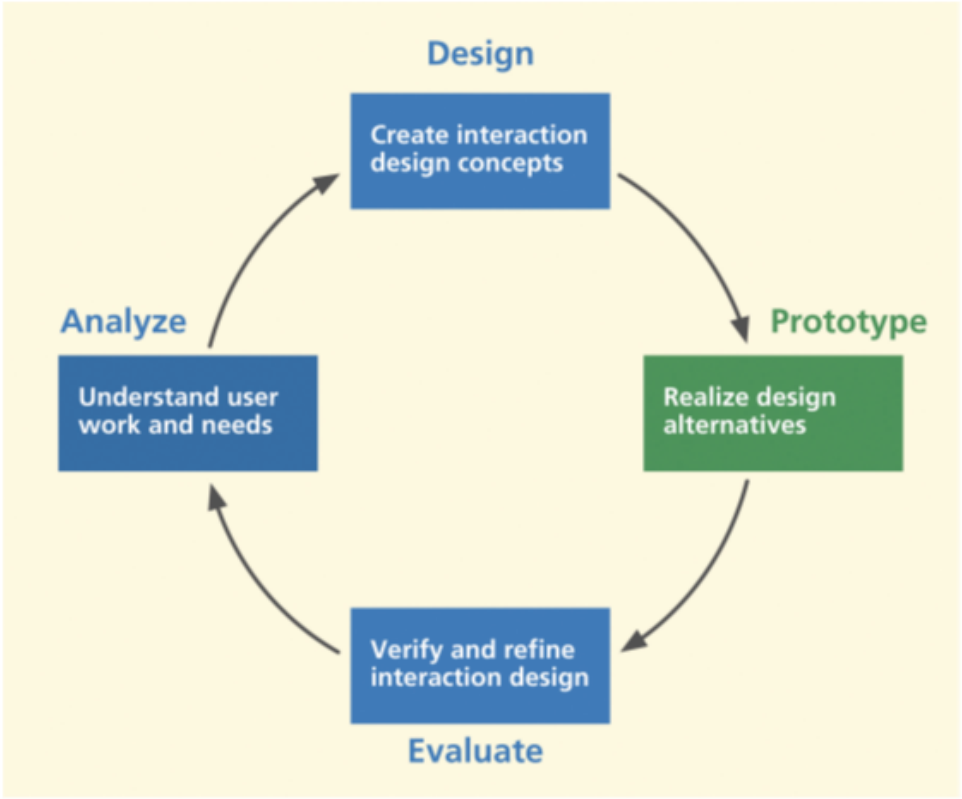
Prototyping

SWEN-444

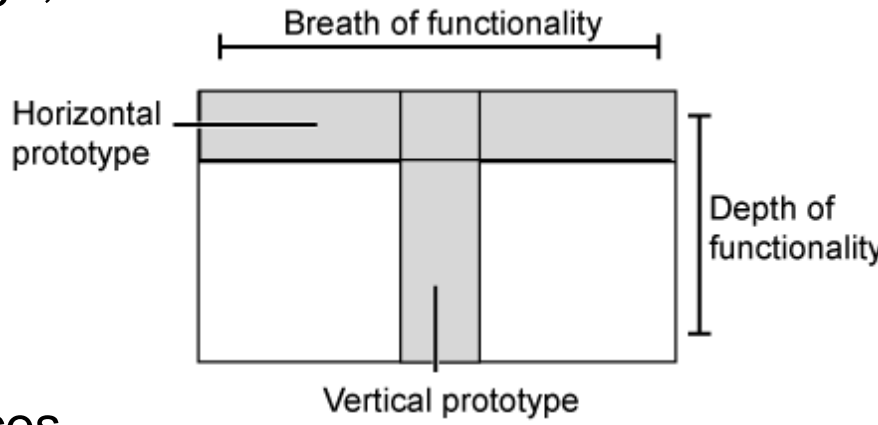
Selected material from *The UX Book*, Hartson & Pyla

Evaluate design before it’s too late and too expensive.



Prototypes must be less than the full system.

- **Horizontal** – overview of feature coverage, but more abstract so less effective evaluation
- **Vertical** – more depth for a few features with more effective evaluation
- **"T"** – the "middle way", mostly horizontal with a few vertical features
- **Local** – where horizontal and vertical slices intersect; analyze isolated concern, e.g., icon design



Dimensions of Fidelity of Prototypes

- **Breadth** - % of features covered
- **Depth – degree of functionality**
- **Look:** appearance, graphical design

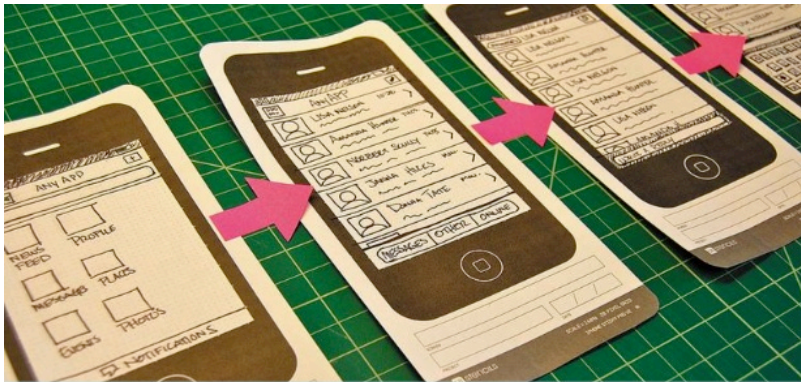
  - Sketchy, hand-drawn

- **Feel:** input method, degree of interaction

  - Pointing & writing feels very different from mouse & keyboard

Fidelity of Prototypes

- **Low fidelity**
  - Paper sketches, story boards or simple wireframes
  - Low fidelity in look and feel, more abstract
  - Can be effective in user evaluation
- **Why paper?**
  - Easy, fast, and low cost to create and change
  - Creative focus on design not on the drawing or programming tool
  - Designer in control during user evaluations



Fidelity of Prototypes

- High fidelity
  - Include details of appearance and interaction behavior
  - Users see more complete design
  - Advanced wireframes with navigation (medium fidelity)
  - Programmed without being the final product
    - Backend simulation
    - Storyboard animations

What Type of Prototyping?

- **Progress** prototype **fidelity** during the design life cycle to…
- Understand the **ecological** (low), **interactive**, and **emotional perspectives** (high) and to ….
- **Focus on behavior first** then appearance

Ideation	Low fidelity paper sketches
Conceptual design	Low fidelity paper sketches, storyboards
Intermediate design	Low to medium fidelity wireframes
Detailed design	High fidelity wireframes, programmed prototypes

Cautions

- Rationalize cost-value tradeoffs to gain budget support
- Do not oversell - capabilities that can't be delivered, development completeness
- Do not overbuild – "good enough" as a prototype
  - Decide early on exploratory or evolutionary prototypes

Prototyping Tool (Individual Activity)

Do some research and select the tool you plan to use to develop your high fidelity prototype. List the tool's pros and cons, and why you decided on using it. Submit your answer to myCourses.