Experiences from Prototyping

What, Why, When and How

Jani Kalasniemi
Prototyping Viking @ Ideasquare, CERN

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Ideas

Quiz: which of these defines the word Prototype?

A) Japanese software company

B) Metal band from the US

C) Video game released on year 2009

D) Original first version of a product

E) Bodies Without Organs album

F) Property of all JavaScript objects

All of the answers are right

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WHAT is a Prototype?

*”A **prototype** is an early sample, model, or release of a product built to **test** a concept or process or to act as a thing to be replicated or **learned** from.”*

-Wikipedia

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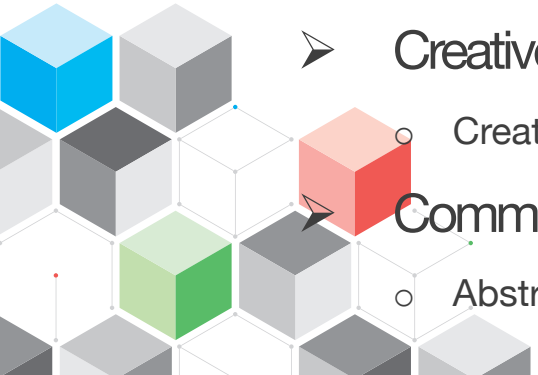
WHY to Prototype?

- To the test the assumptions and viability of the approach
  - Innovation is 1% about ideas, 99% execution & iteration
- Create bias towards action
  - Investigate each assumption through active testing, instead of theoretically thinking it through
- Learning by doing
  - Boost learning by experimenting and exploring the proposed solutions
- Creative serendipity
  - Create unplanned discoveries with tangible prototypes
- Communication
  - Abstract ideas are easier to show and tell



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WHEN to Prototype?

- **As soon as possible and as many times as possible!**
- If you create a product without prototyping, the product itself is your first prototype

*"**Quantity** has a quality all its own"*

-Joseph Stalin

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HOW to Prototype?

High-fidelity

- Closer to the final product in terms of look, feel, and means of interaction
- More expensive
- Time consuming to build

Low-fidelity

- Simple design
- What ever materials are available
- Can be tested immediately
- Cheap & Fast

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HOW to Prototype?

Sketching

Role-Playing

Storyboard

Lego Prototype

Paper prototype

User-Driven Prototype

Preprotyping

Wizard of Oz

Empathy Prototype

Dark Horse Prototype

Functional Prototype

Critical Prototype

Digital Prototype

Mechanical Prototype

Proof of Concept

Minimum Viable Product

Pre-Production Prototype

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HOW to Prototype?

- Anything that is **interactive**, **collaborative** and helps in **communicating**, **testing** and **validation** of ideas and sorting out potential **problems**

- Prototypes can take many forms, and just about the only thing in common the various forms have is that they are all **tangible forms of your idea**

➡ There are as many ways to prototype as you can imagine

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Quick Challenge

Draw a picture of a device that collects balls

Time: 60 sec

Quick Challenge

Now, draw a picture of the person sitting next to you

Time: 30 sec

Quick Challenge

Make a paper airplane of your drawing paper

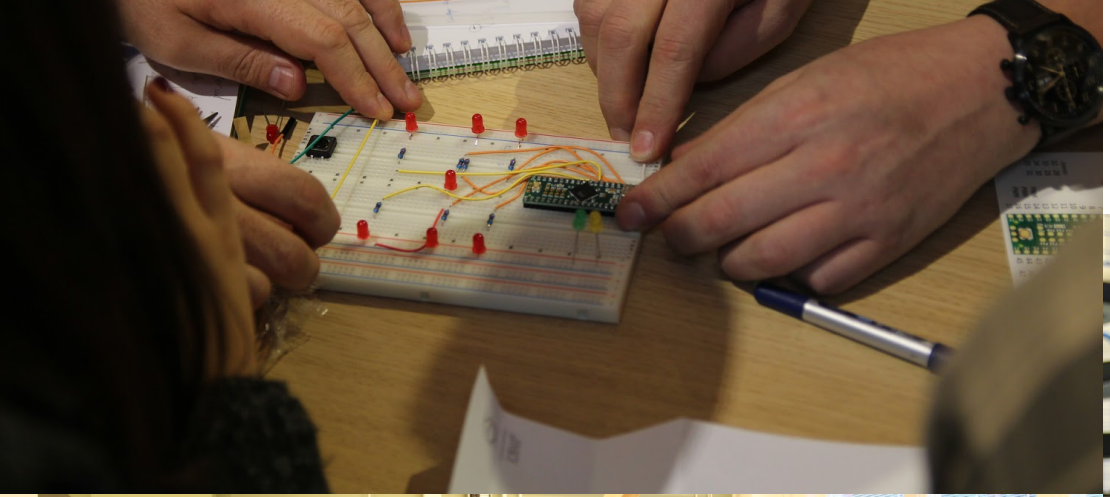
Time: 30 sec

HOW to Prototype?

Storytime

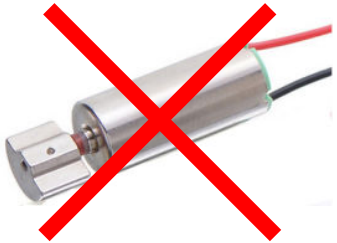
HOW to Prototype?

HOW to Prototype?



HOW to Prototype?

Prototype with haptic feedback to a blind user. When there is an obstacle on the way, prototype vibrates.



HOW to Prototype?

Squirrels are eating all the bird food from the bird feeder.
How to stop the squirrels?

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Guidelines for Prototyping

1. **Just start building**

   Design Thinking has a bias towards action: that means if you have any uncertainties about you are trying to achieve, your best bet is to make something. Creating a prototype will help you to think about your idea in a concrete manner, and potentially allow you to gain insights into ways you can improve your idea.

Guidelines for Prototyping

2. Don't spend too much time

Prototyping is all about speed; the longer you spend building your prototype, the more emotionally attached you can get with your idea, thus hampering your ability to judge its merits objectively.

Guidelines for Prototyping

3. Remember what you're testing for

All prototypes should have a central testing issue. Do not lose sight of that issue, but at the same time, do not get so bound to it that you lose sight of other lessons you could learn.

Guidelines for Prototyping

4. **Build with the user in mind**

   Test the prototype against your expected user behaviors and user needs. Then, learn from the gaps in expectations and realities, and improve your ideas.

Guidelines for Prototyping

5. Break the boundaries of assumptions

Your imagination merely limits the use of different materials and tools in prototyping. Learn how to see things through their potential instead of their limitations and definitions.

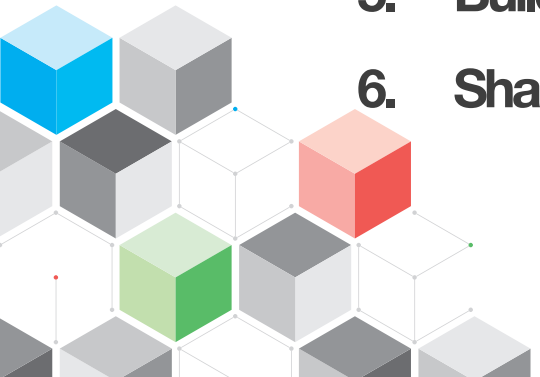
Guidelines for Prototyping

1. Just start building
2. Don’t spend too much time
3. Remember what you’re testing for
4. Build with the user in mind
5. Break the boundaries of assumptions

Workshop time

Prototyping Workshop

1. Define your problem
2. Define your user
3. Describe/visualize your current solution
4. Choose one specific part to prototype/devise a test
5. Build your prototype
6. Share with everyone



Prototyping Workshop

1. Define your problem

- not a solution, yet

5 minutes

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Prototyping Workshop

2. Define your user

- Who are you designing for?

5 minutes

Prototyping Workshop

3. Describe/visualize your current solution

- Choose one specific part to prototype/devise a test

10 minutes

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Zappos
Culture
Visualise observations & thinking
Powered by Service!
Very unique class! Full of discussion!
Take the culture to the NEXT LEVEL!
TEAMS:
#1 The Enthusiastically Running Bugs
#2 TIE Speed Roosters
#2 TIE Z3 (cubed)
#2 Sassafras
Culture linked to Success
name that tune!
Q. What does culture mean to you?
We are our own country!
mayor
currency
passion!
determination
FUN!
Zappos World
Feature real Zappos customers
Local deliveries
RockBand Battle!
Find your twin day!
College day
Theme or movie night
Beer Fest

4. Build your prototype

- Choose either
  - technical detail/function that the product/service must do
  - human experience that your user will go through

You can prototype anything, you can prototype with anything!

60 minutes

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Prototyping Workshop

5. Share with everyone

- Each team 1 min proto demo

- Feedback from other teams

Format: I like… I wish…