Experiences from Prototyping

What, Why, When and How

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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

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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
- 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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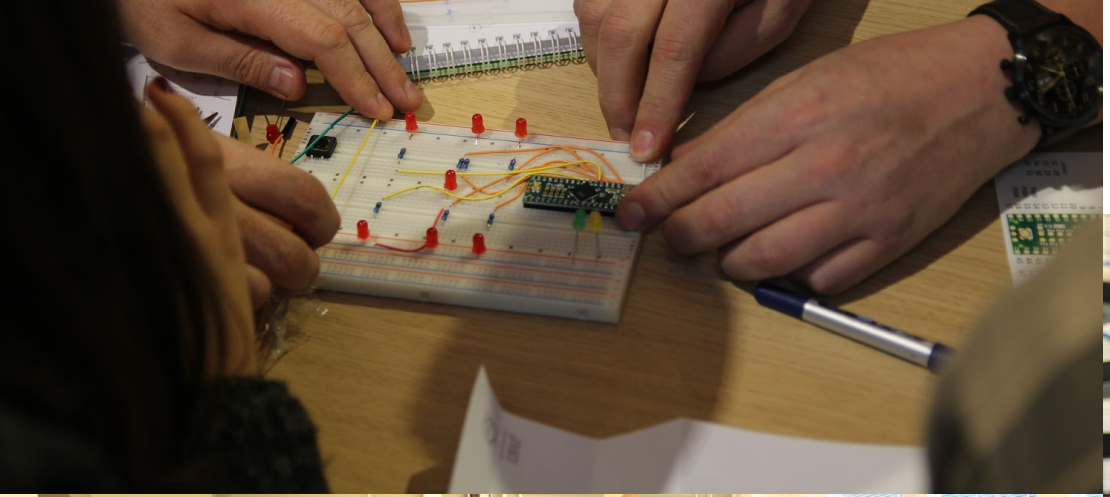
HOW to Prototype?

Storytime

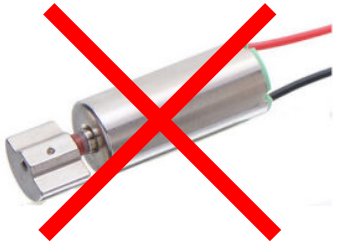
HOW to Prototype?



HOW to Prototype?

HOW to Prototype?

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



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HOW to Prototype?

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

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.

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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.

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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.

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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.

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Guidelines for Prototyping

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4. Build with the user in mind
5. Break the boundaries of assumptions

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