

# Entrepreneurial Prototyping

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# In this video you will learn:

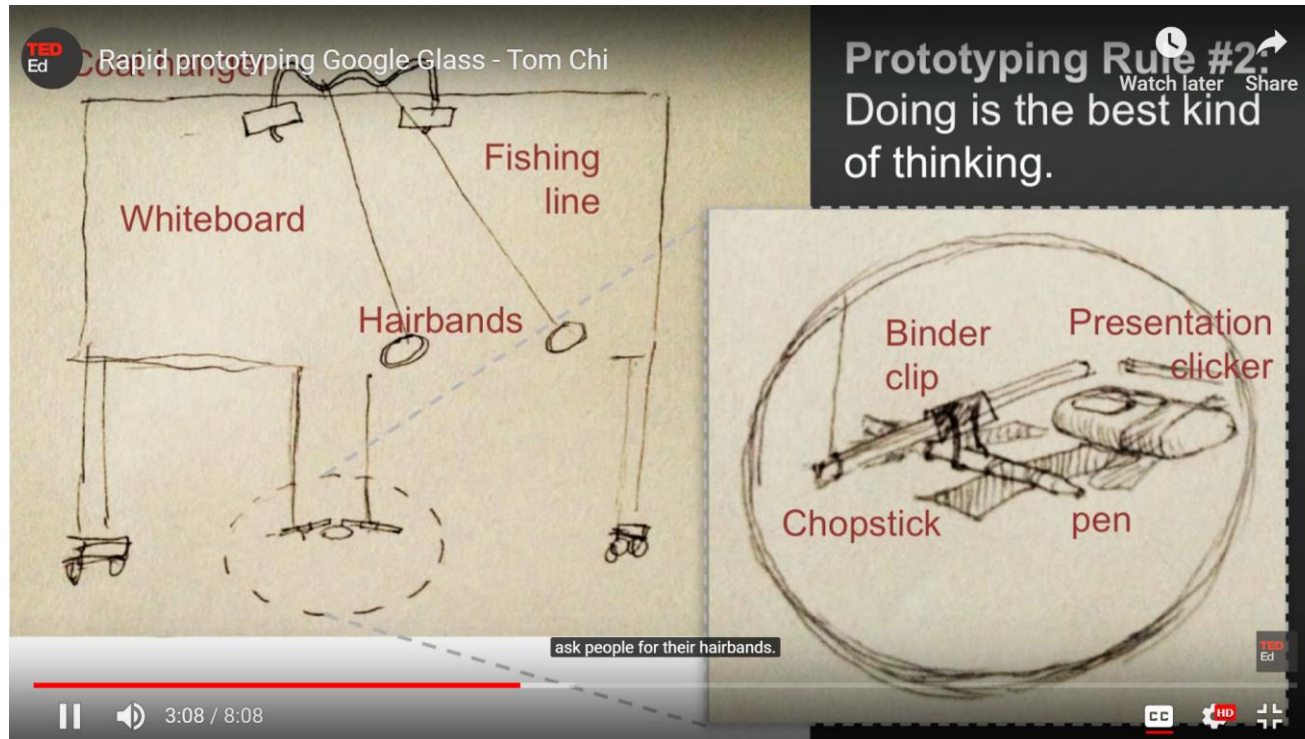
- Why paper and pencil are perfect to start your prototyping journey
- How Google prototypes in 45 minutes
- Why failing more often is better than failing less often
- Why people can now sleep well at the airport
- That a swing is not a swing is not a swing

# What is a Prototype?

A prototype is something that you create with the explicit understanding that it is **not the finished** product/service/experience but instead is intended to be a **stepping stone** along the way to the finished product/service/experience.

—*Our Definition*

# Prototyping – Google glasses



<https://ed.ted.com/lessons/rapid-prototyping-google-glass-tom-chi>

## Your task (15 min)

- Take a paper and a pencil
- Watch the video on how Google prototypes ideas
- Try to answer:
  - What are the rules of prototyping at Google?
  - What types of material should you use for prototyping and why?

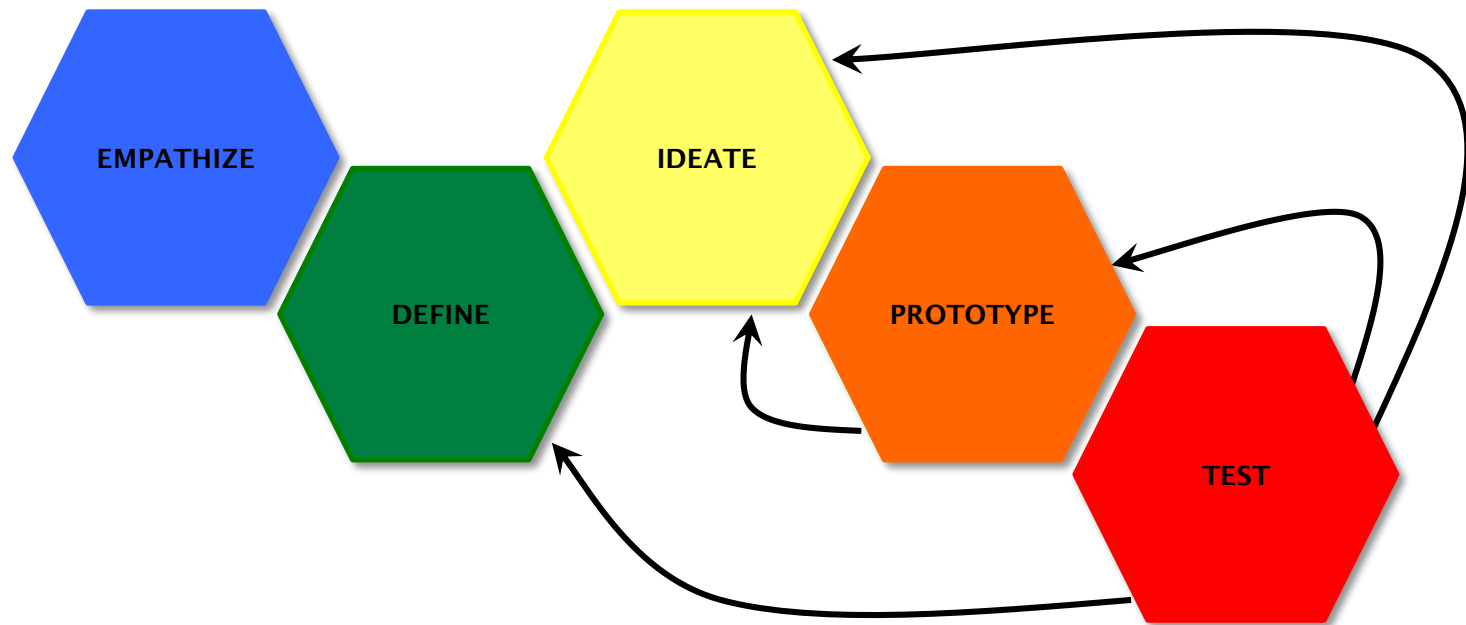
# Forms of prototypes

- physical–tangible,
- analytic–virtual,
- experiential–behavioral

# What are prototypes for?

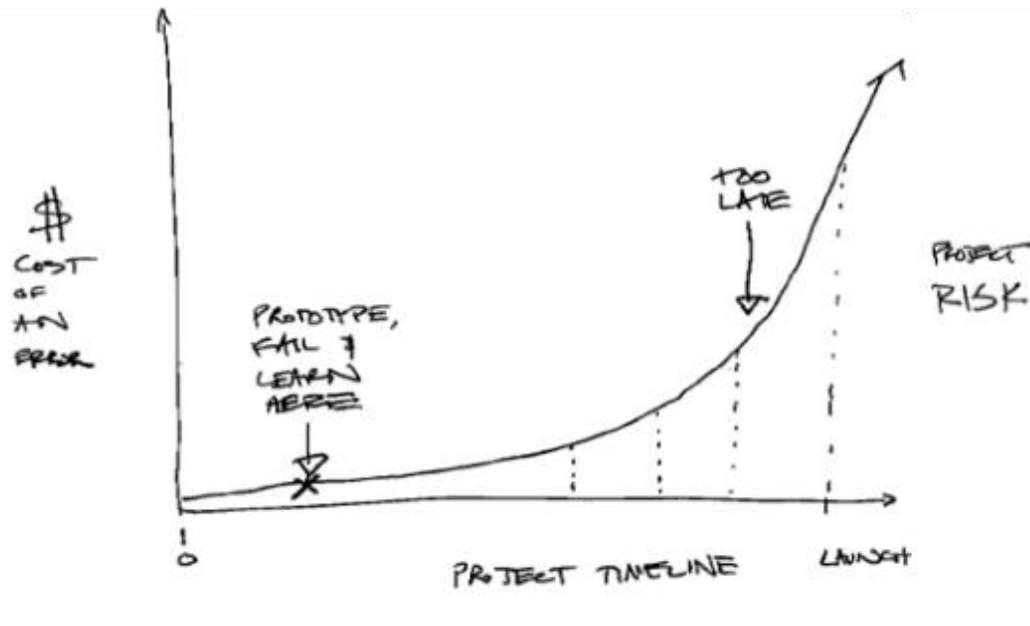
- Trying out an idea.
- Learning about what the important issues are.
- Failing quickly and cheaply.
- Communicating ideas to others.
- Bringing a team together.

# Prototyping is a key part of design thinking

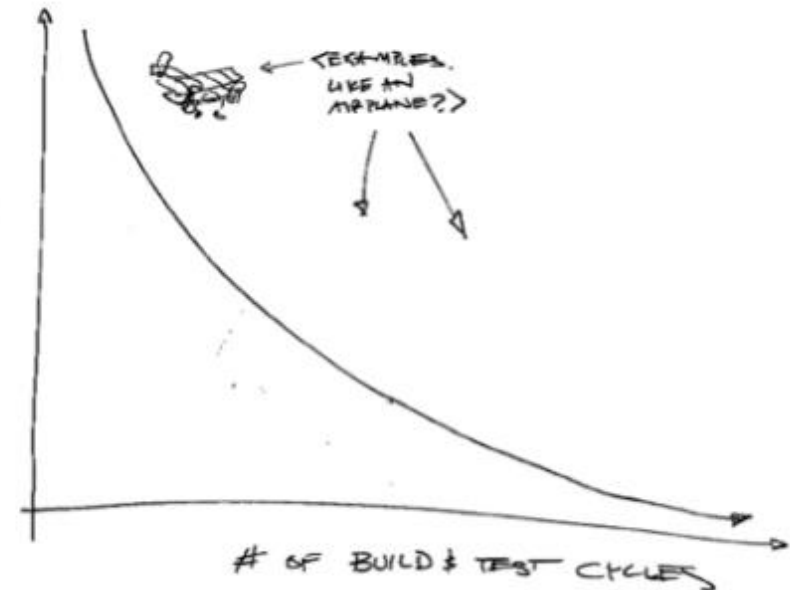




# Fail early and often

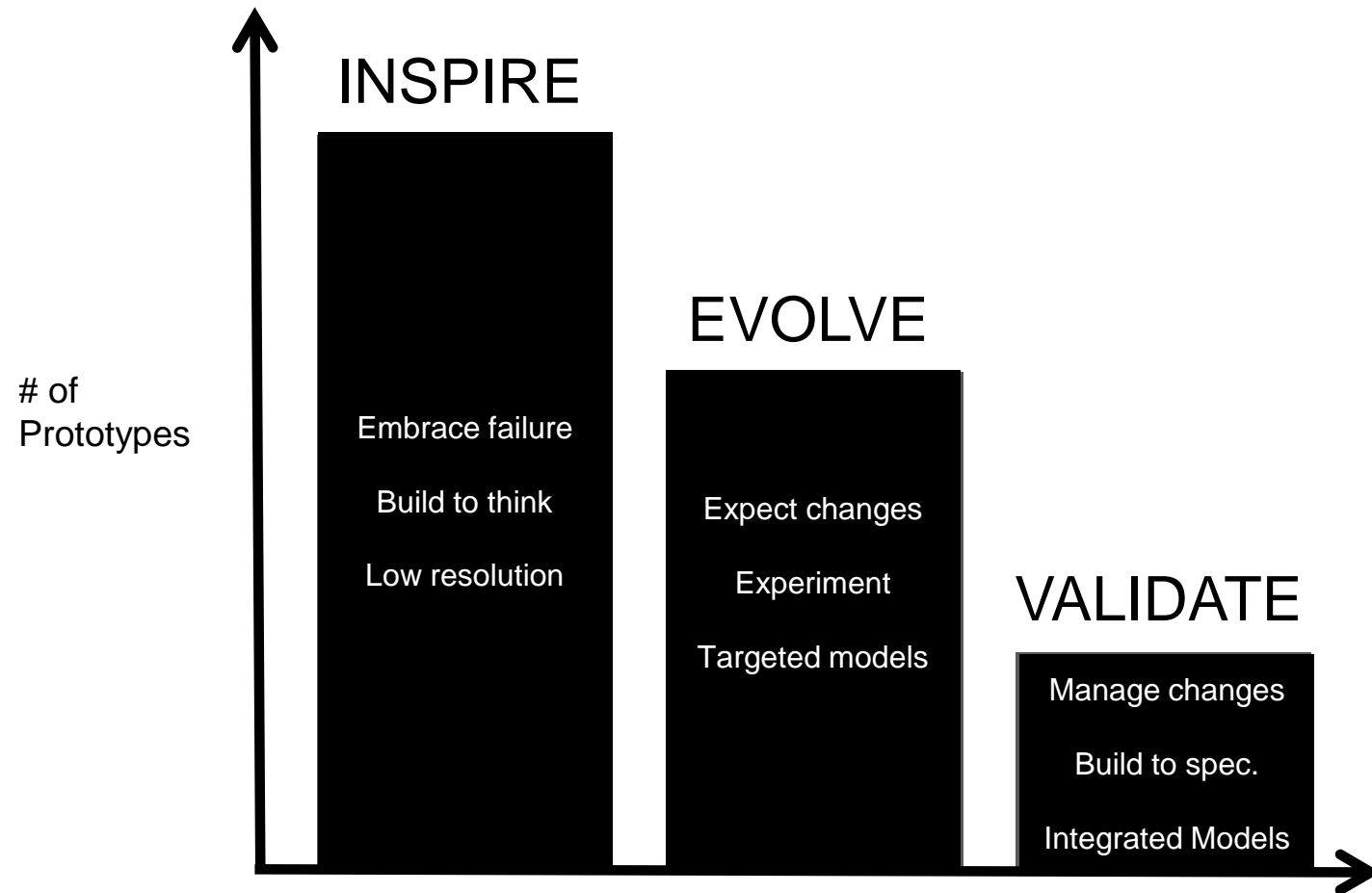


(cost of failure vs. project time)



(project risk vs. iteration curve)

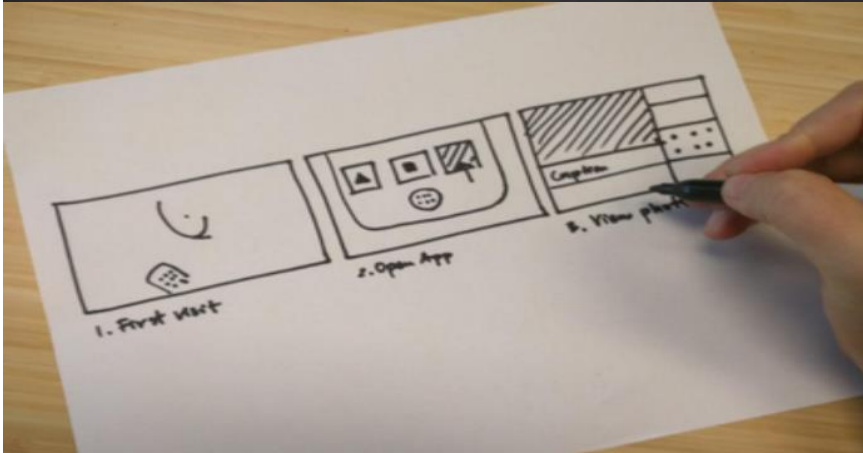
# Stages of Prototyping



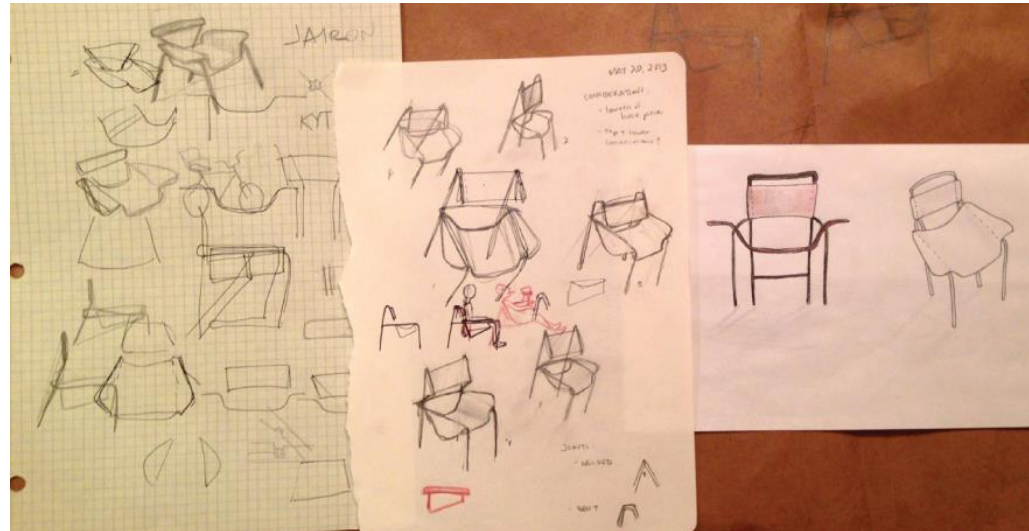
# How does prototyping work?

- Sketch your idea (2d/3d)
- It can focus on a single part of functionality or cover all the functionalities
- So, this can be a dirty paper prototype. Or a cardboard model... or a working prototype made out of old stuff
- “Thinking with your hands”

# Inspire using trash, paper, items from D.I.Y. store

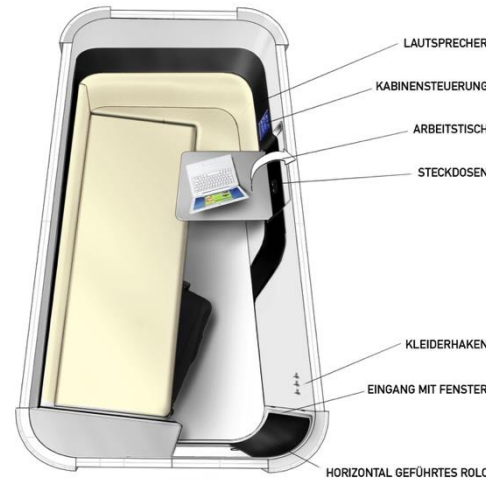
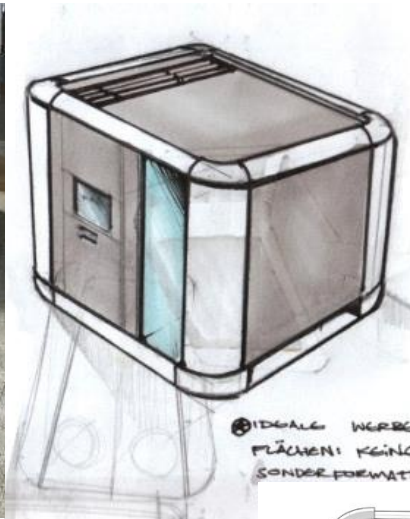


# From idea to reality





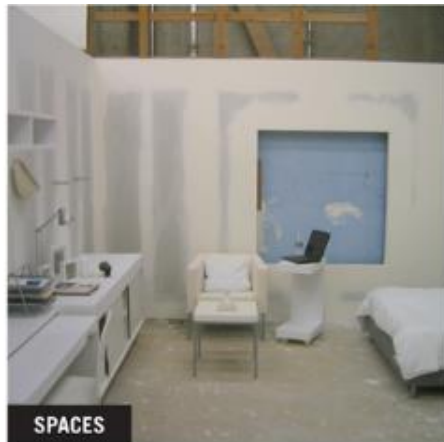
# A hardware example - NapCabs



# Not just for products



**Interactions**

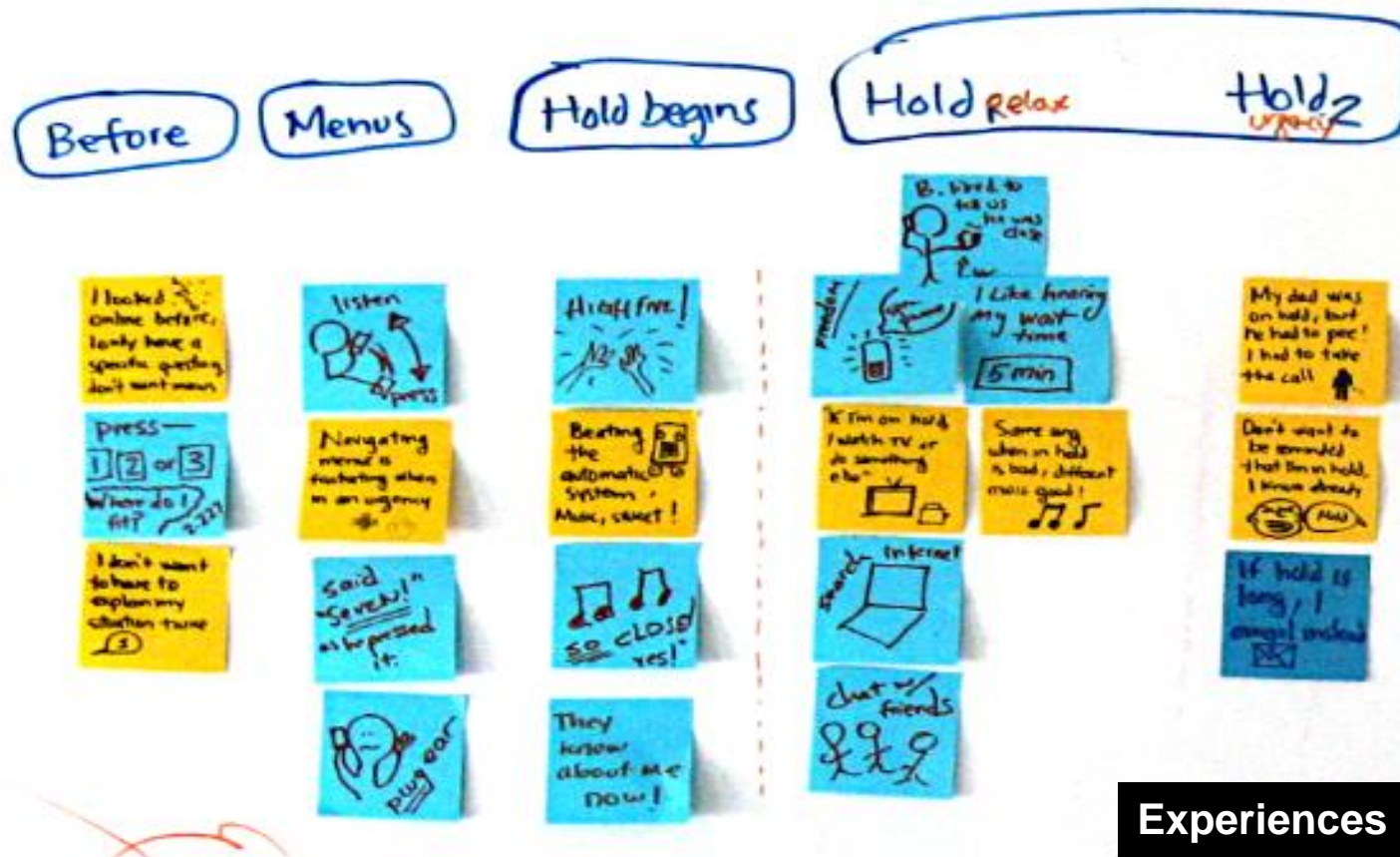


**SPACES**



**Spaces**

# Prototyping experiences





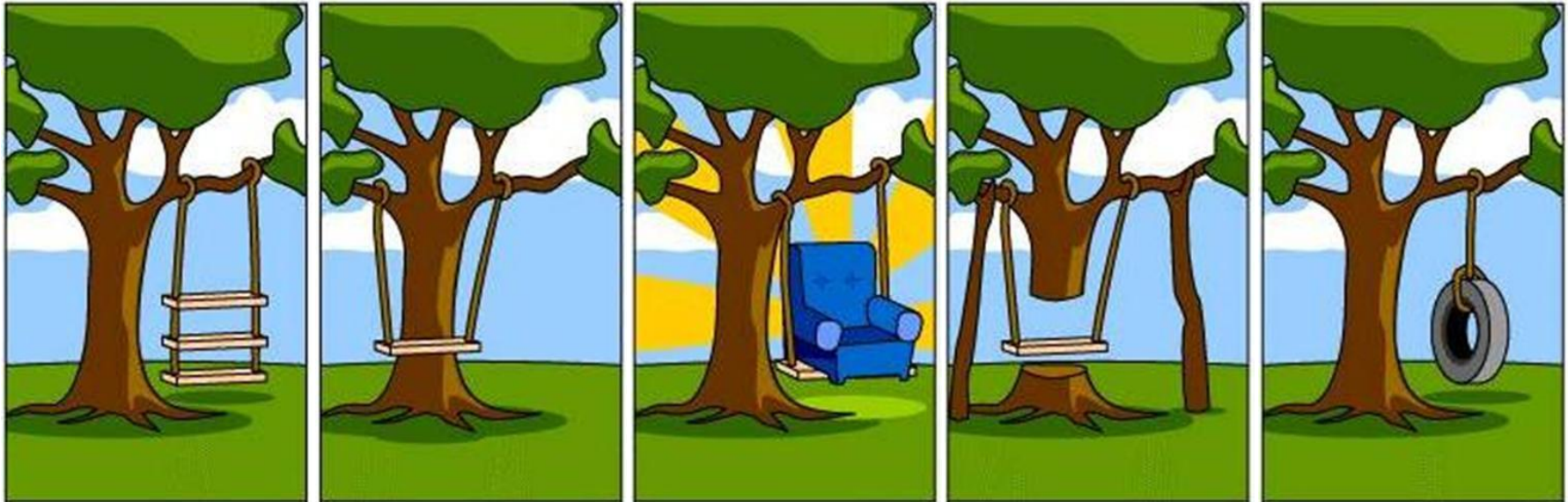
# A software example for UX prototypes



# Software app



# Communicating ideas



How the customer described it.

How the project leader understood it.

How the business consultant improved it.

How the engineers designed it.

What the customer really needed.



# LET OTHERS FEEL IT



Prototype appearance makes a difference -  
BUT Prototyping should be “quick and dirty”



# Session summary:

- Prototypes are not finished products
- You can prototype (almost) everything
- Fail early and frequently (and cheap)
- Prototypes are key for communicating ideas

# References from the class

Chen, M. (2017) Prototyping, p.19 from <https://slideplayer.com/slide/13310534/>. Visited on 12<sup>th</sup> of October 2020.

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## **Additional material:**

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