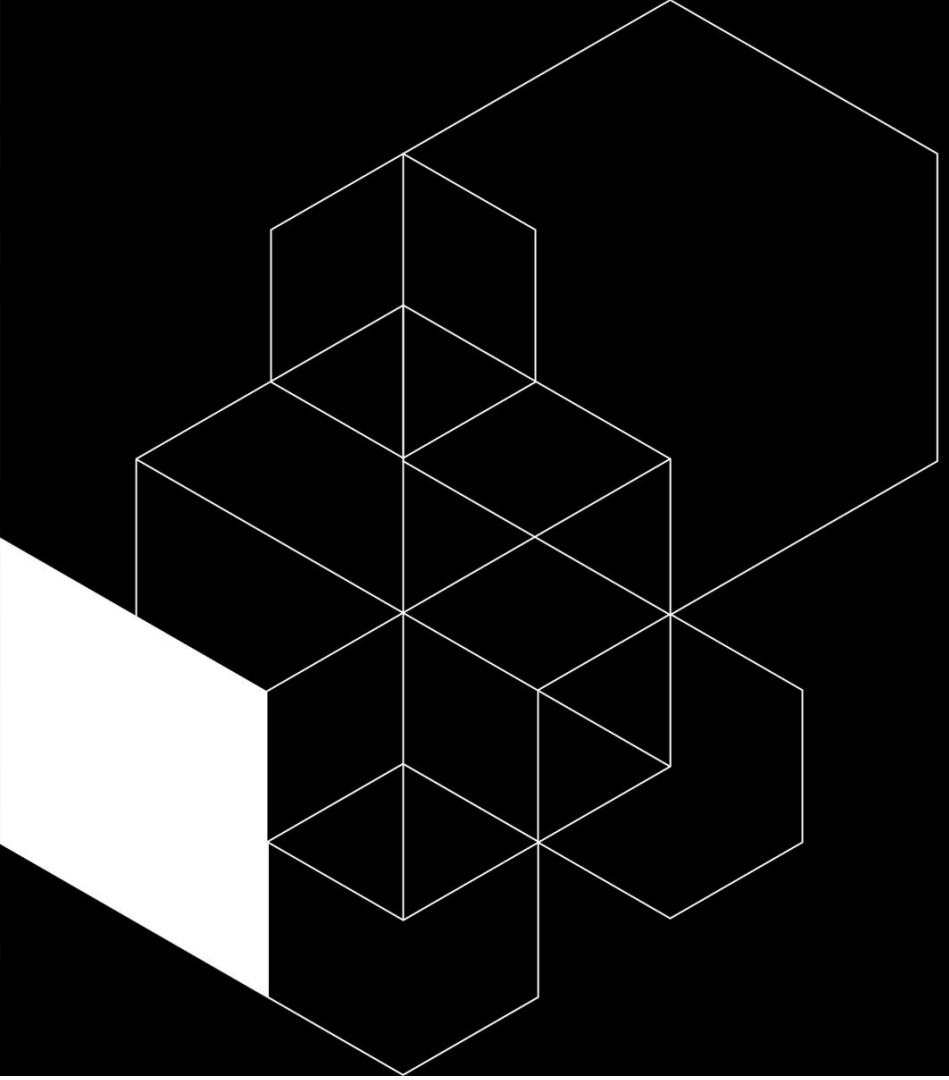


# Introduction to prototyping

**CERN IdeaSquare**
**Dina Zimmermann**

# What is a prototype?

# Some definitions

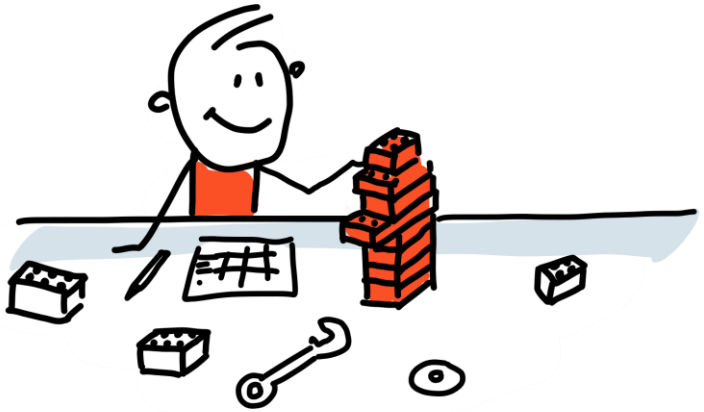
“A prototype is a primitive representation or version of a product that a design team typically creates during the design process”

“Any representation of a design idea, regardless of the medium” (Houde and Hill, 1997)

“An approximation of the product along one or more dimensions of interest” (Ulrich & Eppinger, 2016)

# What is the purpose of prototyping?

# The purposes of prototyping



Feedback

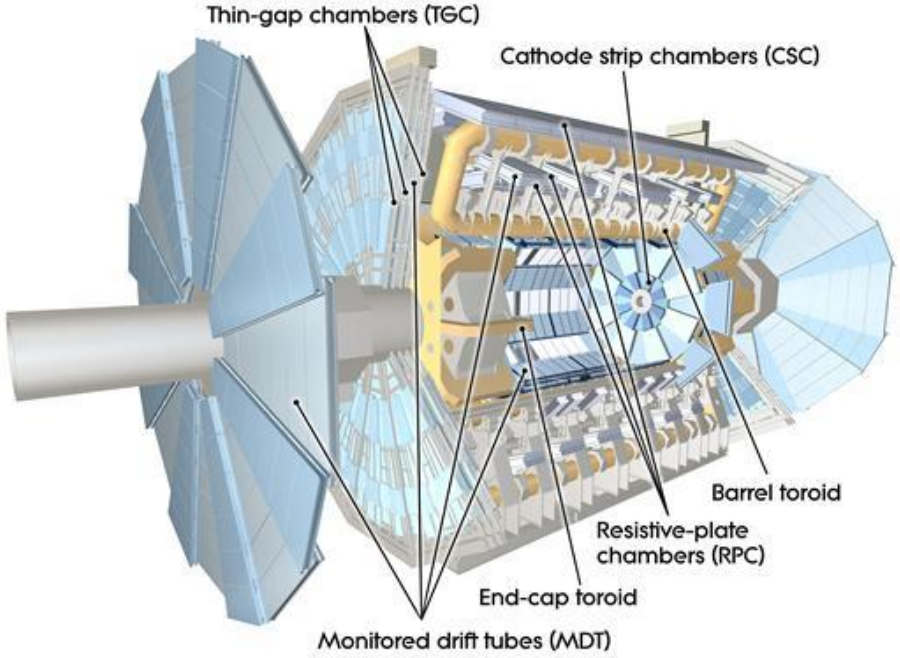
Learn

Commication

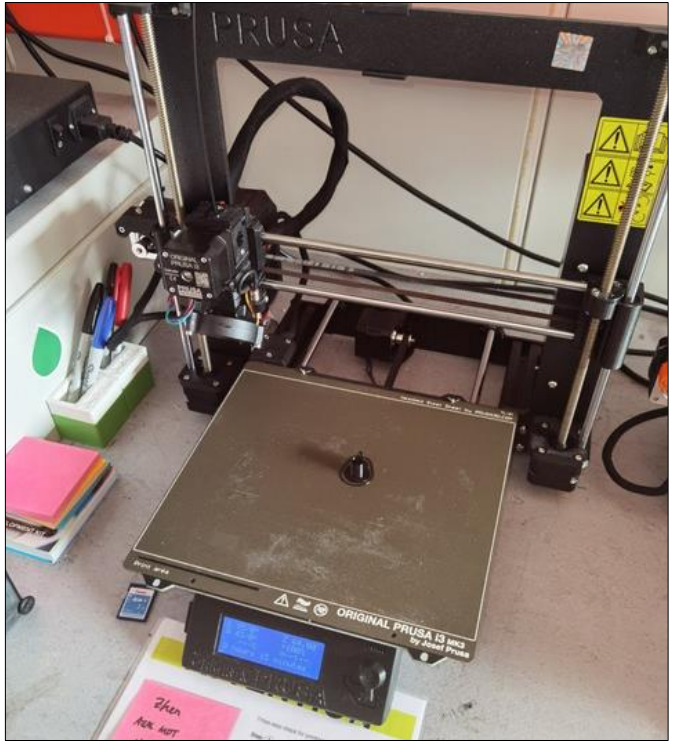
Test

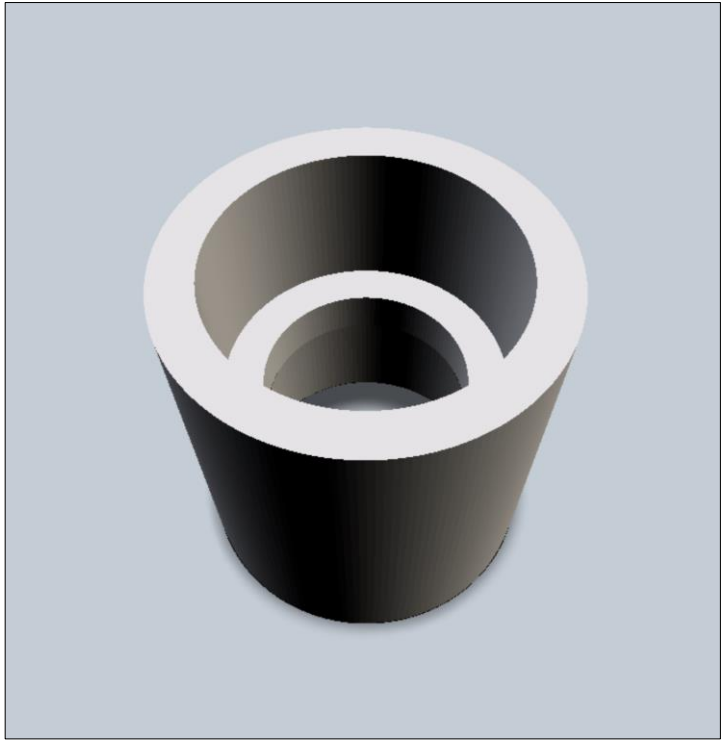
# Different types of prototypes

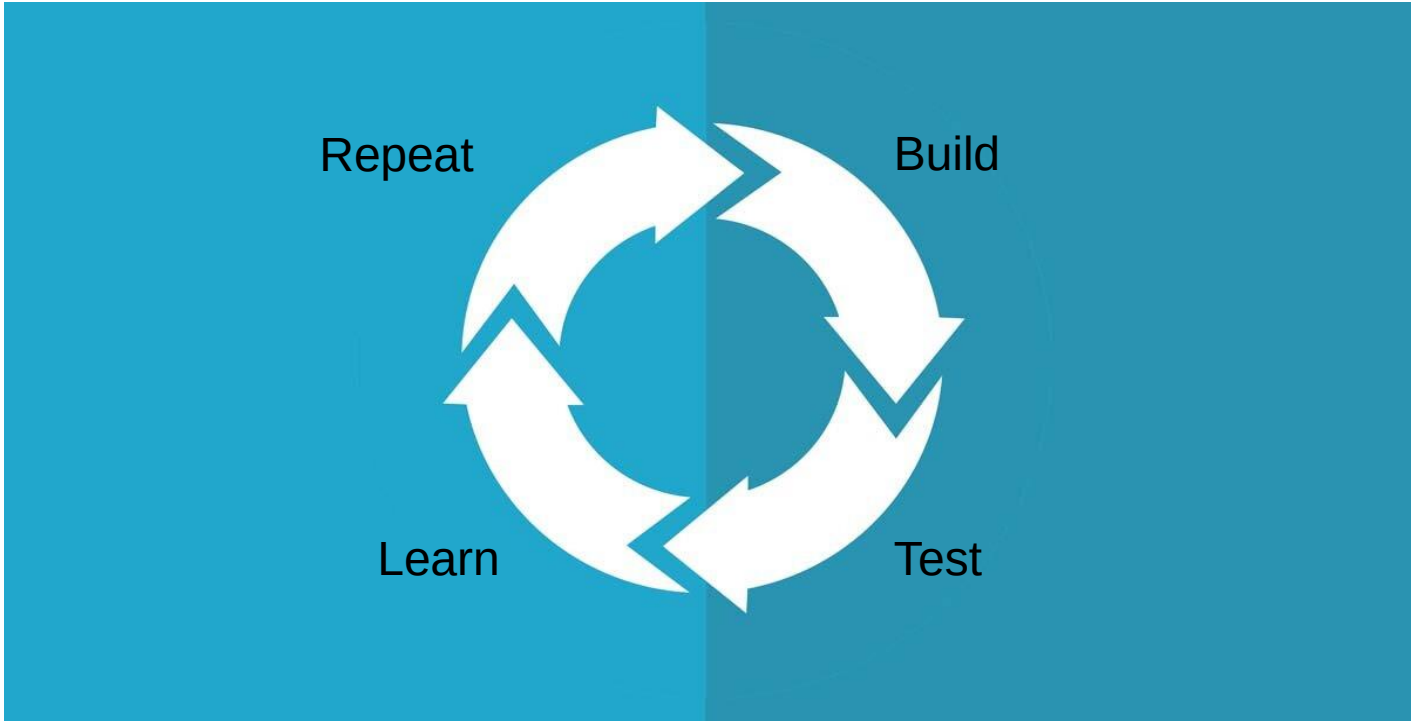
# ATLAS MDT detector disassembly



# First prototype





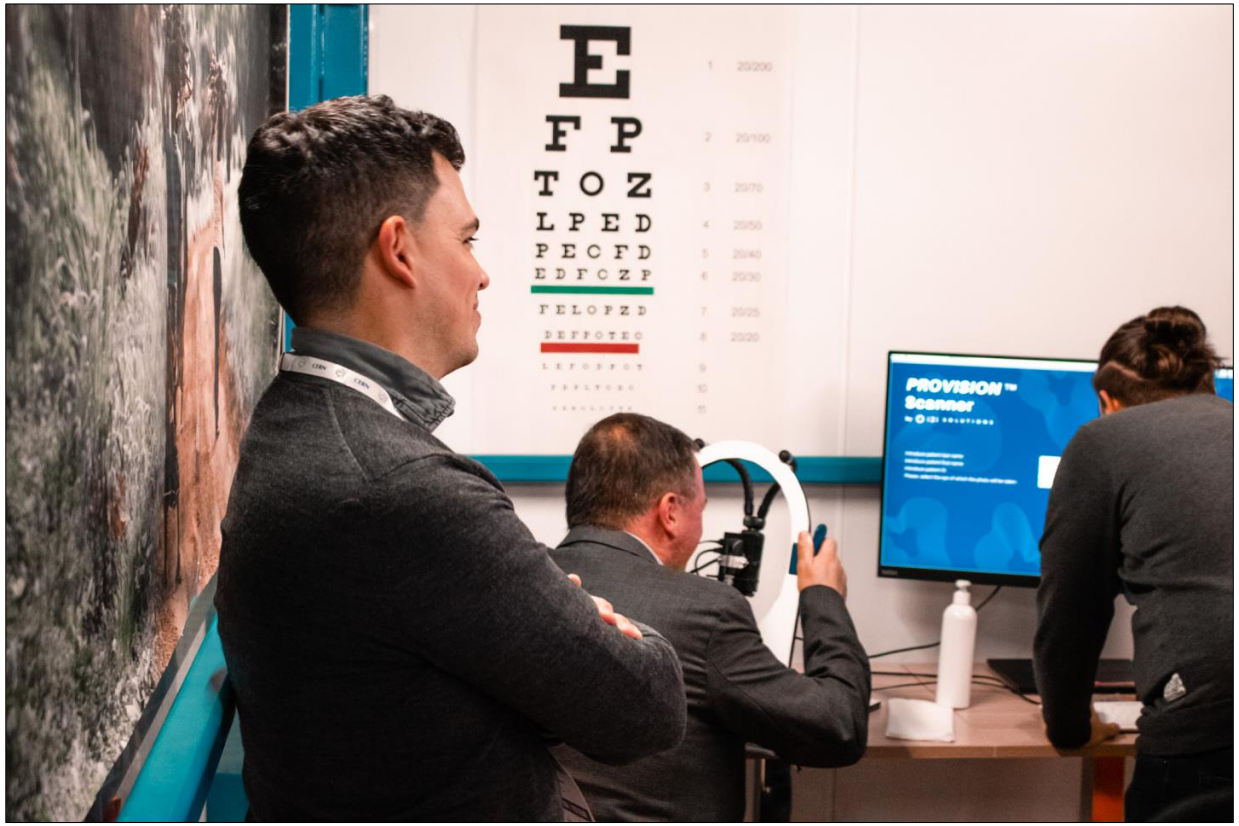

# The iterative process of prototyping

# Second prototype

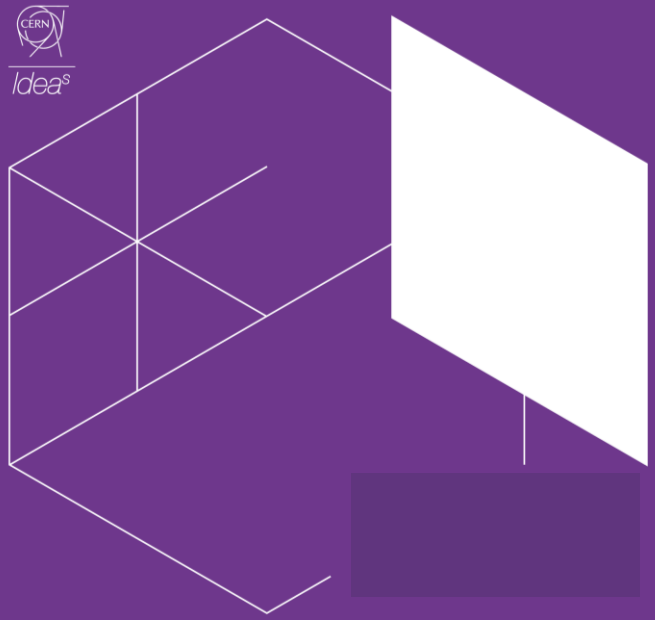
# But…

## A prototype doesn’t have to be a product prototype

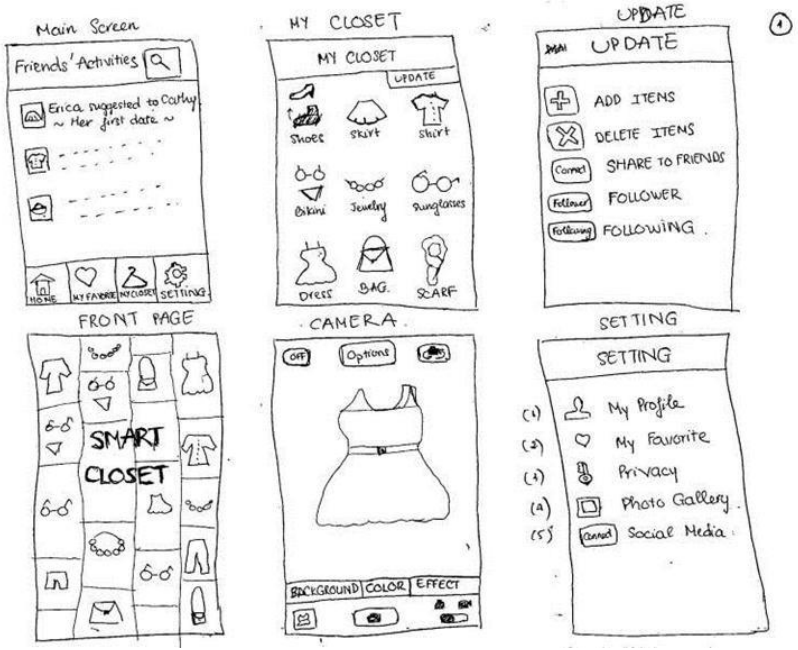
# Example: CBI FusionPoint Final Presentation


E
F P
T O Z
L P E D
P E C F D
E D F C Z P
F E L O P Z D
P E F F O T E C
PROVISION
Scanner

E D F C Z P
F E L O P Z D
D E F P O T E C
L E F O D P C T
F D P L T C E O
P E Z O L C F T D
5 20/40
6 20/30
7 20/25
8 20/20
9
10
11



# The fidelity of the prototype

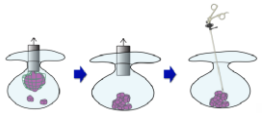



"*Fidelity* refers to how close a prototype is to the final product"

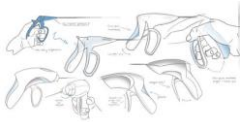
# The fidelity of the prototype

Low fidelity

High fidelity

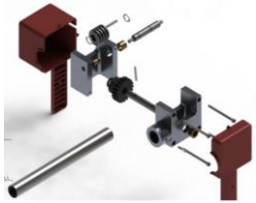


Concept visualization



Sketching

Quick & dirty mockup



3D model

Functional Prototype

Pre-production prototype

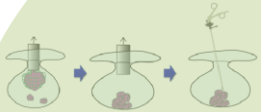
© Carlye Lauff, University of Colorado Boulder

# The fidelity of the prototype

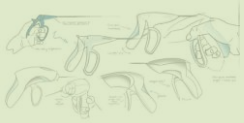
Low fidelity

High fidelity

FOCUS AREA TODAY

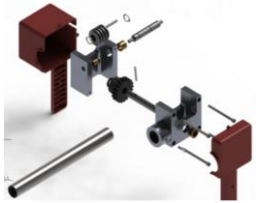


Concept visualization



Sketching

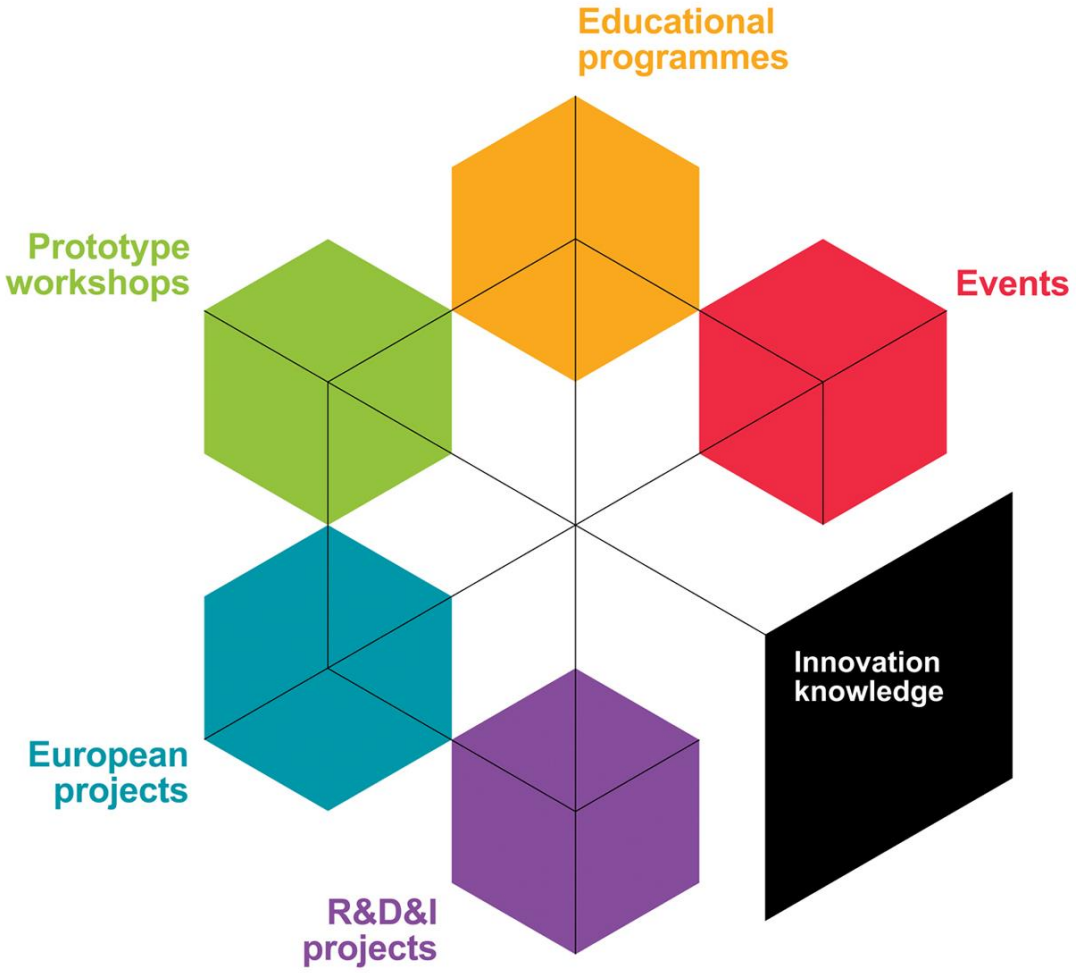
Quick & dirty mockup



3D model

Functional Prototype

Pre-production prototype

© Carlye Lauff, University of Colorado Boulder

# Thank you for your time!