

A person is working on a complex electronic assembly in a factory setting. The assembly is mounted on a transparent surface, and various wires and components are visible. The person is looking up at the assembly. The background is a blurred industrial environment with orange and black colors.

MEC-E3001

pdp

PRODUCT DEVELOPMENT
PROJECT

A”

Aalto University
Design Factory

PdP course staff



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A group of people are gathered around a table in a workshop or meeting room. They are wearing tall, white party hats with blue stripes and handwritten text. One hat says "HSE TUTTU", another says "YSTÄÄLMISTÄNÄ PROTE", and a third says "KIDE OI". They are building structures with colorful LEGO bricks on the table. A woman in a beige top is leaning over the table, and a man in a dark suit is standing behind her, adjusting his hat. A man in a dark jacket is on the left, also wearing a hat and holding a LEGO structure. A woman with glasses is sitting on the left, looking towards the group. The background shows a whiteboard with a diagram and a poster titled "touch".

PD6 for PDP 2024



WHAT IS PD6?



PD6

- Product Development simulation in 6 hours
- Intensive day – throw yourself into it
- Thinking by doing, hands-on, testing
- Find your focus
- Use your radical creativity



The graphic features a black background with a white grid pattern. A red, wavy, scalloped border frames the central text. The word "official" is written in a white, cursive script. Below it, the word "LICENCE" is written in large, bold, white, sans-serif capital letters. At the bottom, the phrase "TO ACT DIFFERENTLY" is written in red, sans-serif capital letters. A purple rounded rectangle is on the left side, and an orange rounded rectangle is at the bottom left.

official
LICENCE
TO ACT DIFFERENTLY

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TEAM: _____



Yellow

Our philosophy of Creation:

- › Be **INTERESTED**
- › Get your **HANDS DIRTY**
- › **COMMUNICATE** your ideas
- › Get it **DOWN**
- › **BUILD** on others ideas
- › **QUICK 'n' dirty**
- › **DEMO** or die
- › Keep up the **PACE**
- › Have **FUN!!!**

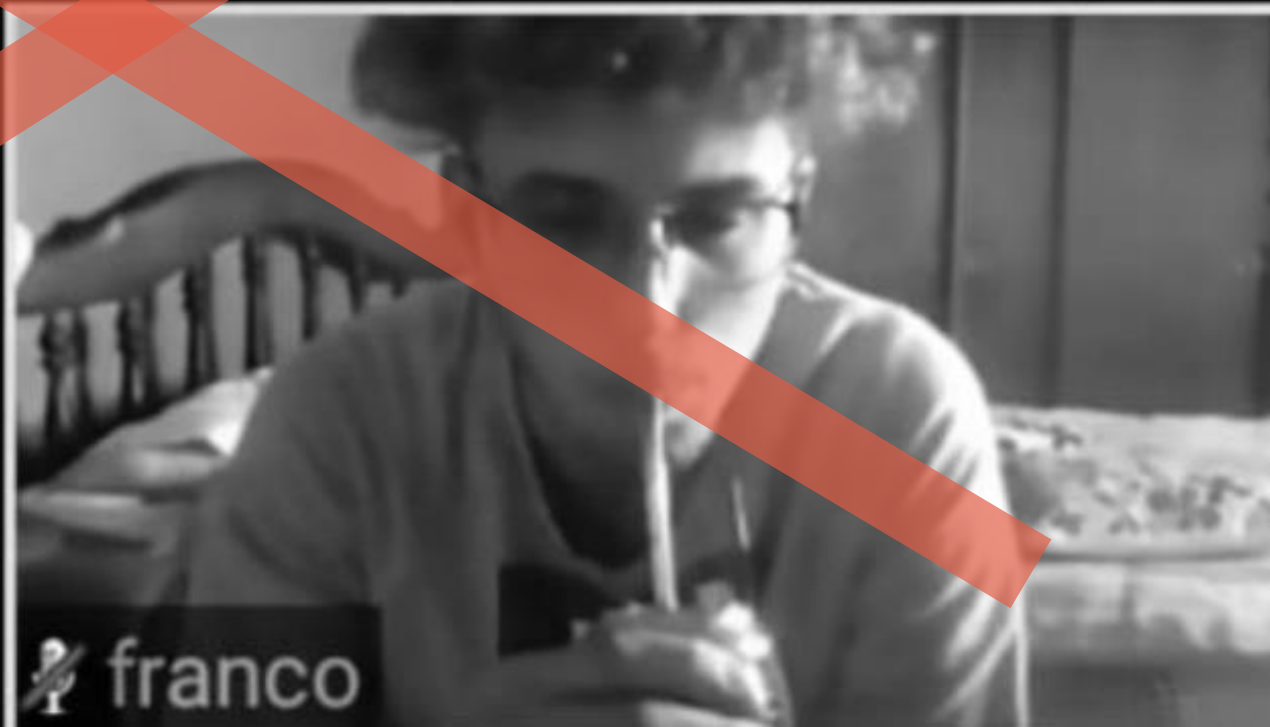
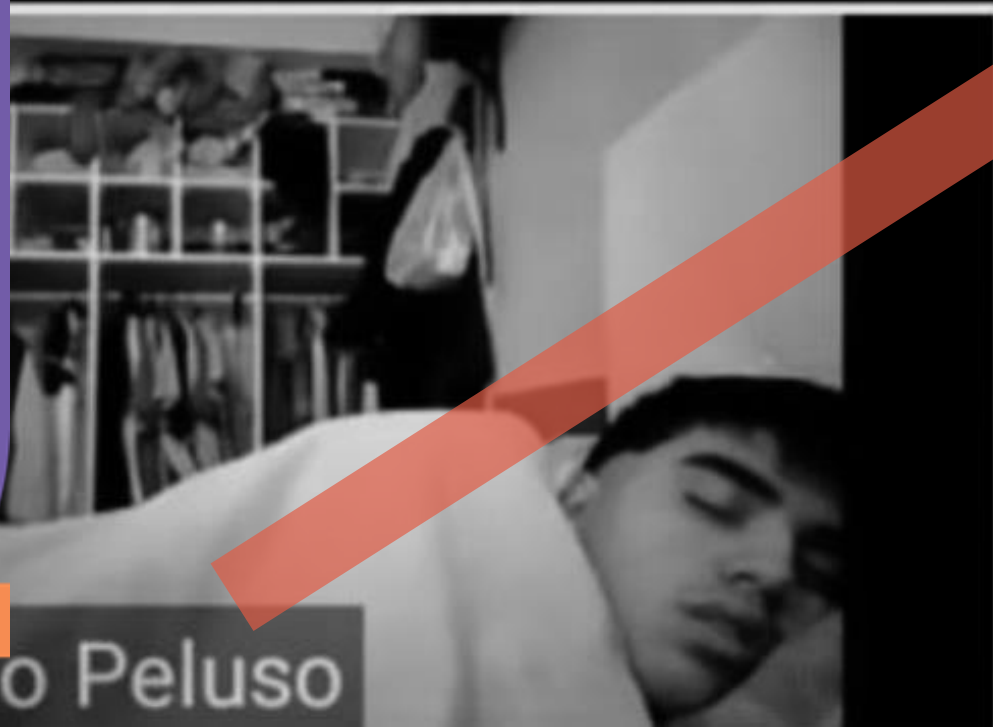


Schedule

	Introduction		
09:45	Kick-start & plan		Checkpoint 2: (1 person comes to us)
	Headquarters -masterplan -roles	13:30	CP2: PDP Head quarters (2nd floor)
		15:15	Final presentations
	Checkpoint 1: (we come to your place)		Feedback Closing Cleaning
11:00	at your place		

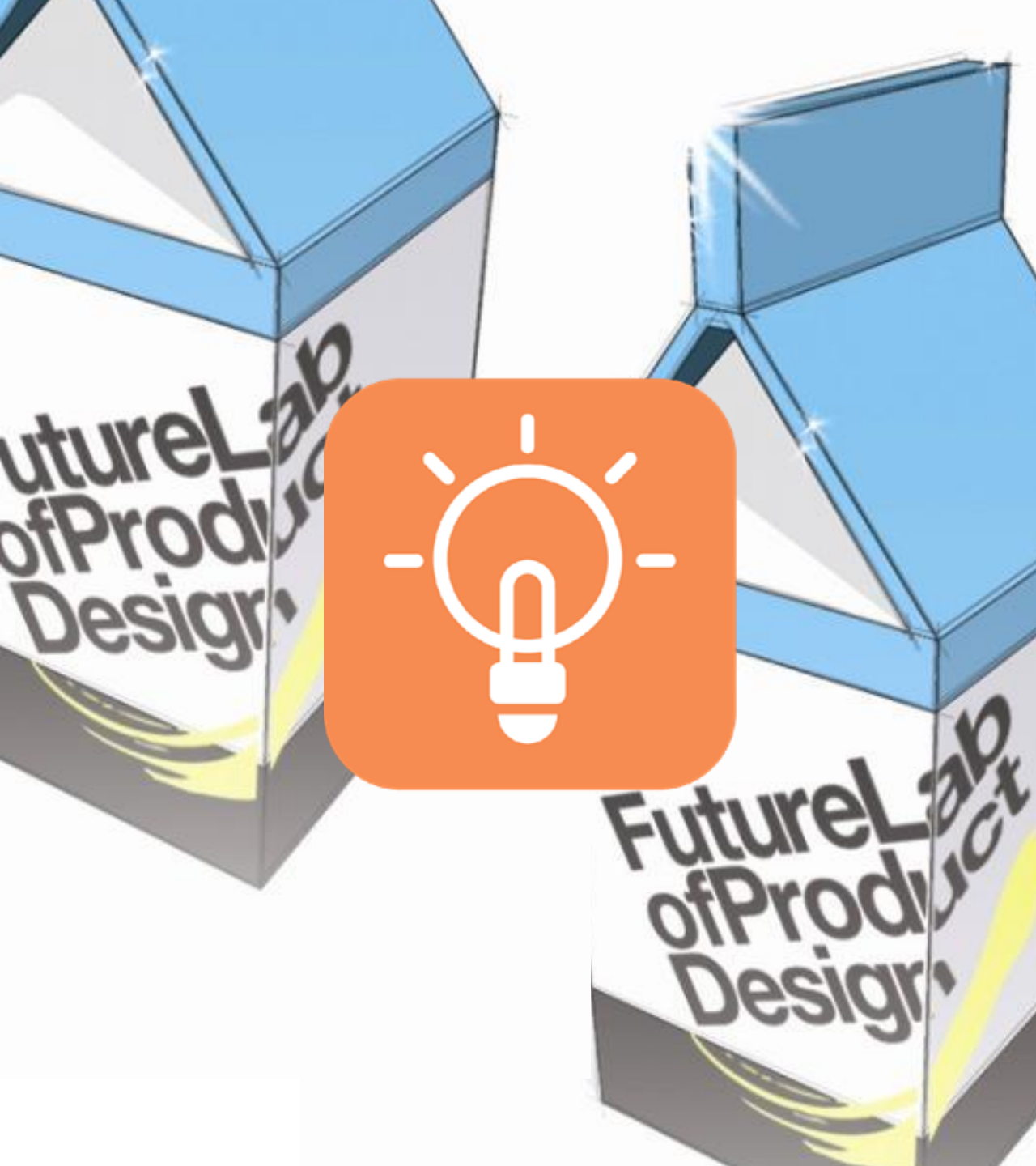
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Long history - research findings

Problems in industry

- Poor idea generation process
- Taking ideas further

Problems in student projects

- Getting started in teams
- Clarification of the task
- Communication



How the customer explained it



How the Project Leader understood it



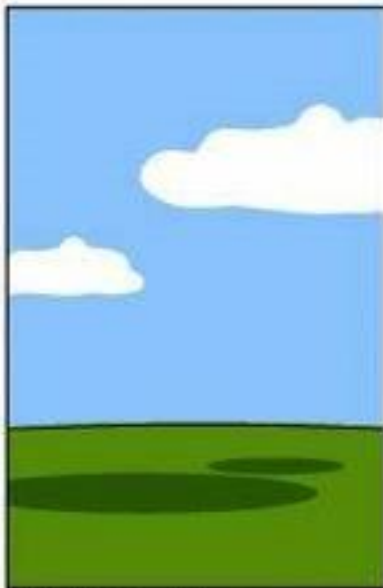
How the Analyst designed it



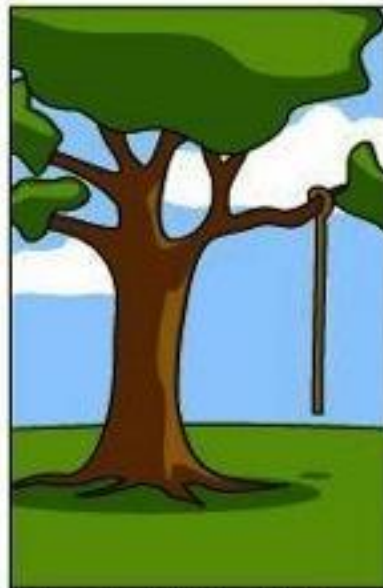
How the Programmer wrote it



How the Business Consultant described it



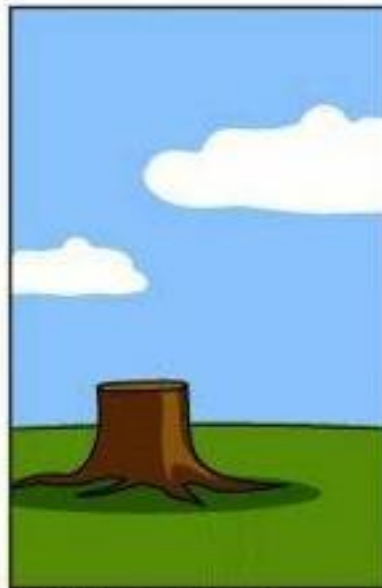
How the project was documented



What operations installed



How the customer was billed



How it was supported



What the customer really needed





Motivation for PD6

- Fail faster to succeed sooner
- Think to build – and, *build to think*
- Reinforcing the team – everyone can!

**PRODUCT
DESIGN AS
WE OFTEN
SEE IT**



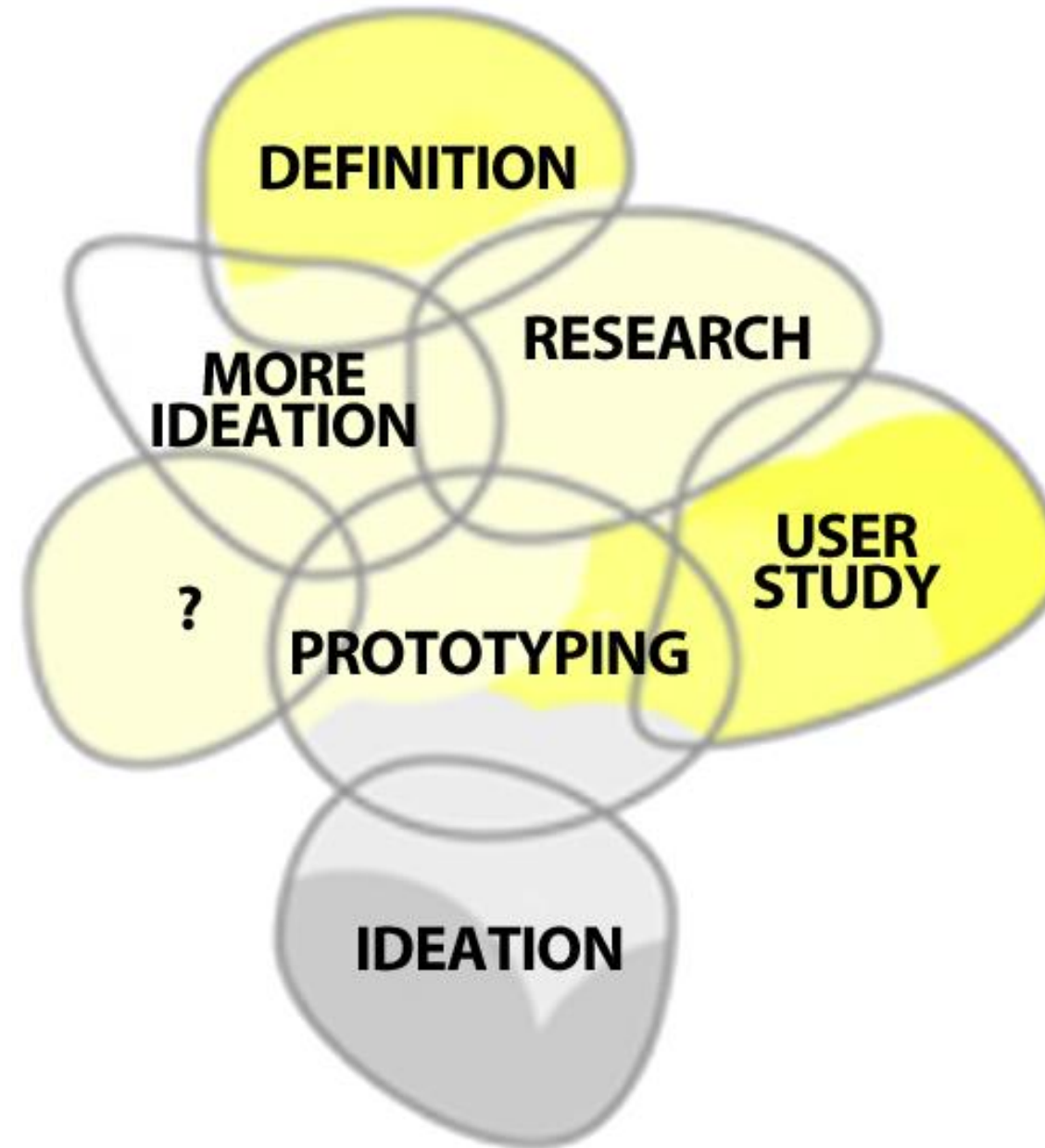
A linear process

...Commonly builds on one idea
...is necessary ...eventually
...is good for control

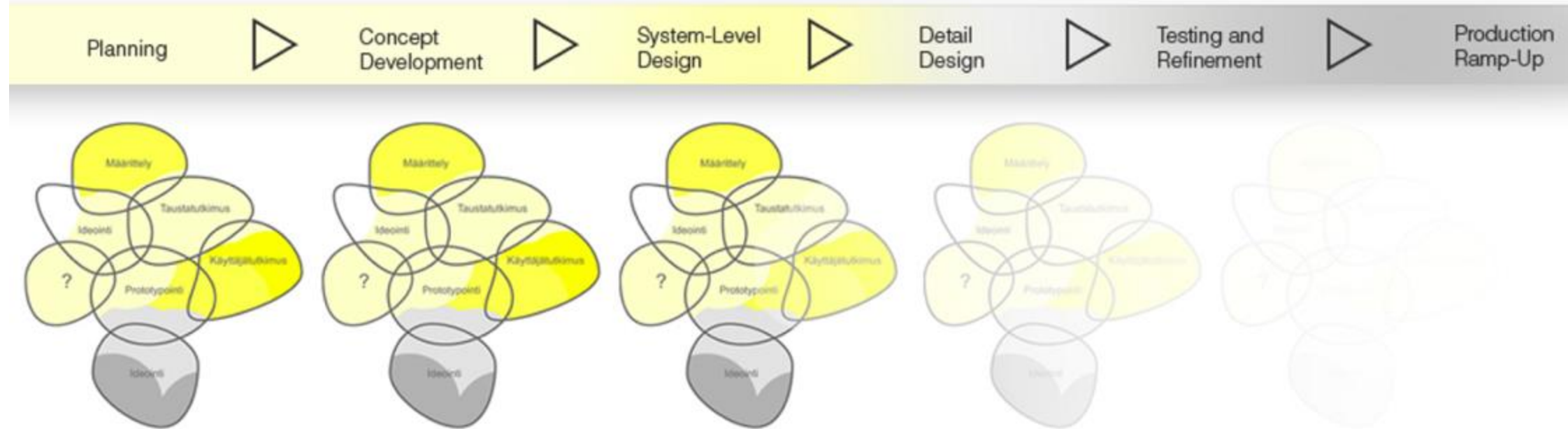


Product design is non-linear!

- Prototype for purpose!
- Focus more on the problem
...than on the process
- Interaction (ask-watch-learn-try)



The PD6 process



The traditional (boring) roles

Project Manager *management, team building*

Industrial Designer *usability, appearance, form*

Mechanical Engineer *specs, CAD, manufacture, details*

Marketing & Business *sales arguments, distribution*

Life Cycle Expert *maintenance, life-cycle control*

Electrical Engineer *functions, sensors, microprocessors*

“If you have a hammer in hand, just nails are catching your eye”

Role ideas

Time Manager

efficient and precise usage of time

Story Designer

make it big

Data Mining Engineer

obvious and unexpected sources

Business Shark

how do we make money

User/Client Expert *who are they and what motivates them*

Devils Advocate

what if

“If you have a hammer in hand, just nails are catching your eye”

Idea Generation

Brain storm rules

The **FLOW**

Variety of actions

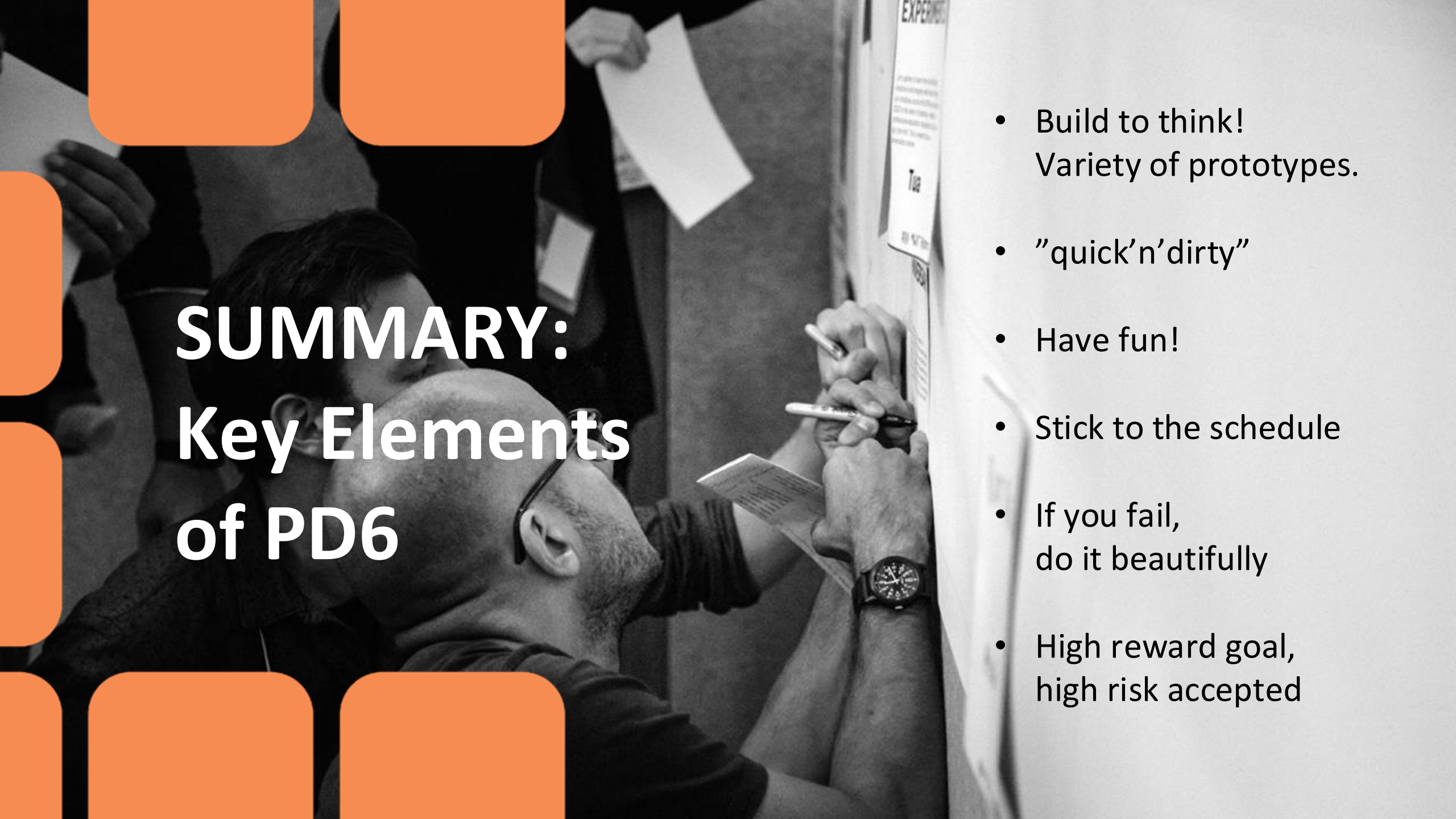
Visualise & materialise ideas



Demo or Die

- Radical viewpoints
- Choose your media
- Present *also* facts





SUMMARY: Key Elements of PD6

- Build to think!
Variety of prototypes.
- "quick'n'dirty"
- Have fun!
- Stick to the schedule
- If you fail,
do it beautifully
- High reward goal,
high risk accepted

Creativity in PD6

Perspectives to the problem?

How to harvest information?

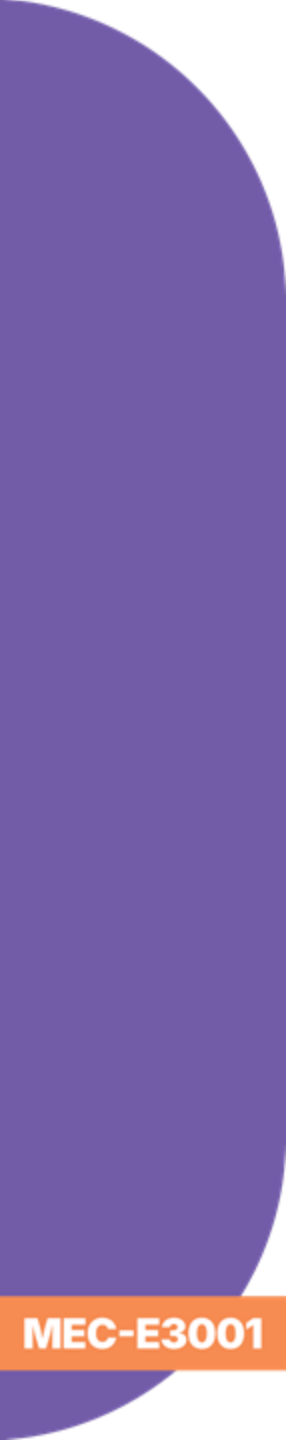
How to experiment,
prototype or test [virtually]?

Presentation or demo
– what makes “it”?



A top-down view of a workshop table. Several people's hands are visible, some holding white paper or cards. A smartphone is lying on the table. A person in a black and white striped shirt is in the foreground, looking down. A book titled 'CINDY FERNANDEZ' is also on the table. The background is a light-colored wall.

PD6 WORKSHOP DESIGN BRIEF



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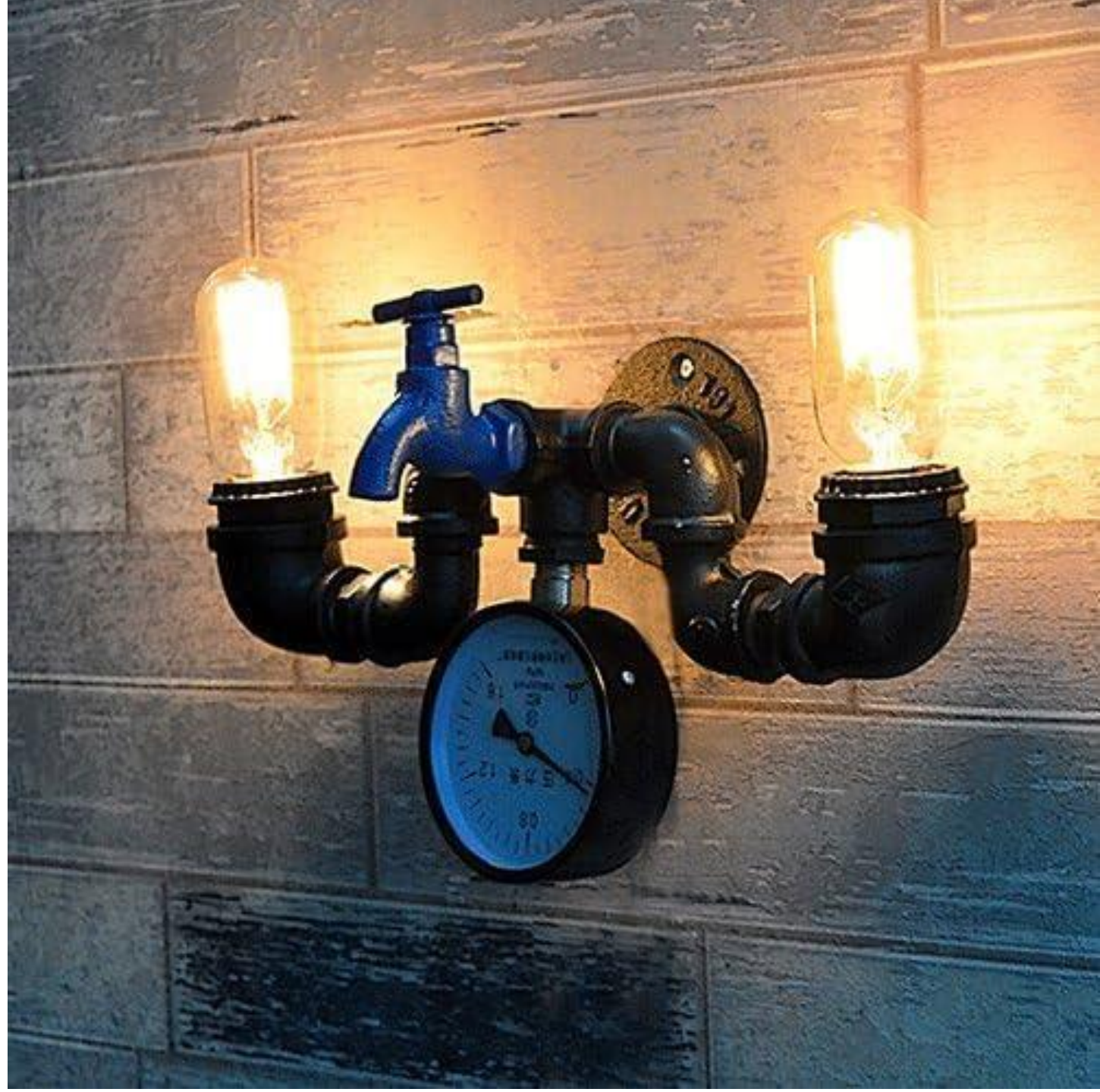
Develop a device for
monitoring waste water





Integrate commercial and technical success into a personal dust monitor

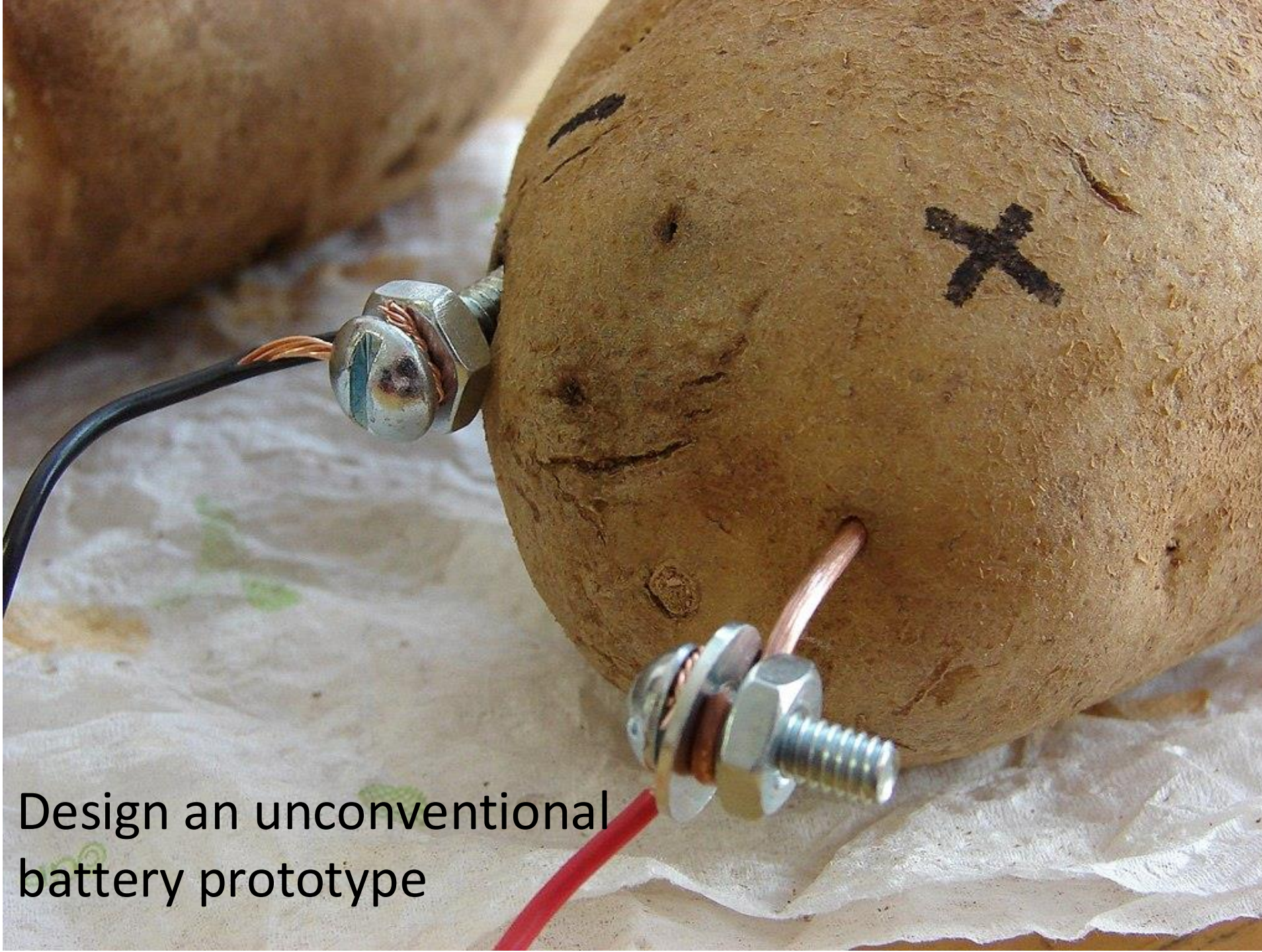
Design a self-powered IoT water meter





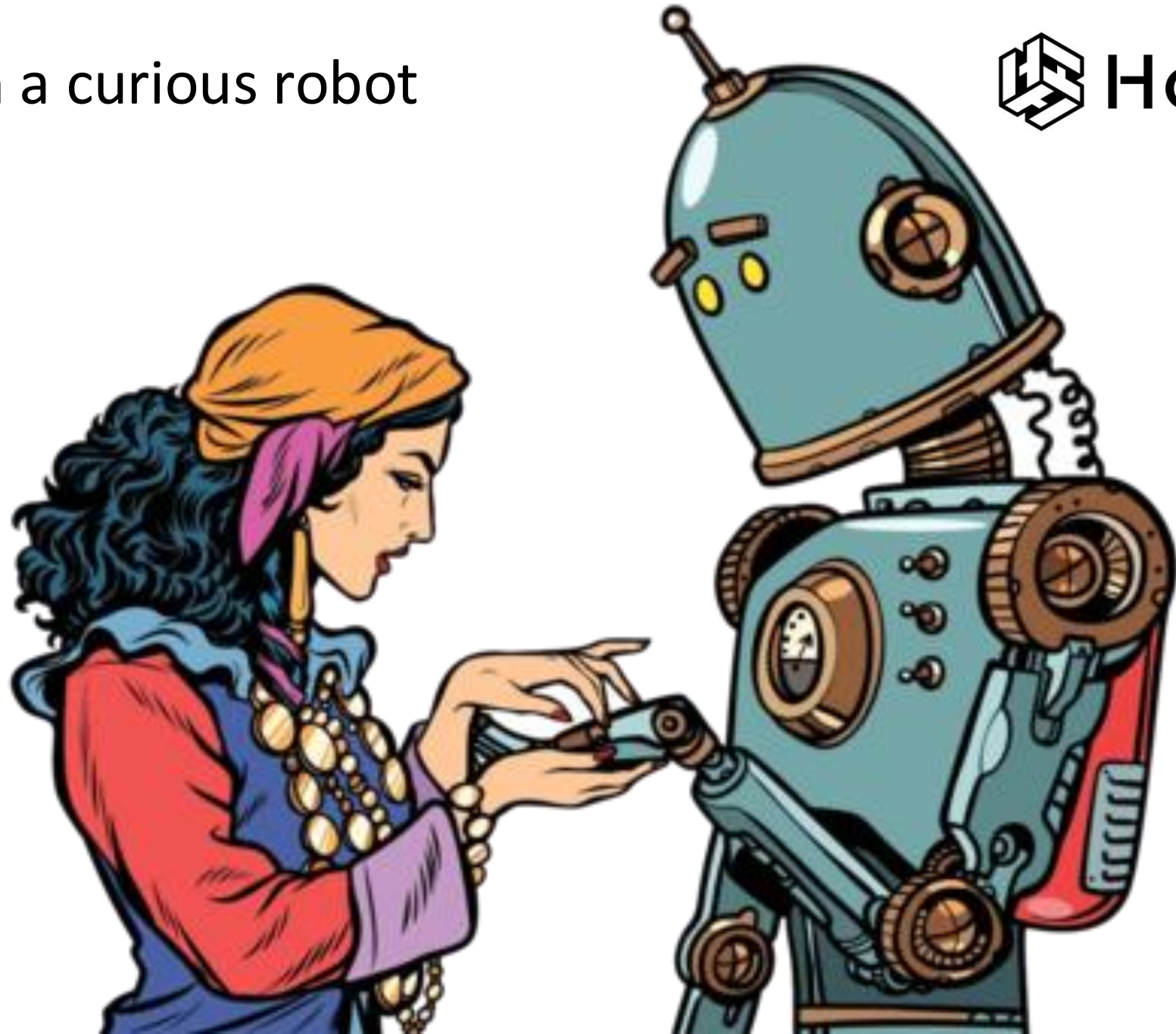
Develop a prototype that fulfills the needs of active seniors

「CU
REN」



Design an unconventional
battery prototype

Design a curious robot

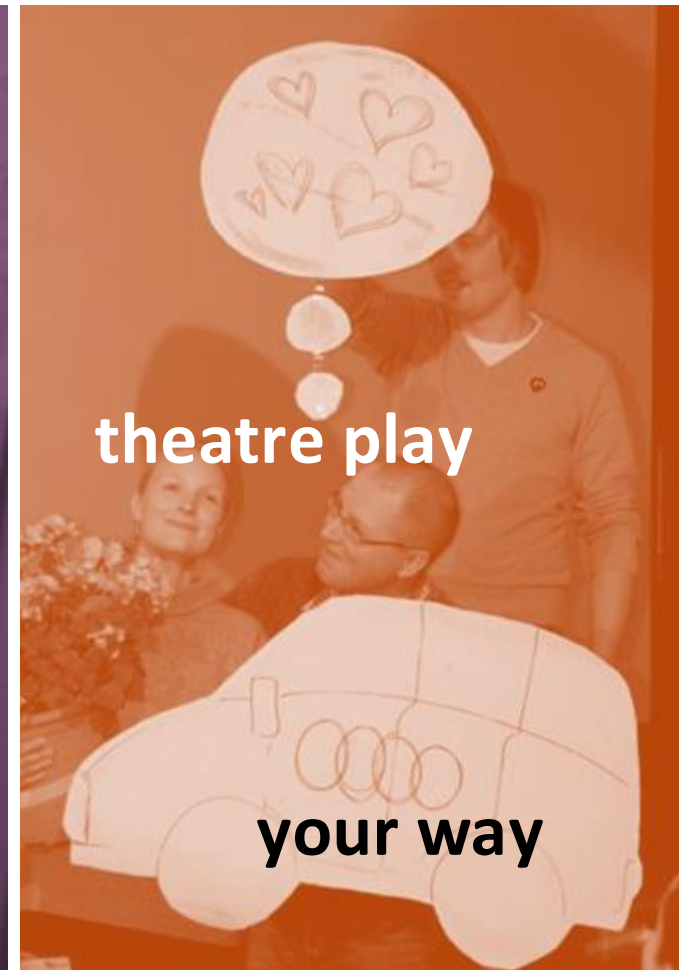




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Design a demining robot

Communicate your results in the most touching way



Practical Requirements

- a **schedule** for the day and roles defined (CP1)
- Minimum **3 phone calls** made
- Talk to Vesku
- At least **one meeting** with an **external** party
- **testing** done (document & show!)

And all of those in a way that makes sense!

Demonstration

”Demo” e.g. 3D model, tangible or visual concept;
a “prototype”, mock-up, scale model or any demonstration
that helps the audience to understand the value of your idea. Convince us!

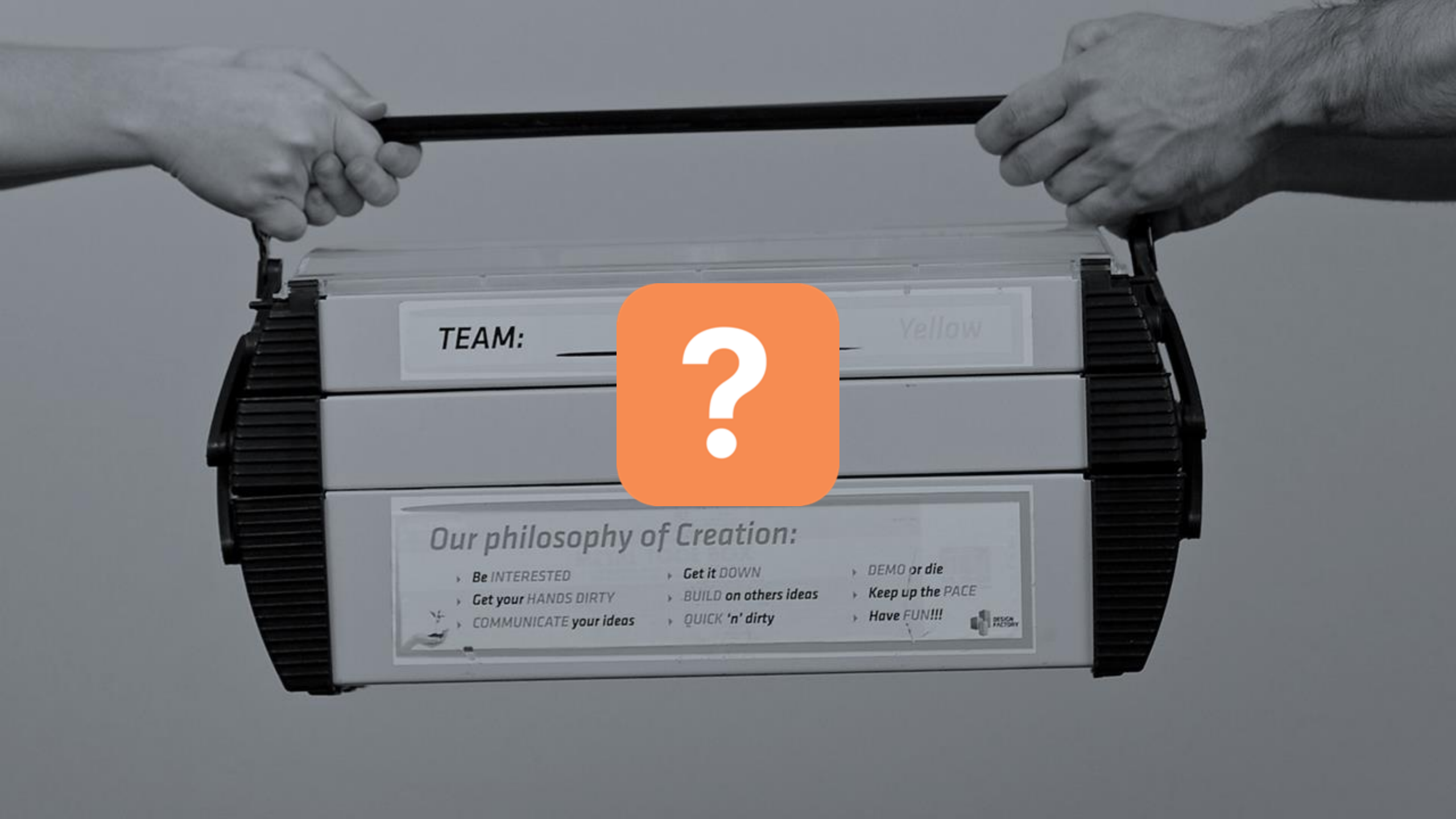
And related story telling / presentation
(altogether 5 min = 300 sec)

Practical advice:

- reserve little (enough) time for planning, designing & practicing
- no more than 3 powerpoints (if any)

However, you shouldn't forget

- ease of use, user experience
- (manufacturing) cost issues
- modularity
- safety
- variety of users (age, sex, size, profession, ...)
- statements against existing solutions
- what makes quality
- retrofit
- sustainability



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DISCK FACTORY

A photograph of a break area. In the center, a woman with glasses and a name tag stands behind a table. On the table are several stacks of pizza boxes, two bottles of Coca-Cola, and a blue hard hat. To the right, a sign on a box reads "Please sign our guestbook!" with an arrow pointing to a guestbook. A man in a tan uniform and a woman in a dark shirt are seated at the table. The background is a red wall. The text "BREAKS ON THE GO!" is overlaid in white, bold, sans-serif font.

BREAKS ON THE GO!

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