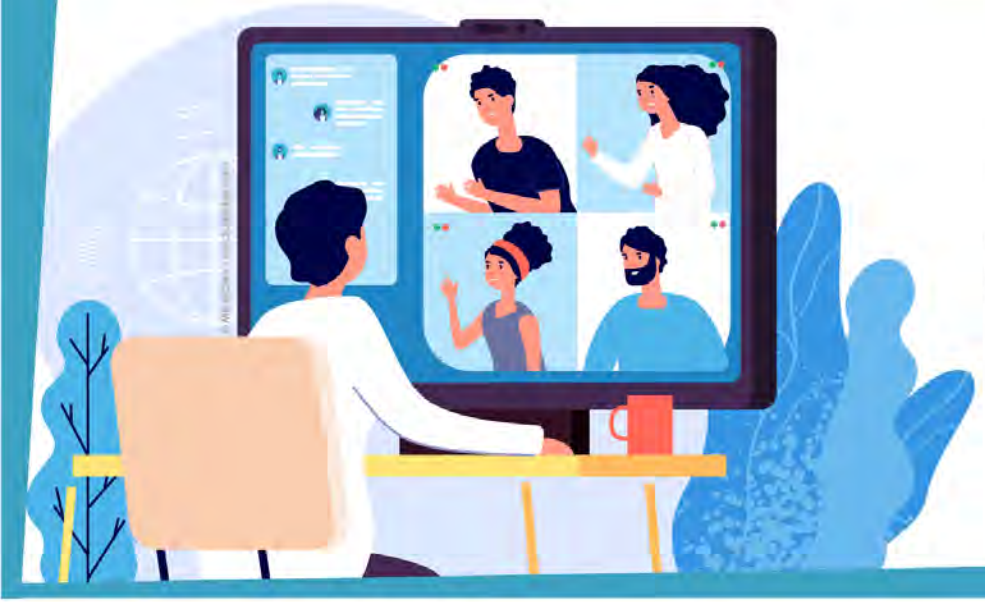

SCIENCE PROJECTS ONLINE WORKSHOPS (SPOWs)

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ICT-INOV METHODOLOGY FOR INNOVATORS

1° Session – 13 March 2023

Ref. code 618768-EPP-1-2020-1-EL-EPPKA2-CBHE-JP

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What is Design thinking?

Complex problems — otherwise known as "**wicked**" problems — are those that are **difficult** to **define** and cannot be **solved** using **standard methods** and **approaches**.

It is a methodology that aims to tackle highly **complex problems**.

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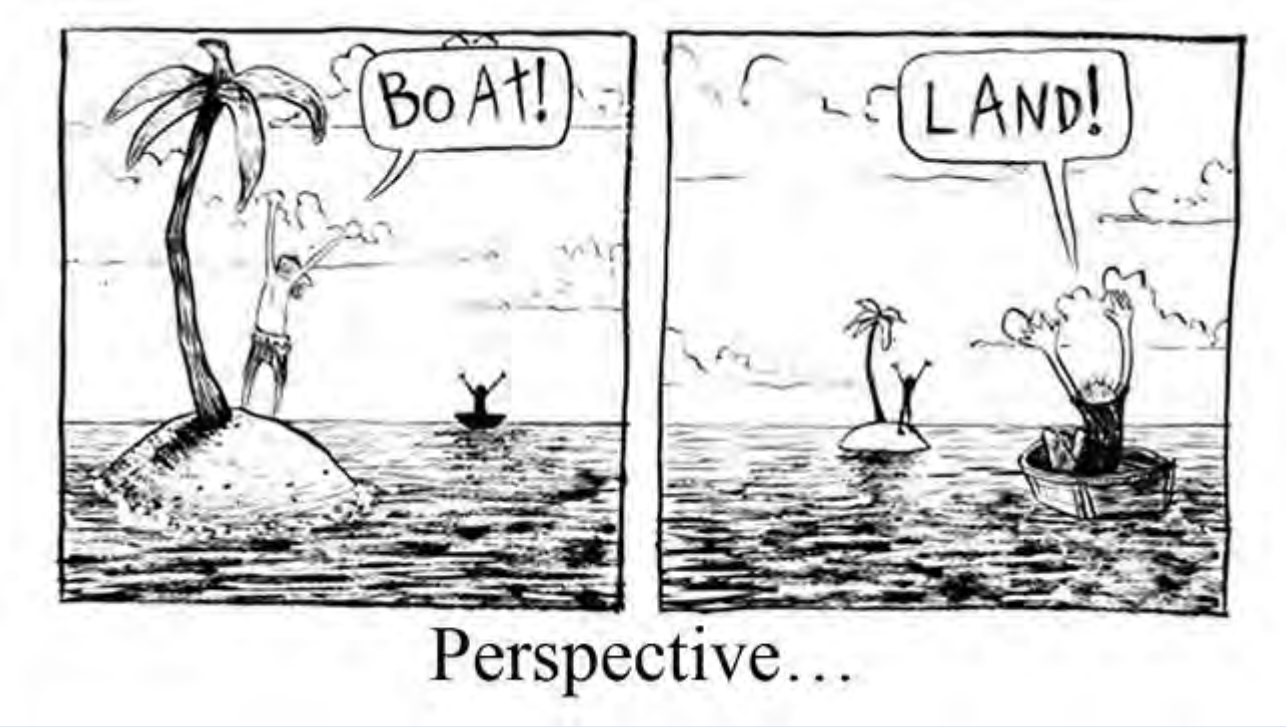
Design thinking methodology

Climate change, poverty, and world hunger are often-cited examples; they **need** to be **tackled** from **multiple angles**.



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Innovation

It is not an event.

It is a **mindset**.

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Design Thinking Advantages

- Students have the **opportunity** to **think critically** and **imaginatively**, **collaborate**, **communicate** and **engage** their **curiosity**.
- Students can **develop** into **autonomous learners** who decide **how they work** and **what solutions** they want to create.
- Students can be **involved** in an **active** and **meaningful process** that helps them show the **real application** of disciplinary content.
- It **helps** teachers **differentiate** and **personalize learning** for each student.

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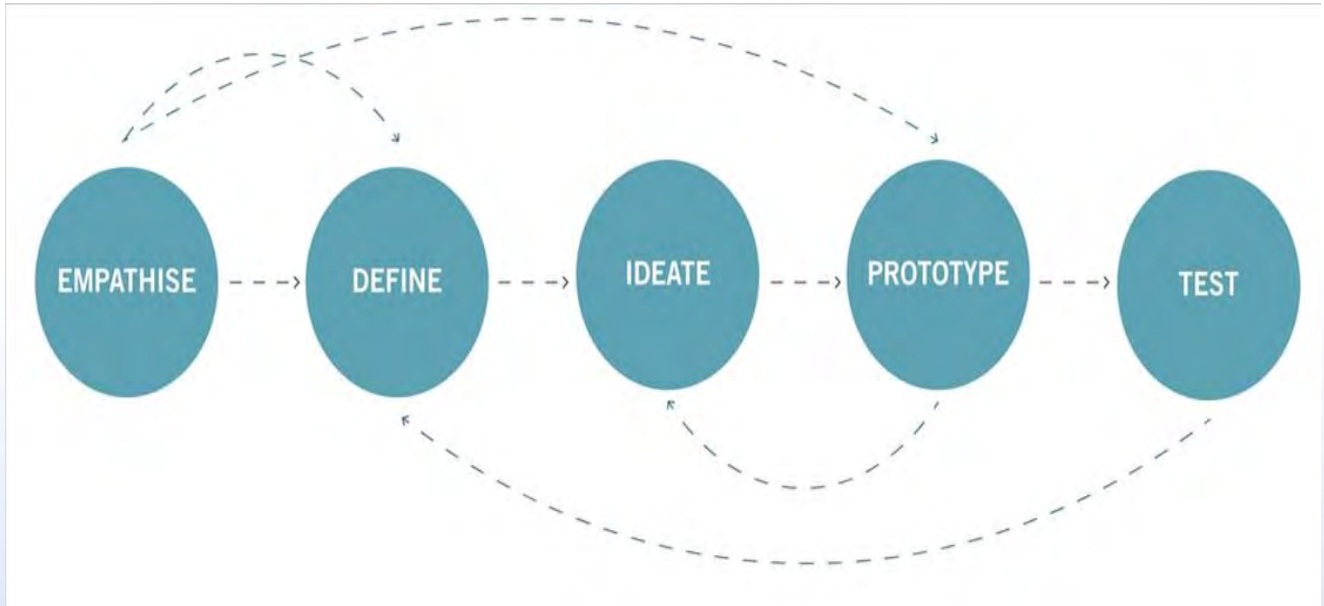
Design Thinking in brief

It is a **structured process** for **problem solving** to:

- **identify** challenges,
- **gather** information,
- **generate** potential **solutions**,
- **refine** ideas,
- **test** solutions.



The **aim** is to **bring innovative solutions** to the **problems**.

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Empathy phase

1- Drawing the framework of problem

2-Searching the problem

3- Reporting

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Empathy Phase (1)

1. **Problematic** areas
2. Areas of **possible change**
3. Things to **improve**

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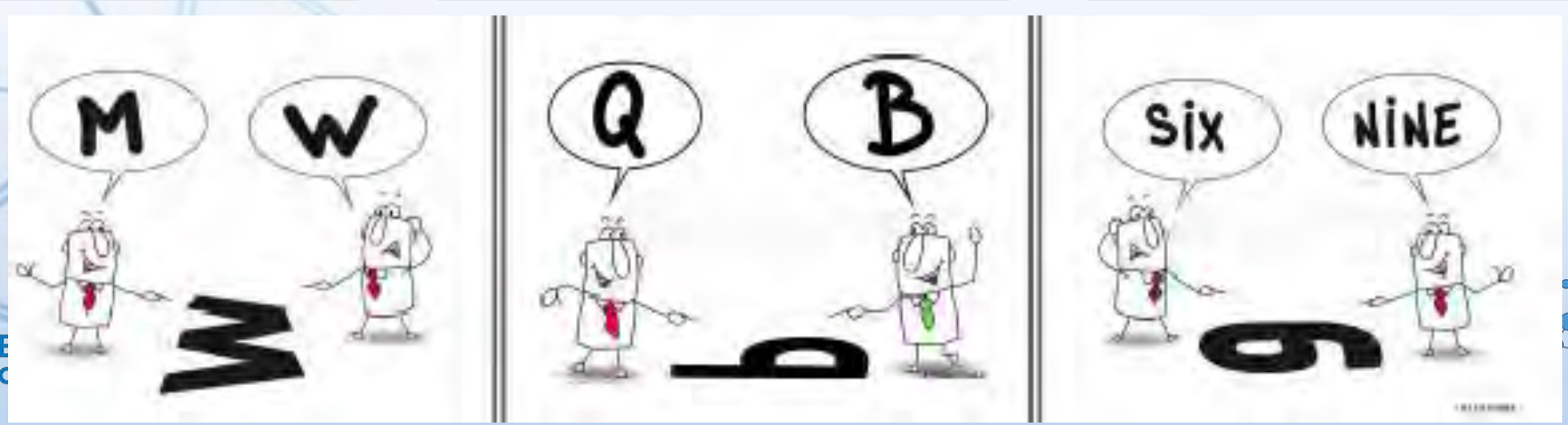
Define phase

Who	What	Why
• The user	• … needs a way to … (use verbs)	• … because … (insight)



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Ideate phase

(1) Ideas' classifications

Once the Ideation session is complete, the **ideas** must be **collected**, **categorised**, **refined**, and **narrowed down**.

(2) Ideas selection (first)

The team can **select** the **best solutions**, **ideas**, and **strategies** from a shortlist.

(3) Ideas selection (second)

After **voting** the **best idea**, the team can start to **create** the **blueprint** for their **prototype**.

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Prototype phase

Prototyping is the art of **showing instead of telling**.

Usually, **students** in groups try **build** a **rough model** of their final solution found.

The **model** is a **visual representation** of **what the concept** should **look** or **feel like**.

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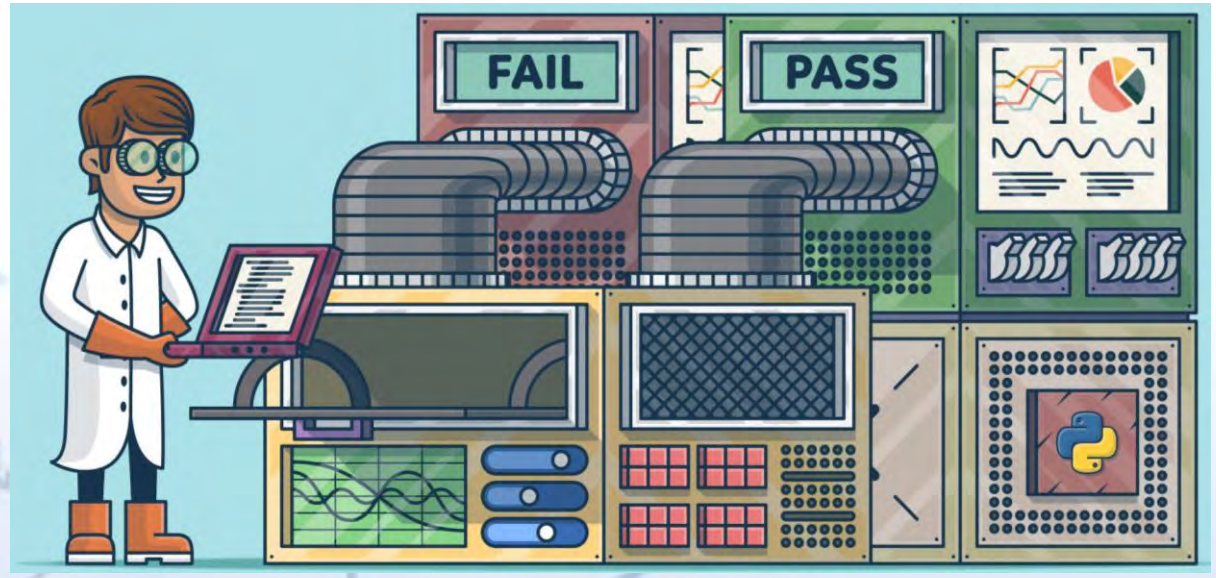
Test phase



Testing solutions **allows** to **improve** them – **user feedback** allows to determine what is right (and wrong) with the design.

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Thank you for your attention!

Dr Michela Tramonti, EU-Track
m.tramonti@eu-track.eu

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