

TRANSFERABLE SKILLS I

DesignThinking Module

2022.2023

lesson 2

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2.1 EVALUATION

Utopian Vision
Design Fiction

2.2 DESIGN THINKING EXPECTATIONS

Problems suited to *DT*

2.3 DESIGN THINKING MODELS

Evolution 6² Model

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EVALUATION

The participation of each student in the final presentation is mandatory

The presence of each student in the classes is mandatory

_UTOPIC FUTURE SCENARIO

- _ Work (groups of 5 students each)
- _Evaluation at your last lesson | 20th October ; 21st November ; 5th January

ORAL PRESENTATION [30%]*

- _Classic power point presentation and/or:
- _Demonstrating, promotional video TV, newspaper reports
- _Live demonstration
- _Users interviews
- _Others
- _5 minutes presentation (1 minute/each student)

WRITEN ESSAY [30%]

- _Maximum 1500 words
- _Interconnection between work description and classes content is valued

SUPPORTING ARTEFACTS [40%]

- _Maps, photos, graphs, physical/virtual prototypes, ...
- _Upload through Moodle until 23h59, presentation day

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EVALUATION

Utopian Vision

Design Fiction



Design Fiction

work must '**gravitate around**' challenges related with **one of the 17 UNITED NATIONS SUSTAINABLE GOALS**

One goal will be randomly assigned to each group at lesson 3.

Groups constitution must be communicated and closed until lesson 3 (next week).

1
SDG

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EVALUATION

Design Fiction

This is your future



House of the future 1965 - Fred McNabb

the deliberate use of **diegetic prototypes** to suspend disbelief about change
Sterling, 2012

a conflation [fusion] of design, science fact and science fiction
Bleeker, 2009

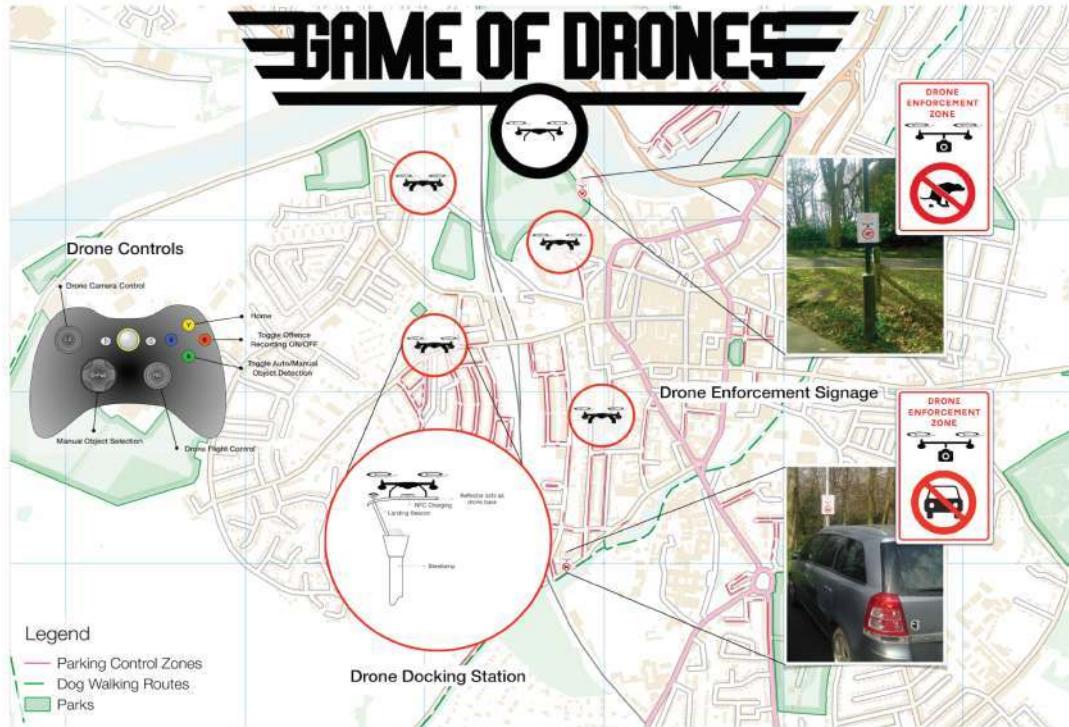
not to show how things will be but to open us space for discussion
Dunne & Raby, 2013

a way of envisioning, a communication tool, and a way of building inspiration and motivation
Lindley, 2015

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EVALUATION

Design Fiction



Coulton et al., 2017

GAME OF DRONES

example

_Gamified drone-based system for civic enforcement

_Premised upon a supposed legislation change (allowing drones to help local government)

_Recruits retired members of police/army to act as remote drone pilots

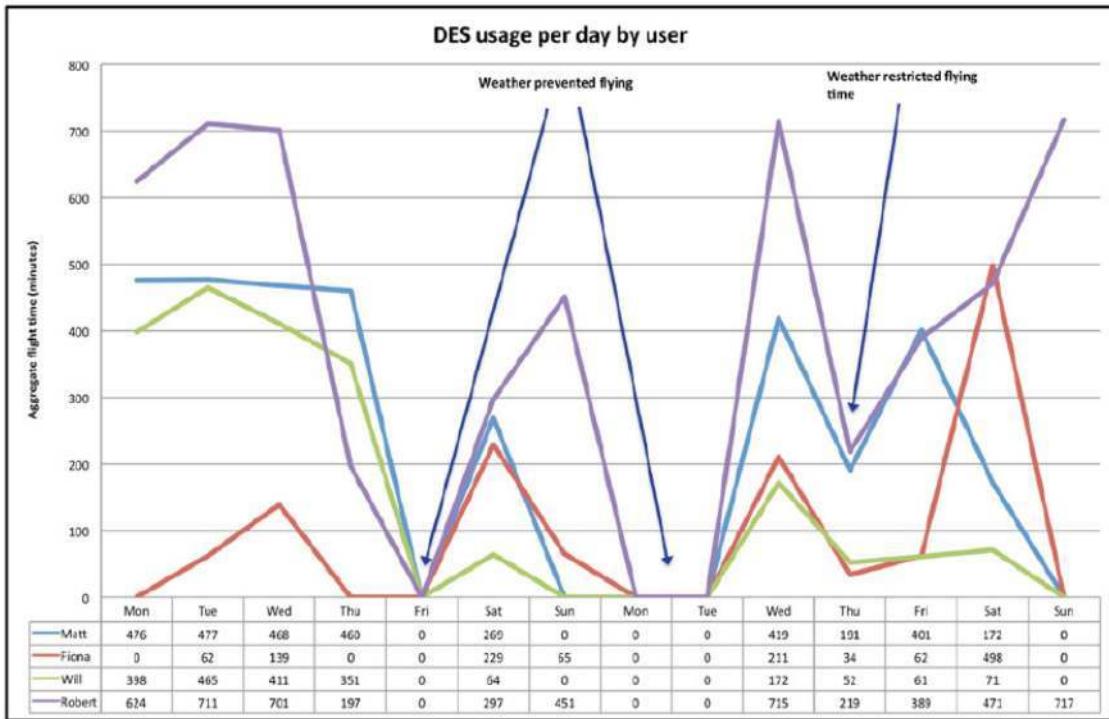
_Parking offences and dog fouling

_Game-like interface, points rewarded for catching other citizens infringing upon the rules

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EVALUATION

Design Fiction



Coulton et al., 2017

GAME OF DRONES

example

_Gamified drone-based system for civic enforcement

_City map

_Hardware required specifications

_‘Drone enforcement zone’ signage design

_Game-like interface

_5 minute demonstration video recorded from a drone

_Participants trial and data collection and protection policies

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EVALUATION

Design Fiction

THE EMPATHY GAME

example

_ Algorithms for detecting empathy within digital communications in situations such as: disambiguation of text – based chat, weaving emotions into telemedicine, smart devices such as cars modifying their behaviour based on users' emotional states

_Smart phone accessories, wearable devices



Coulton et al., 2017

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EVALUATION

Design Fiction



@The Digital Empathy SDK <https://youtu.be/64GntbVwlGw>

The screenshot shows a news article from The Mirror. The headline reads: "Blade Runner-style emotion machine can detect love on first date". The subtext states: "The device is inspired by the Voight-Kampff machine featured in the 1982 sci-fi thriller, Blade Runner, directed by Ridley Scott and starring Harrison Ford". Below the article, there is a large image of a yellow, spherical device with a face and a coiled cord. To the right of the article, there are two smaller video thumbnails: one showing a blue car driving and another showing a woman's face.

THE EMPATHY ENGINE

example

_ Algorithms for detecting empathy within digital communications in situations such as: disambiguation of text-based chat, weaving emotions into telemedicine, smart devices such as cars modifying their behaviour based on users' emotional states

_ Smart phone accessories, wearable devices

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YET ANOTHER
UNSUCCESSFUL
INTERNET DATE ...

In the not too distant
future, the minefield of
internet dating remains
as tricky as it ever was.

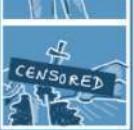
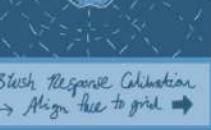


2



V Camera
Calibration

SET



Blush Response Calibration
↳ Align face to grid ➔

3



4



THE END

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DESIGN THINKING EXPECTATIONS



**WHAT DO YOU EXPECT
TO LEARN FROM THIS
MODULE?**

**WHAT DO YOU KNOW
ABOUT DESIGN
THINKING?**

**WHAT HAVE YOU
HEARD ABOUT IT?**

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DESIGN THINKING EXPECTATIONS

= generating
original
ideas

Is Design Thinking equal to...
**Think outside
the box**

= innovation

= creativity



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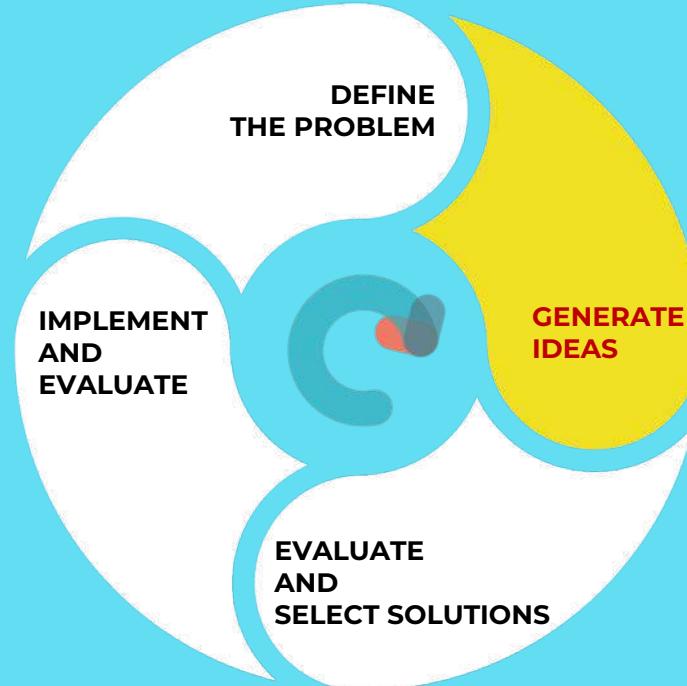
DESIGN THINKING EXPECTATIONS

**WHAT IS THE
CONTRIBUTION OF DESIGN
THINKING THROUGH THE
PROCESS OF SOLVING A
PROBLEM?**

**IS IT ONLY WHEN
GENERATING IDEAS?**

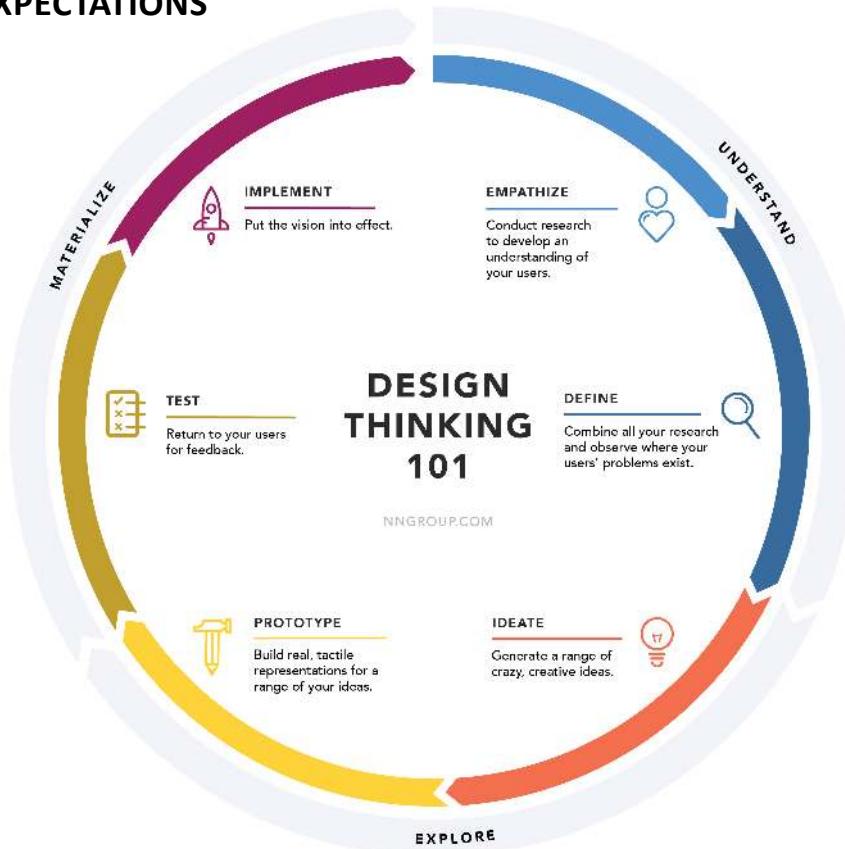


Take the problem 'organizing a party' as an example



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DESIGN THINKING EXPECTATIONS



MYTH

DESIGN THINKING IS ONLY ABOUT GENERATING IDEAS

FACT

DESIGN THINKING PROVIDES A THINKING STRUCTURE THROUGHOUT ALL PROCESS OF SOLVING A PROBLEM

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DESIGN THINKING EXPECTATIONS

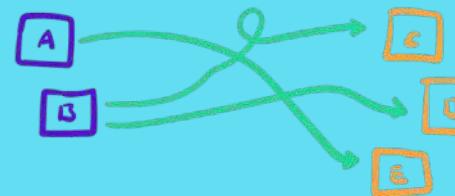
**Are all problems suited to
be solved applying a
Design Thinking approach?**

**Are all problems created
equal?**

Well-defined



Ill-defined



Wicked

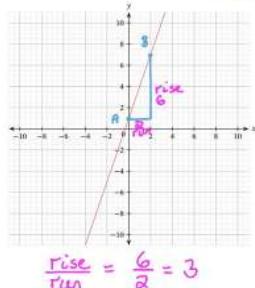


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DESIGN THINKING EXPECTATIONS

ARE ALL PROBLEMS CREATED EQUAL?

Calculate the **slope** of the **line** in the graph.



$$y = mx + b$$

slope/gradient

$$m = \frac{y_2 - y_1}{x_2 - x_1}$$

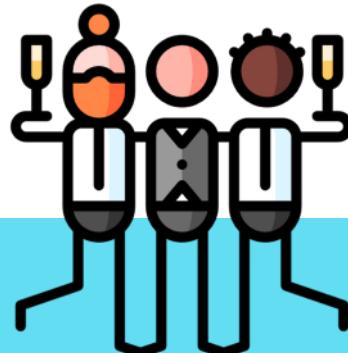
$A(x_1, y_1)$
 $B(x_2, y_2)$

$$A(0, 1) \quad B(2, 7)$$

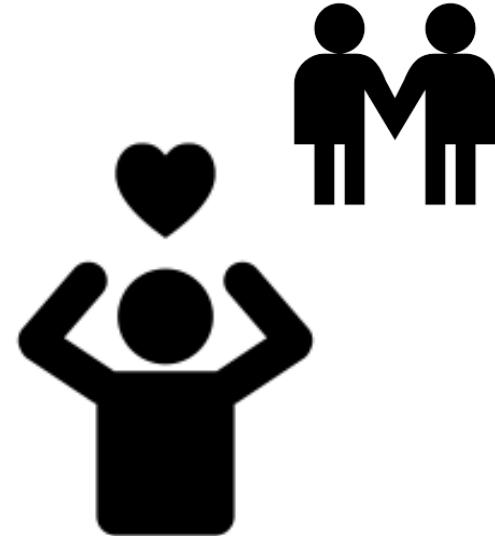
$$m = \frac{7 - 1}{2 - 0} = \frac{6}{2} = 3$$

slope = 3

✓ +ve



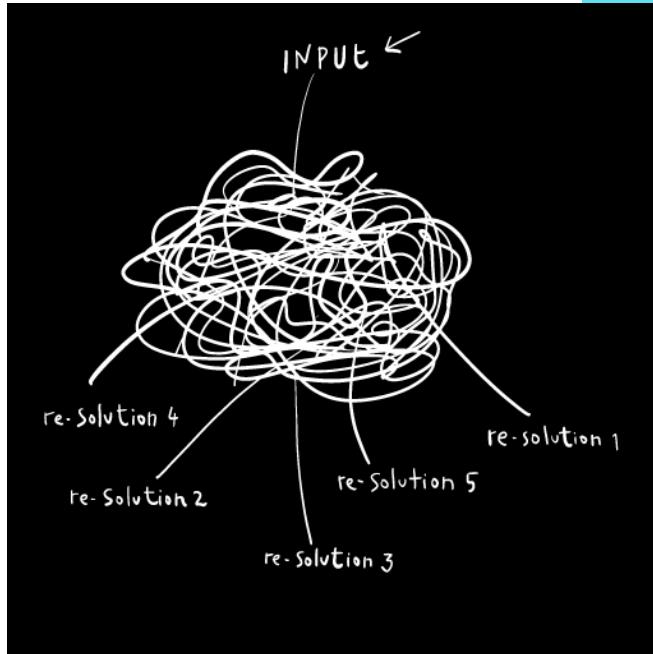
'organizing a party'



'choose a partner for life'

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DESIGN THINKING EXPECTATIONS



PROBLEMS SUITED FOR DESIGN THINKING APPROACH

Open

Admit more than one 'right answer'

Complex

Several parts, interconnected sometimes opposing each other

Dynamic

Changing with time
Problem evolves with the solution

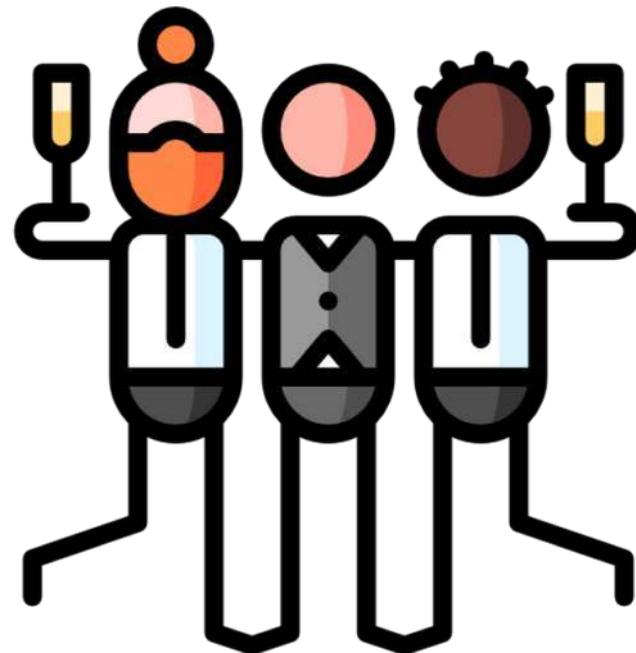
Unstructured

Can't be solved following a 'recipe'

Undefined

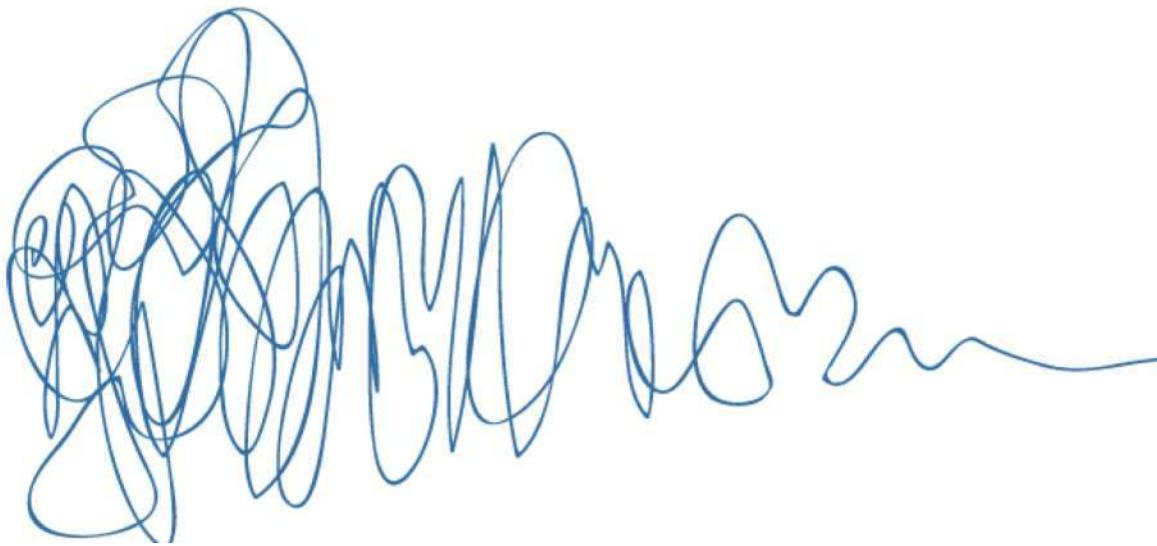
Usually there is no starting question neither ready input data

I AM GOING TO THE PARTY
AND I'M BRINGING ...



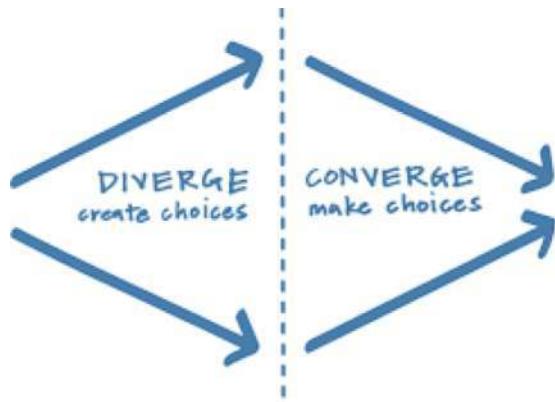
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DESIGN THINKING MODELS



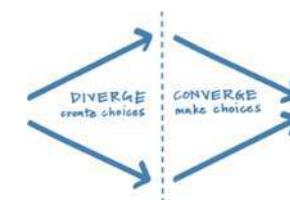
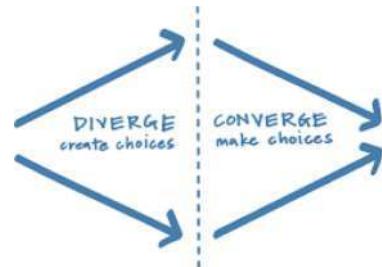
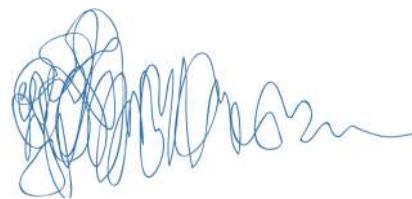
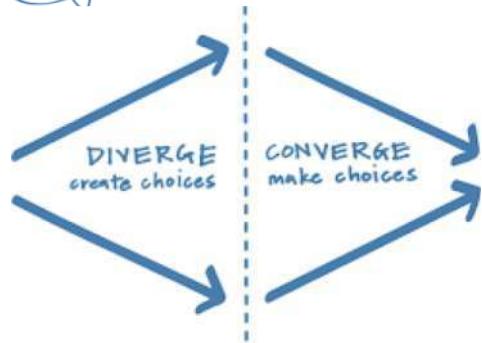
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DESIGN THINKING



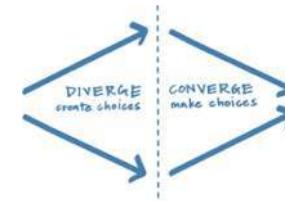
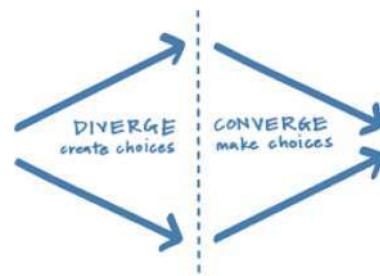
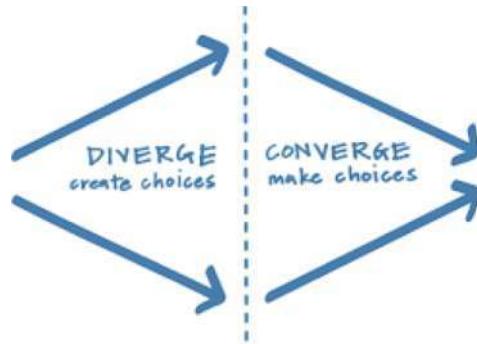
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DESIGN THINKING



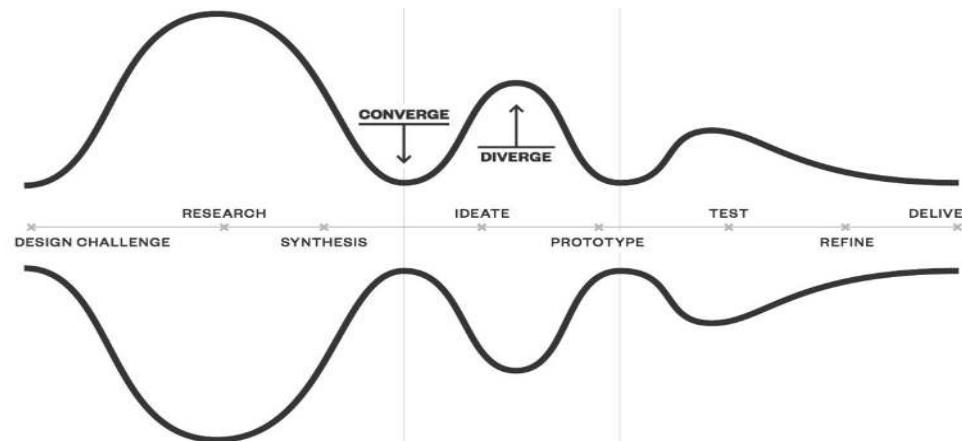
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DESIGN THINKING



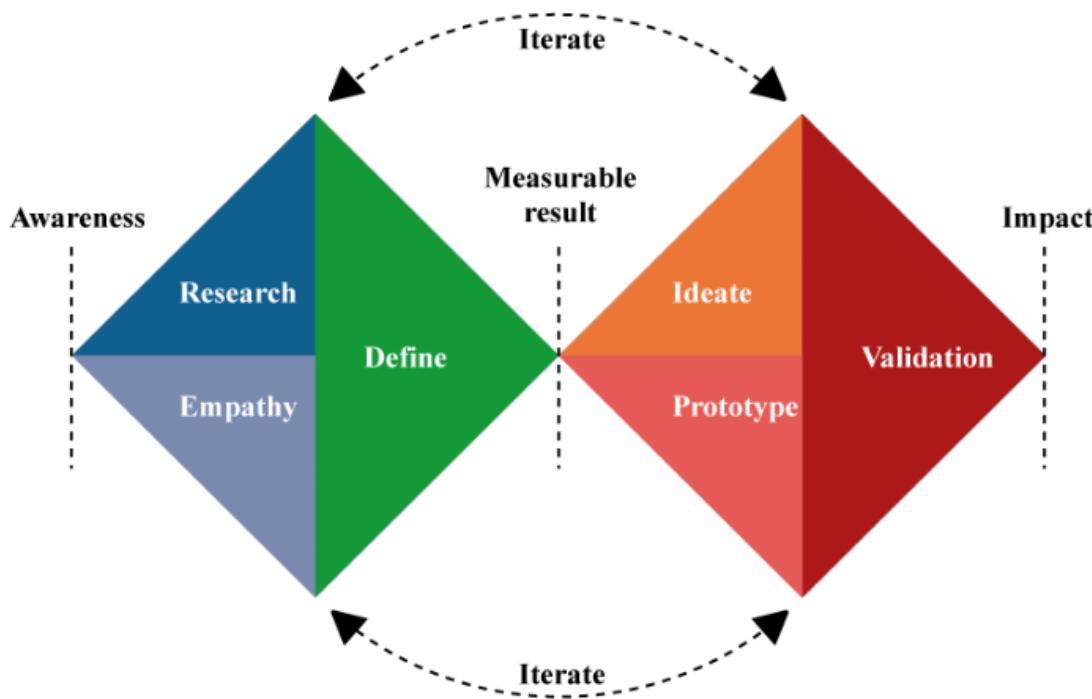
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DESIGN THINKING MODELS



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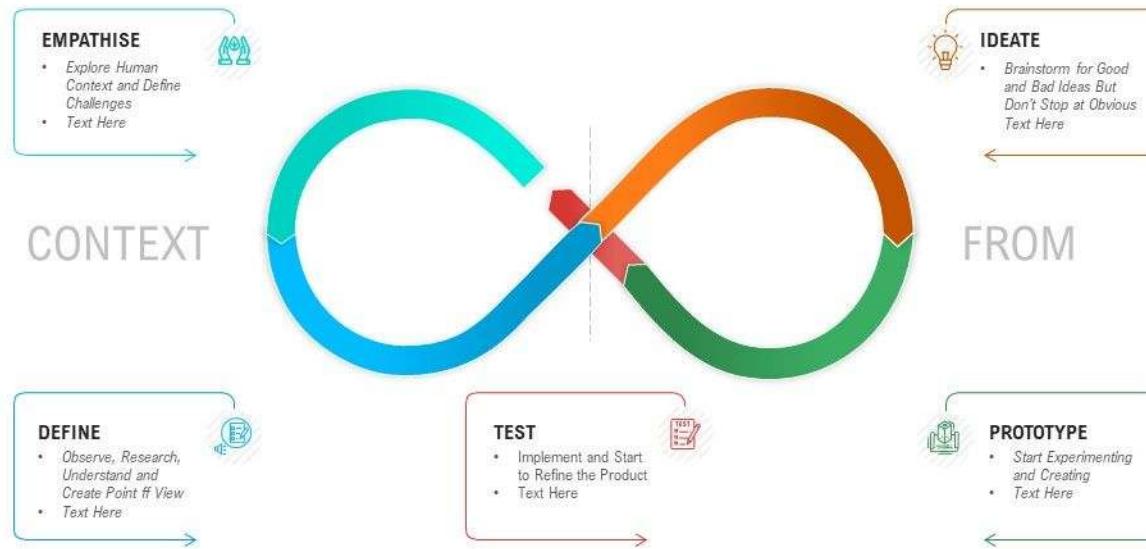
DESIGN THINKING MODELS



DESIGN THINKING MODELS

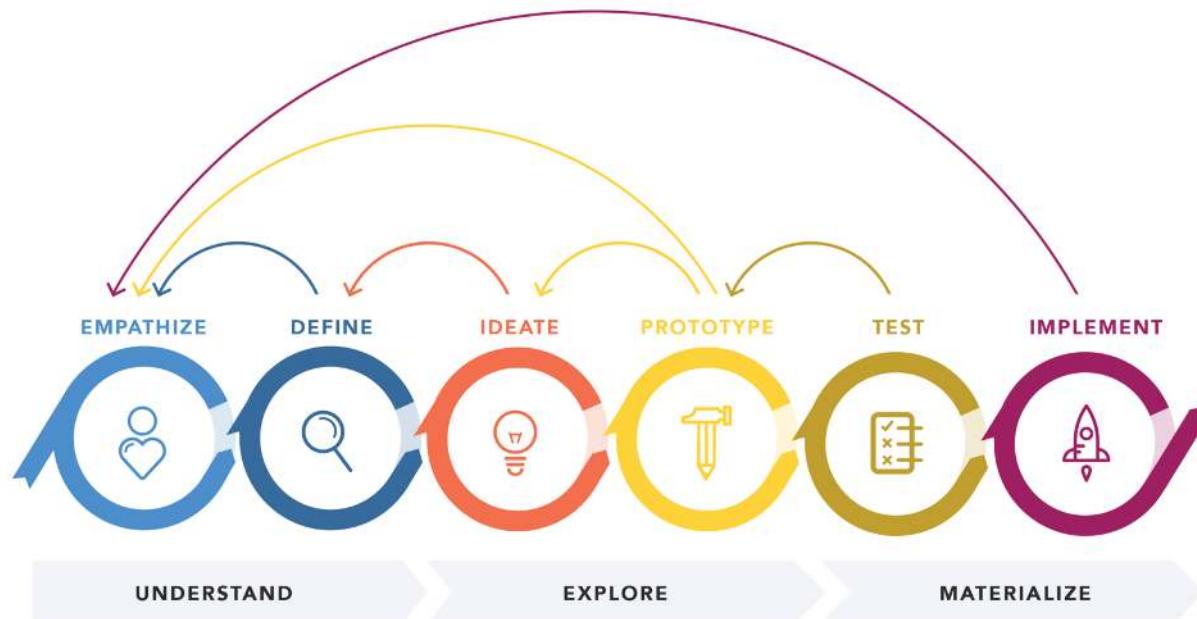
Design Thinking Innovation Framework

This slide is 100% editable. Adapt it to your needs and capture your audience's attention.



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DESIGN THINKING MODELS



DESIGN THINKING 101 NNGROUP.COM

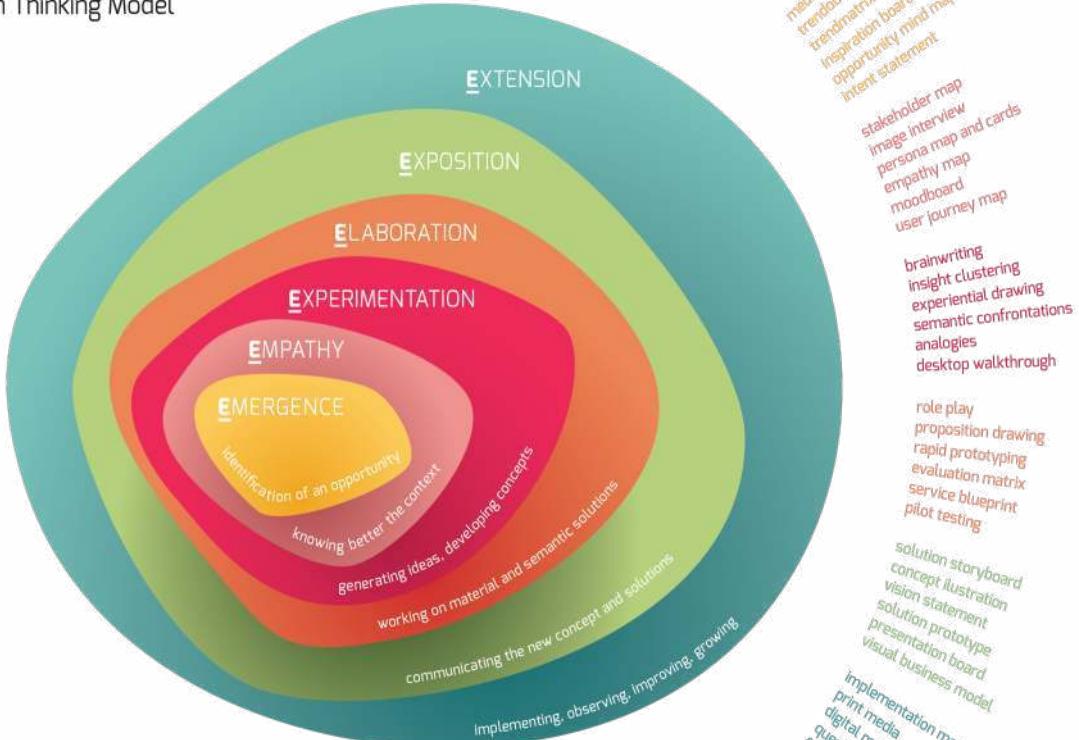
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**DESIGN THINKING
MODELS**
E6² Model

MIND
SHA
KE

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EVOLUTION 6²

Mindshake Design Thinking Model



MIND
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DESIGN THINKING MODELS

E6² Model

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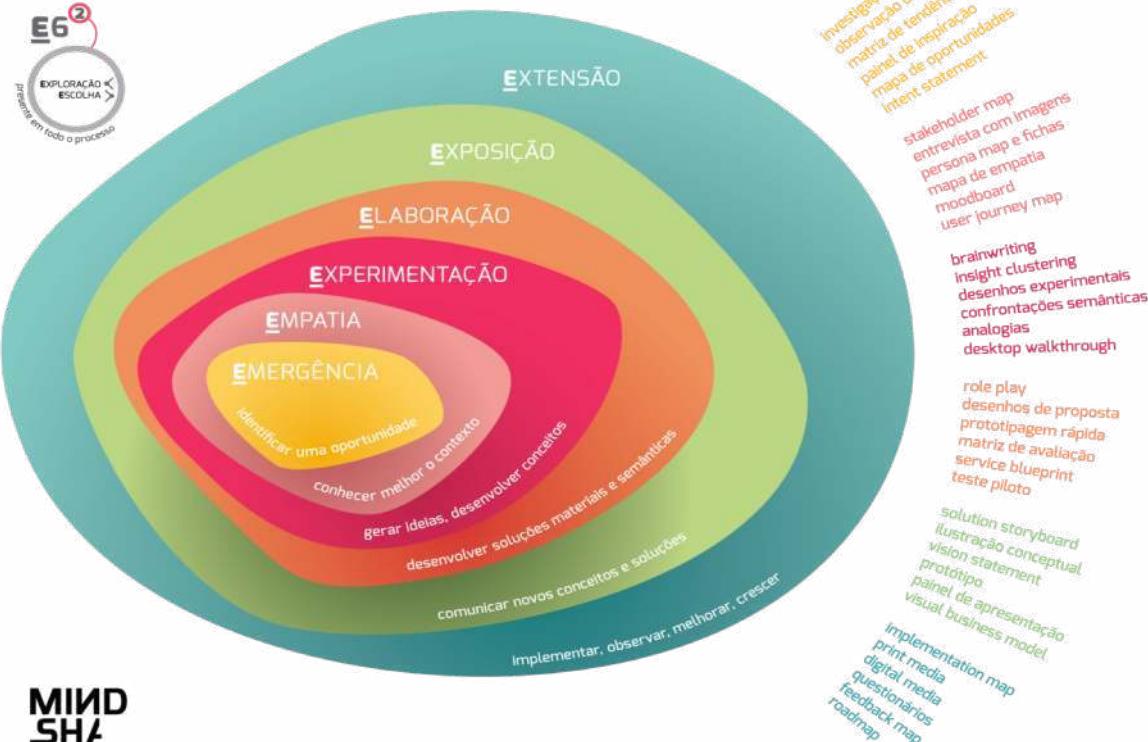
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EVOLUTION 6²

Mindshake Design Thinking Model



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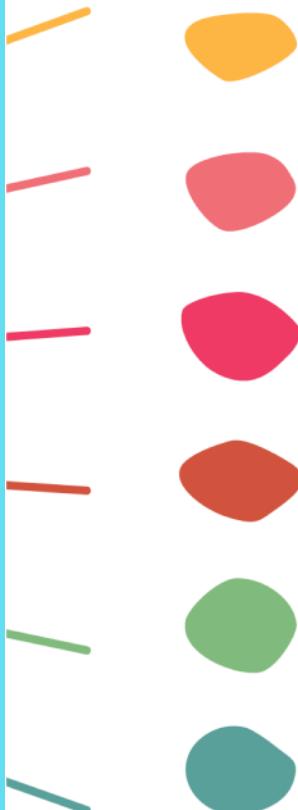
DESIGN THINKING

MODELS

E6² Model

MIND
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EMERGENCE

identification of an opportunity

EMPATHY

knowing better the context

EXPERIMENTATION

generating ideas, developing concepts

ELABORATION

working on material and semantic solutions

EXPOSITION

communicating the new concept and solutions

EXTENSION

implementing, observing, improving, growing

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DESIGN THINKING MODELS

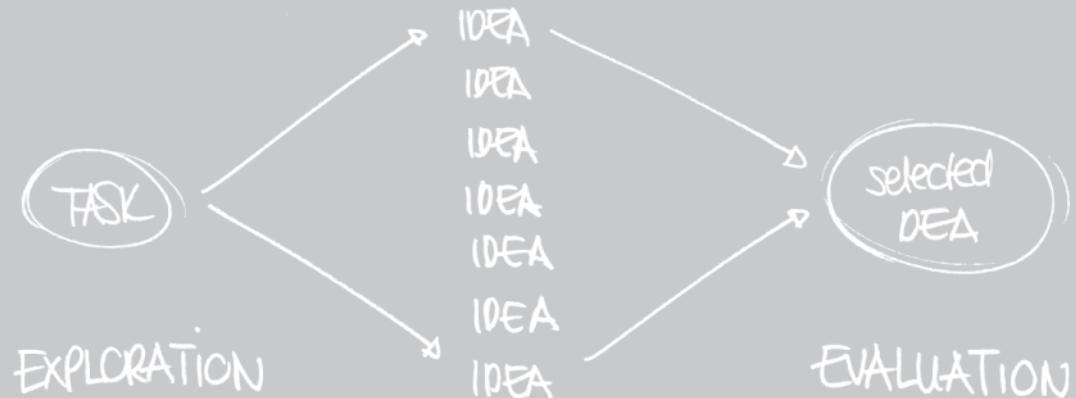
E6² Model

MIND
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The model is called **E6²** (squared), as there are moments of **Exploration** (divergence) and **Evaluation** (convergence) in every phase of the model.



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DESIGN THINKING SYNTHESIS



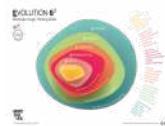
1

SDG

CONTEXT: **1/17 SDG**



OBJECTIVE: **DRAW A
NARRATIVE ABOUT A
FUTURE, UTOPIC,
FICTIONAL SCENARIO**



METHOD: **DESIGN THINKING E6² Model**