

TRANSFERABLE SKILLS I

DesignThinking
Module

2022.2023

lesson 4

**Violeta
Clemente**

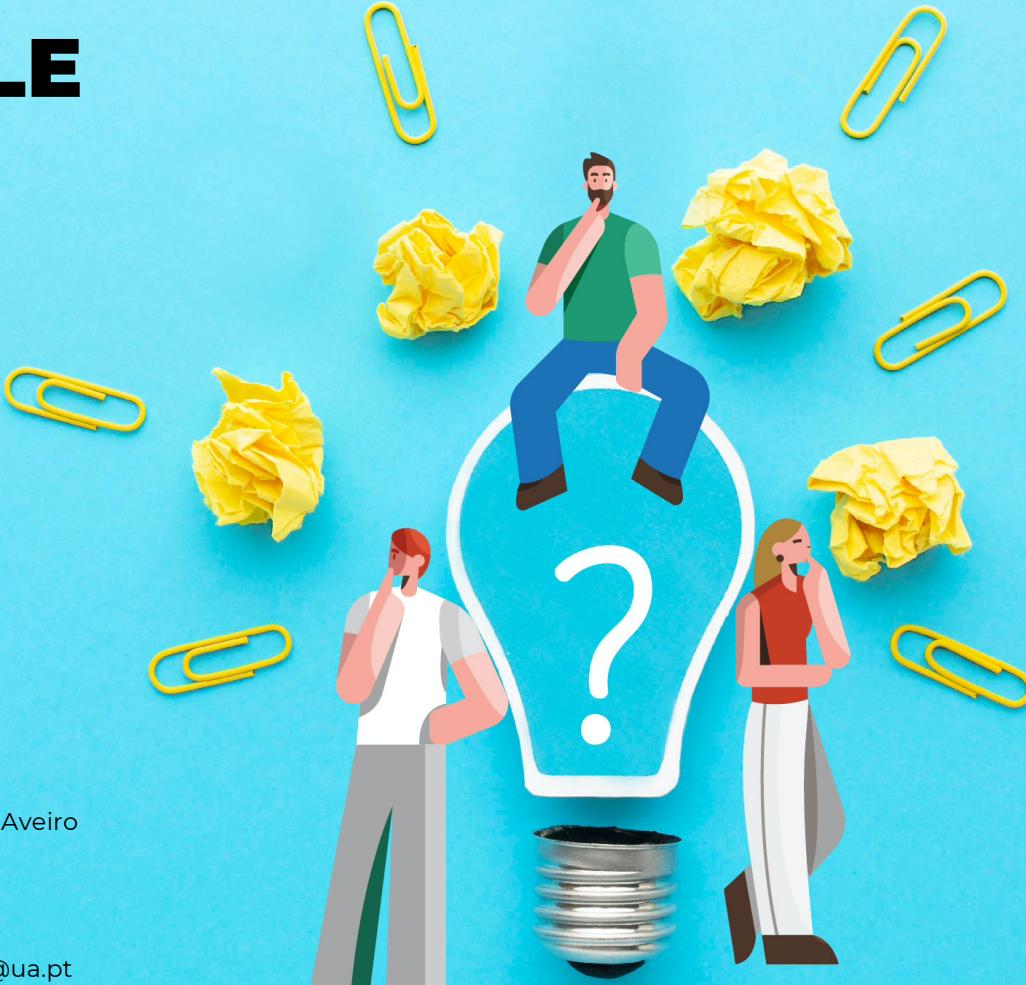
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4.1 EMERGENCE PHASE

Opportunity Mind Map

Intent Statement

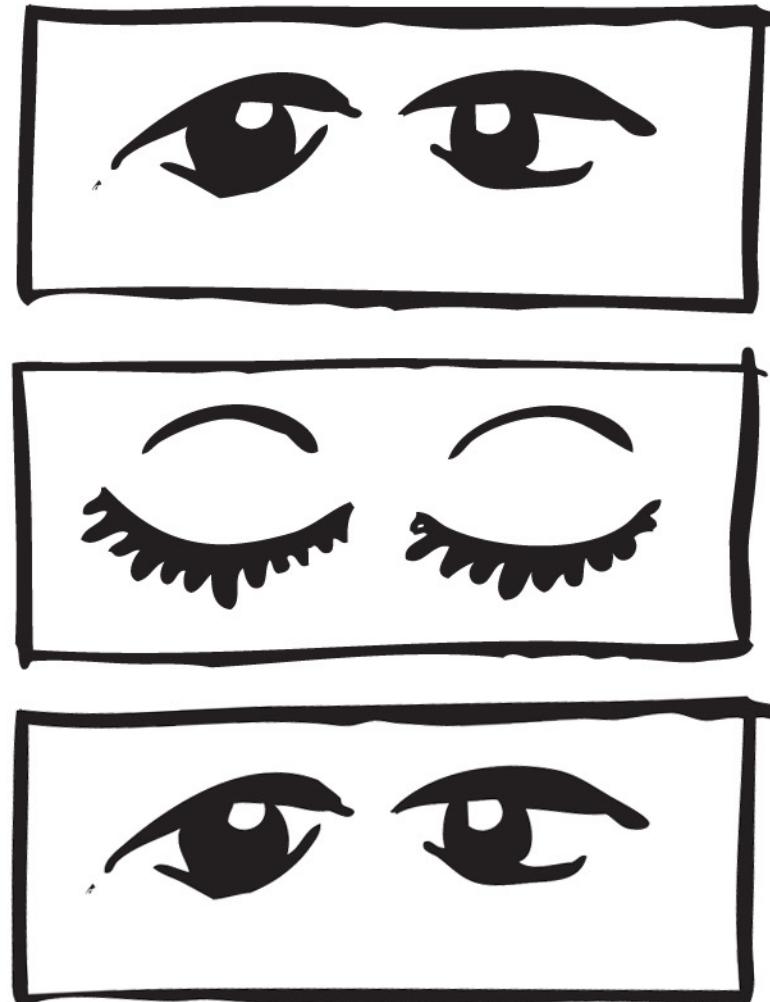
4.2 EMPATHY PHASE

Persona

Empathy map

EXERCISE

**how long can you
hold on
without blinking?**





A young boy is running across a grassy field under a cloudy sky. He is wearing a red t-shirt, khaki shorts, white socks, and dark shoes. He has a brown leather pilot's cap and goggles on his head. His arms are outstretched to the sides as if he is flying. To the right of the boy, there is a large, semi-transparent orange circle containing the text "there is no box".

**there is
no box**

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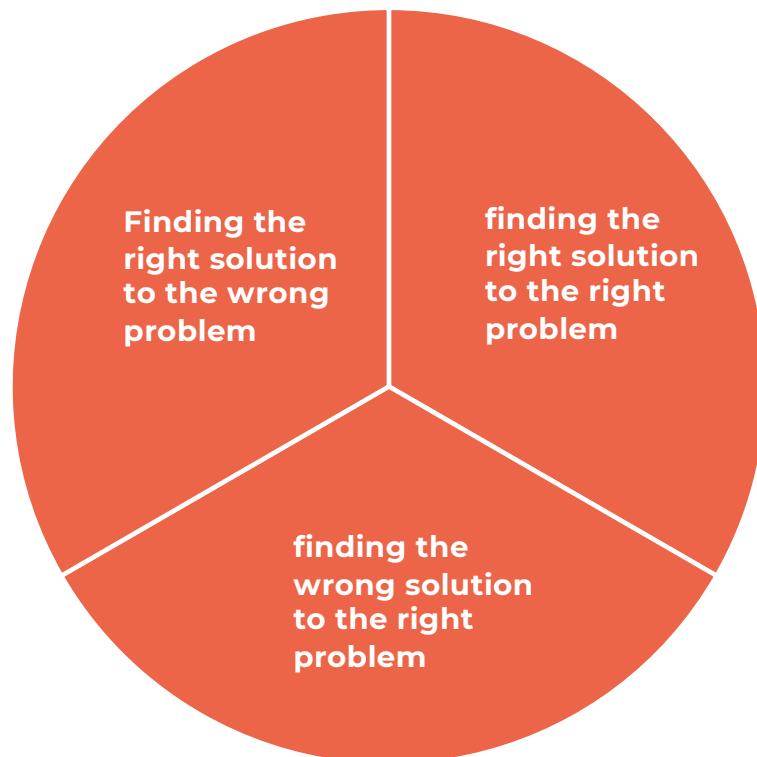
think outside the box

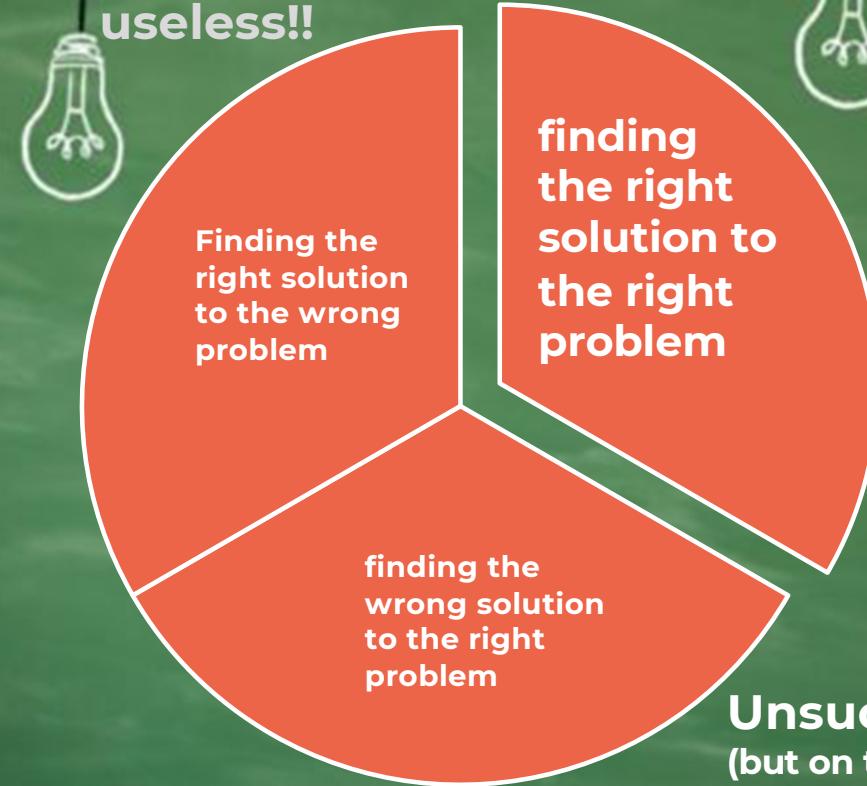
MYTH



... except
your own
self made
box

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Unsuccessful!
(but on the way
to success)



**The problem you
have to solve is
not necessarily
what it seems to
be or what you
think it is**



**Solve a problem
that IS NOT THE
PROBLEM is
useless.**

**Your first task is
to FIND THE
RIGHT
PROBLEM.**



WRONG

Start with a solution
without knowing the
problem.

RIGHT

Start by
finding the
right
problem.

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Much of the academic and commercial work that seeks to innovate around technology ... **solves problems that don't exist or ignores the complexity** of personal, political or environmental issues.

"solution-driven design" generally reaches for answers **before questions** have been **asked fully**

history... is littered with failed solutions that **presume problems** rather than investigate them"

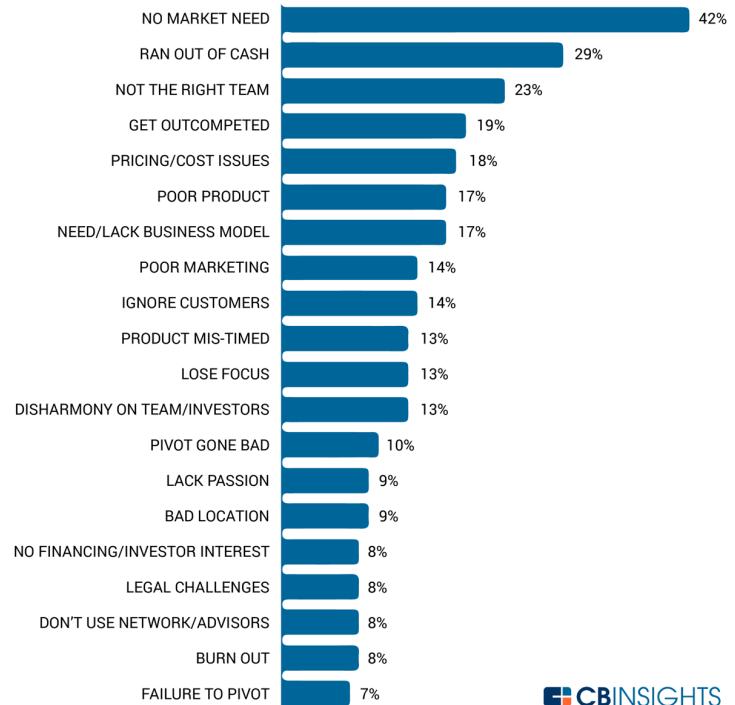
Blythe et al, 2016

why do startups fail?



THE TOP 20 REASONS STARTUPS FAIL

Based on an Analysis of 101 Startup Post-Mortems



CB INSIGHTS

why do startups fail?

SEGWAY is considered (one of) the biggest failures of the startup-industry

Developed following the rule of “high confidentiality”

Any tests with users were done until the product release

Super high tech

High production costs & high price

No legislation / regulation





**“customers
don’t want a
perfect drill,
they want a
perfect hole”**

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DESIGN THINKING MODELS

E6² Model



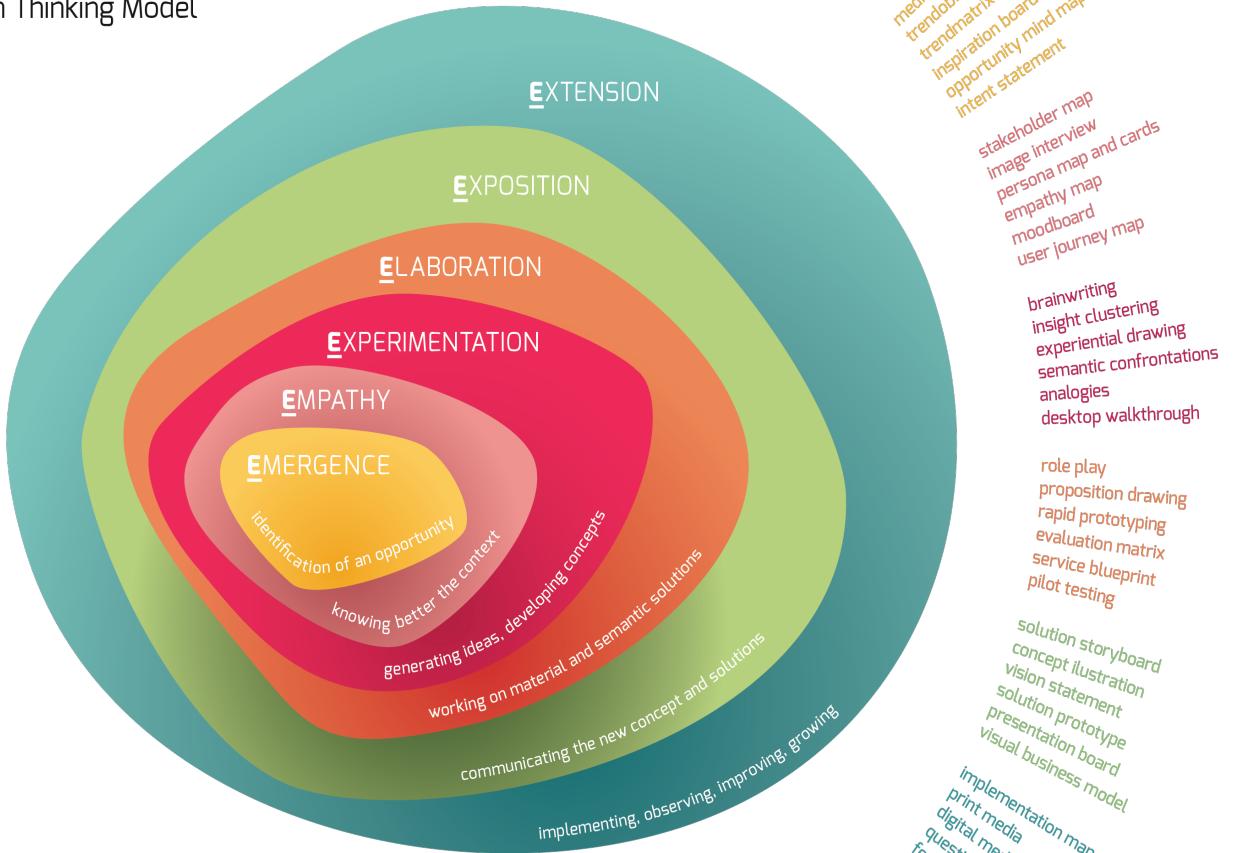
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EVOLUTION 6²

Mindshake Design Thinking Model



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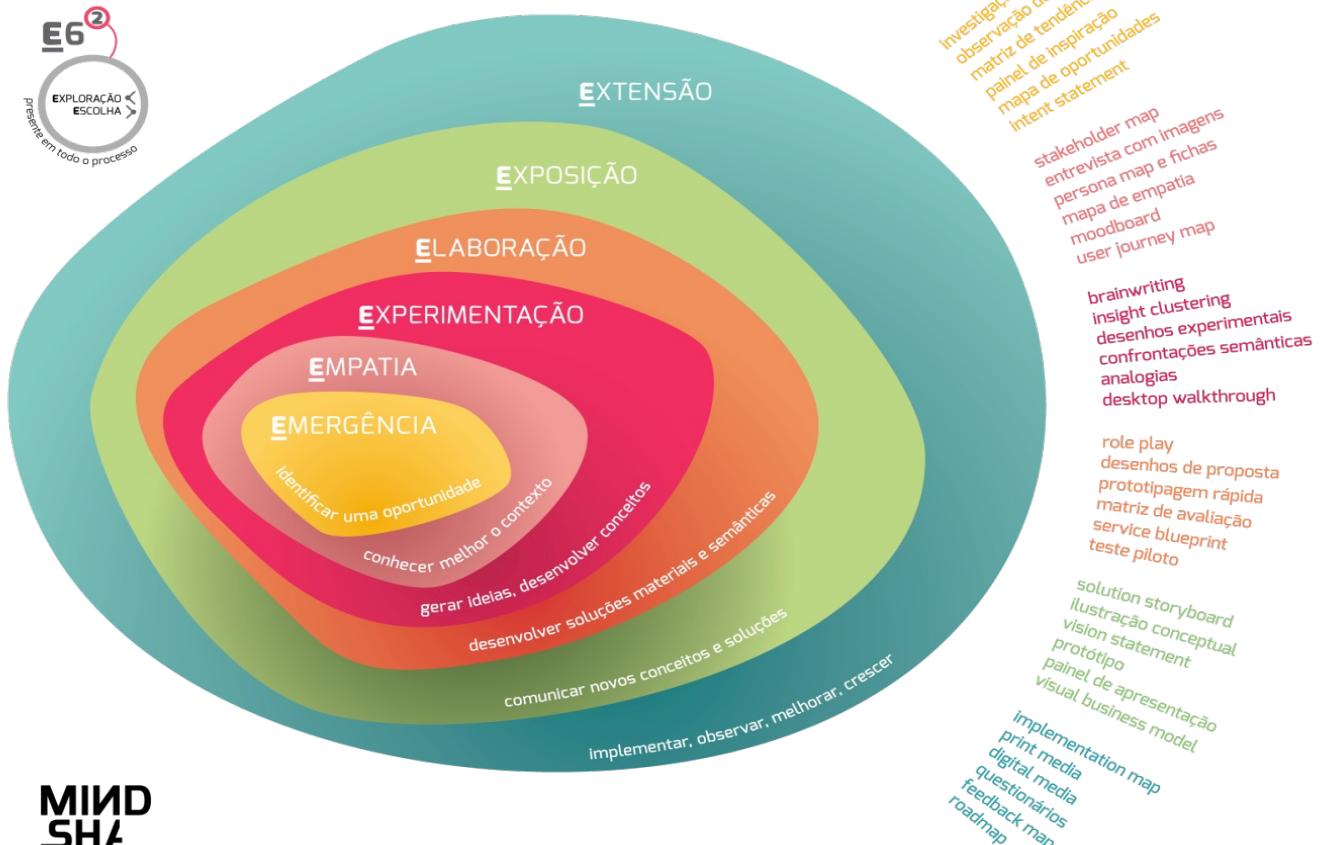
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**DESIGN THINKING
MODELS**
E6² Model



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Mindshake Design Thinking Model



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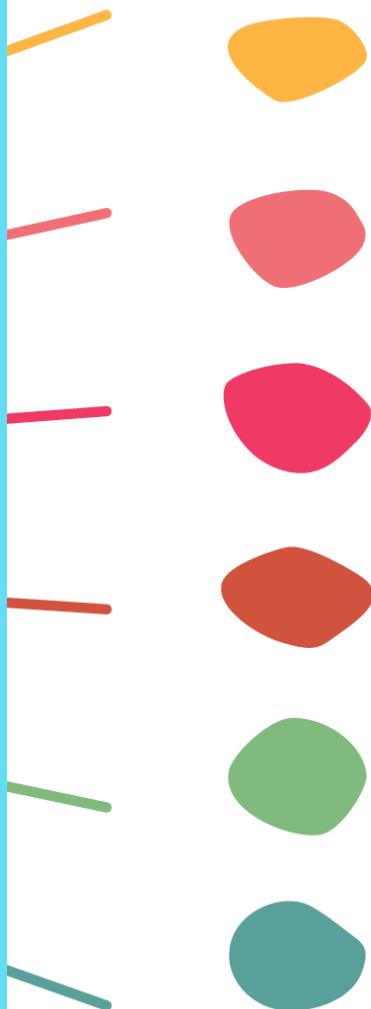
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DESIGN THINKING MODELS

E6² Model



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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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E6² Model

Emergence phase

EMERGENCE

Identification of an opportunity

What is the ‘situation’ surrounding the (apparent) problem?

Which issues gravitate around it? How are they connected?

What is the ‘real’ problem and how can it be stated?

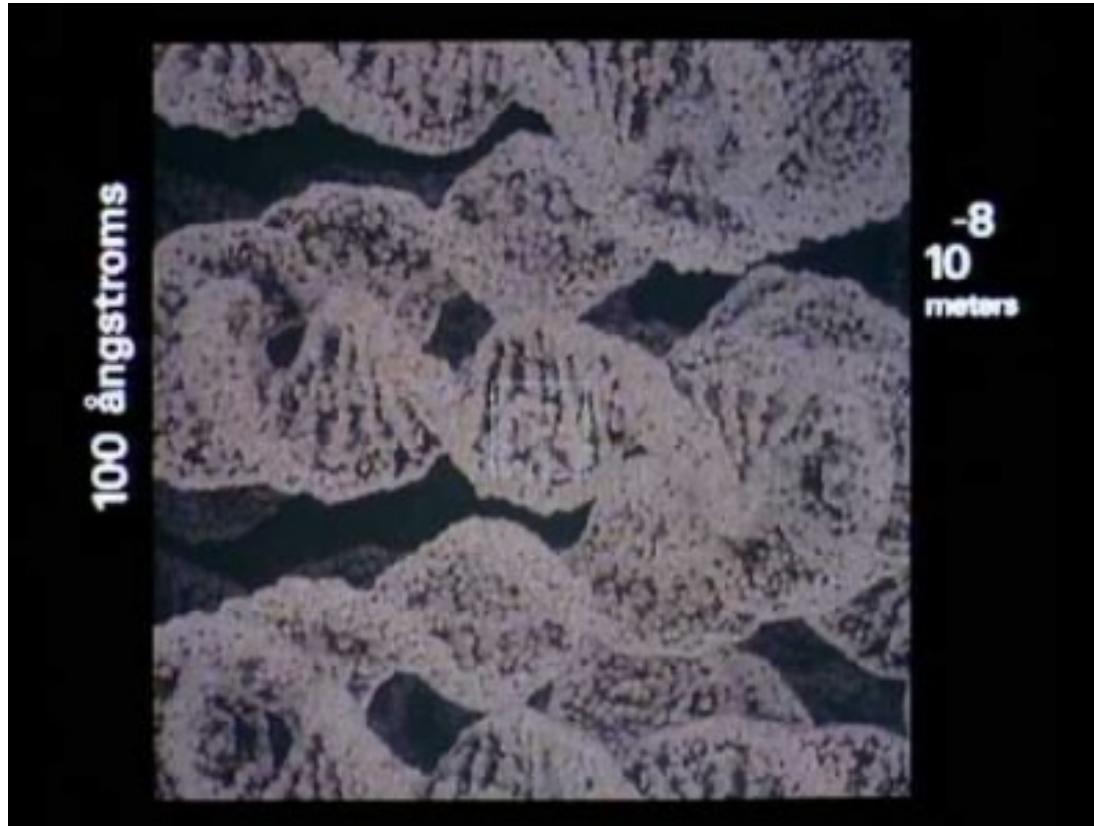
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E6² Model

Emergence phase

EMERGENCE

Identification of an opportunity



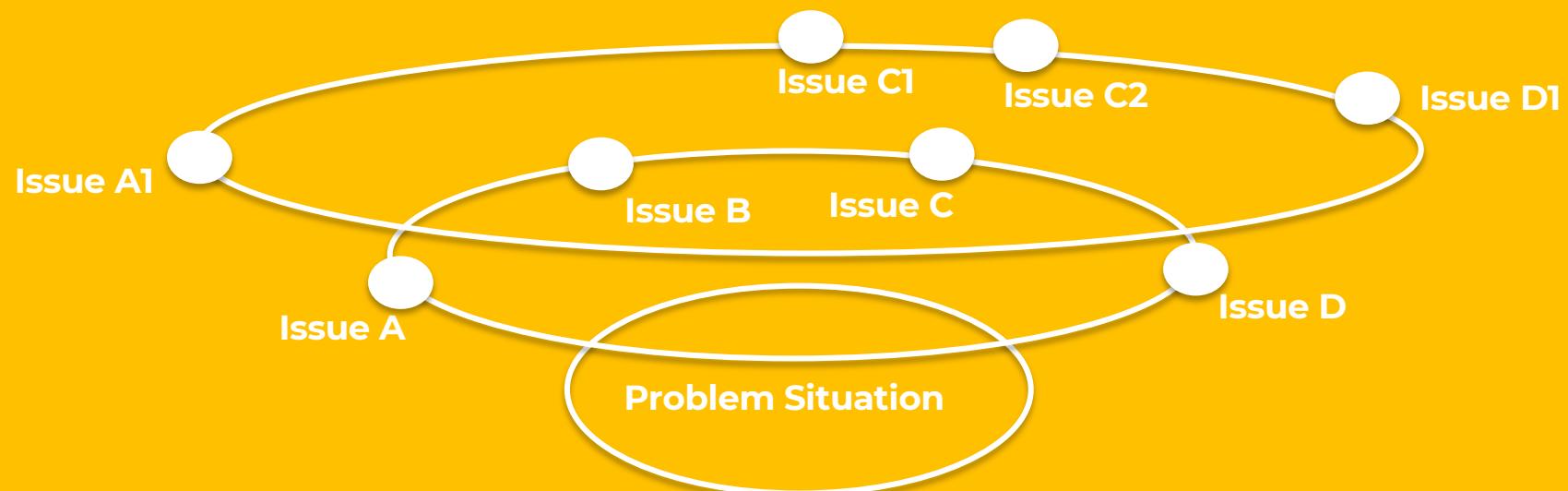
Powers of Ten™ (1977)
<https://www.youtube.com/watch?v=OfKBhvDjuy0>

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E6² Model

Emergence phase

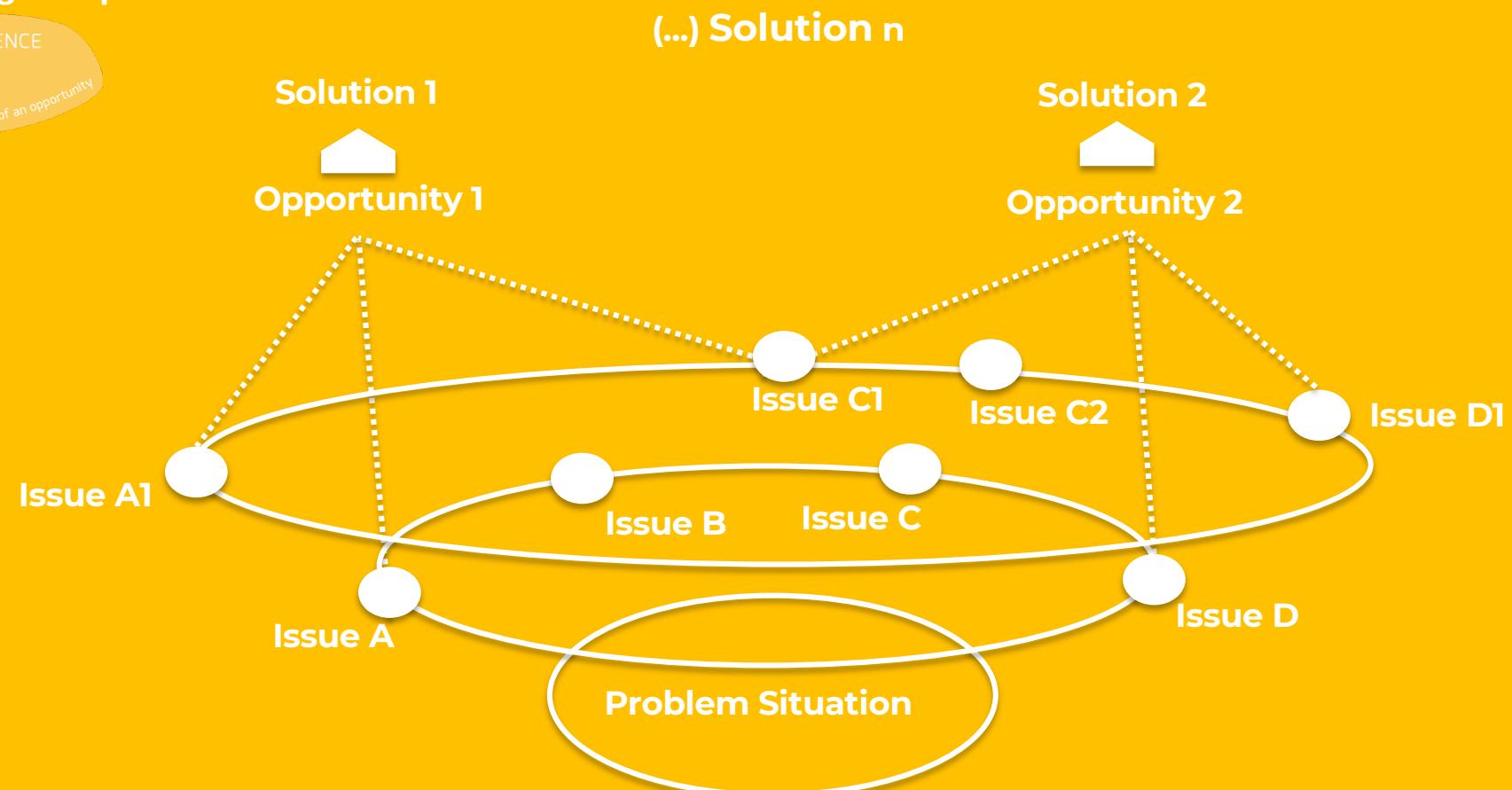
EMERGENCE
Identification of an opportunity



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E6² Model

Emergence phase



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E6² Model

Emergence phase



MIND
SHAKE

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OPPORTUNITY MIND MAP



radial and visual organisation of selected information, the first ideas and insights

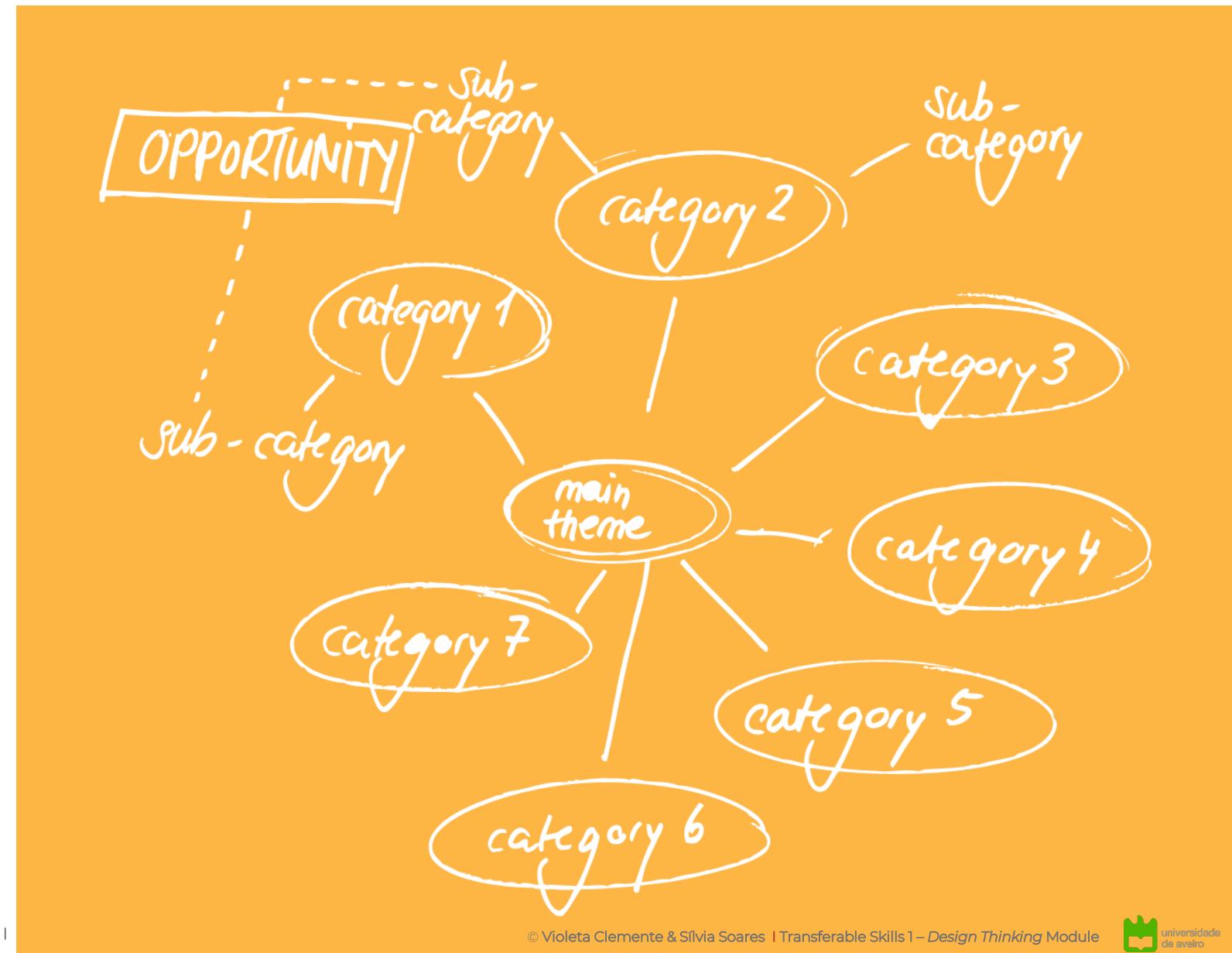
visualisation of data,
create an overview

reveal opportunities and
directions

find connections between
information and ideas

EMERGENCE

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E6² Model
Emergence phase



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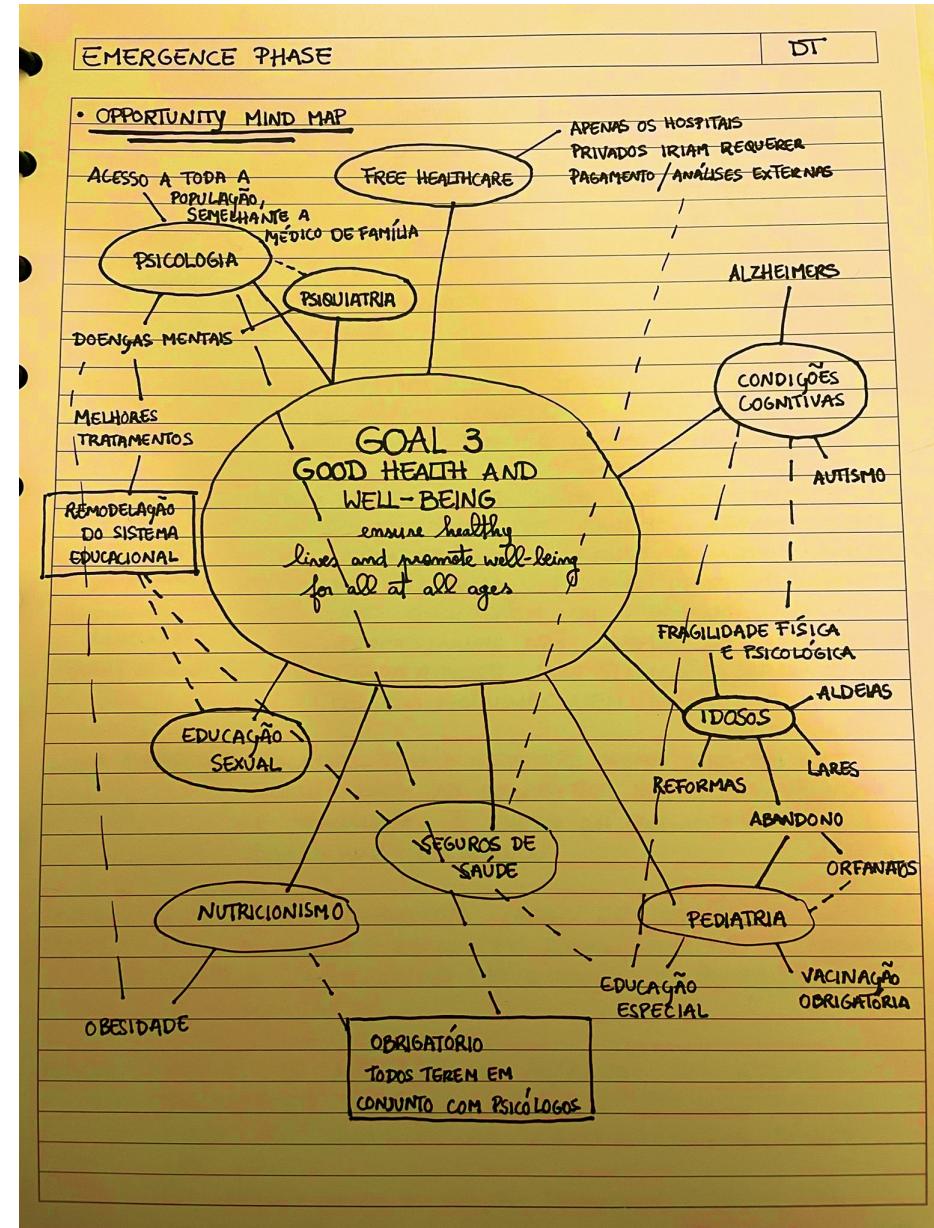
Emergence phase



HEALTH+

Designed scenario

'Opportunity Mind Map' developed by students from previous years (draft version)



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E6² Model
Emergence phase

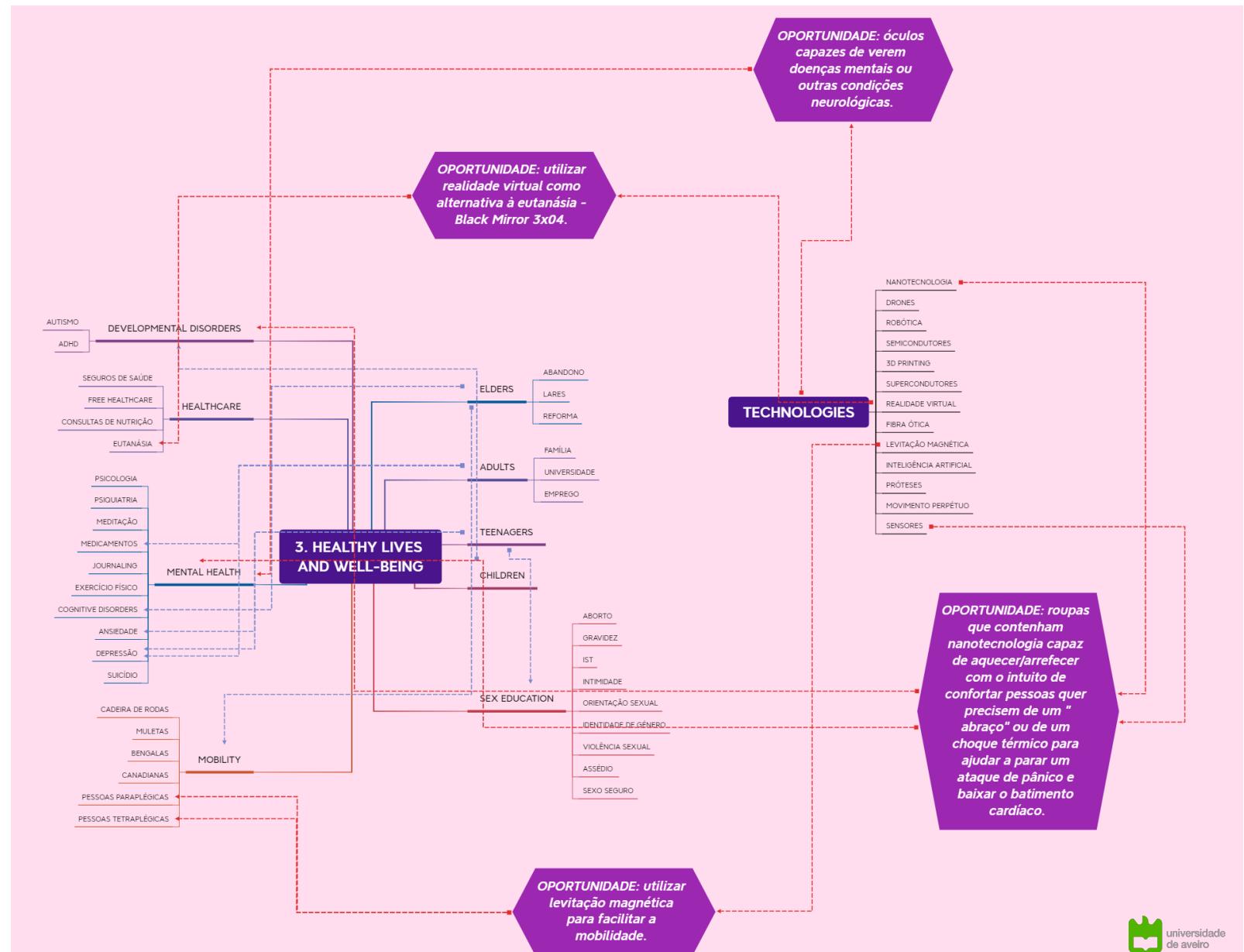
EMERGENCE

Identification of an opportunity

Opportunity Mind Map

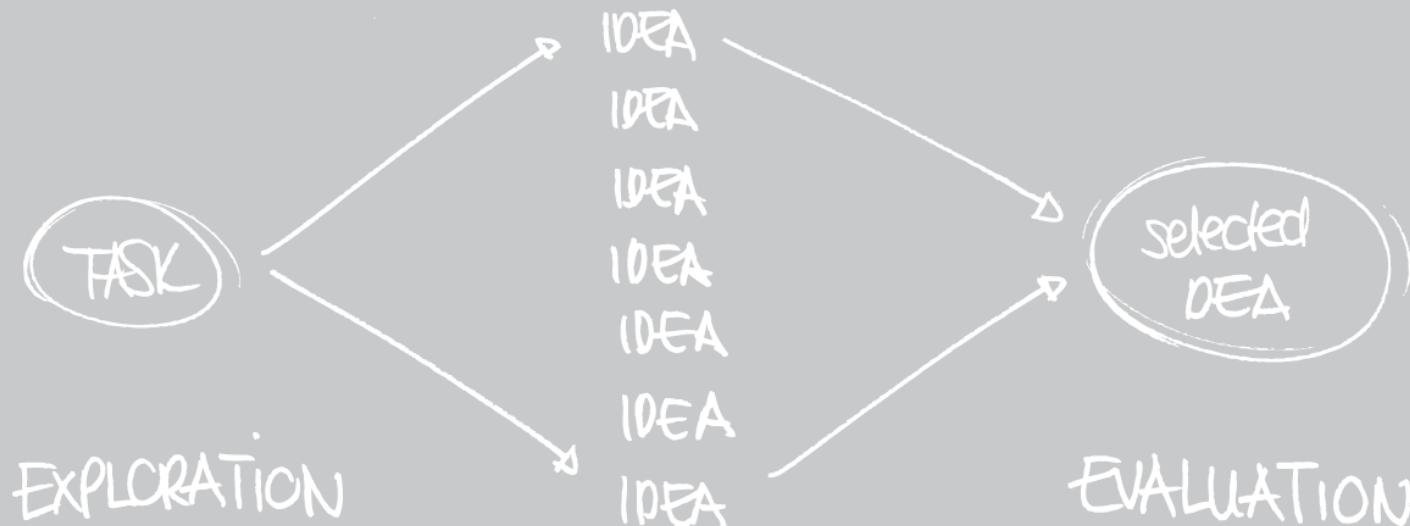
HEALTH+
Designed scenario

'Opportunity map' developed by students from previous years (final version)





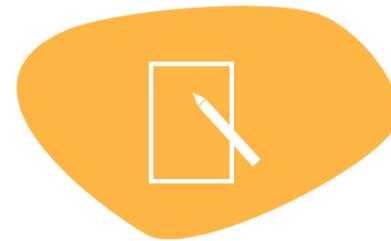
The model is called **E6²** (squared), as there are moments of Exploration (divergence) and Evaluation (convergence) in every phase of the model.



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E6² Model
Emergence phase



INTENT STATEMENT



formulation of the intention to innovate, based on the identification of opportunities

define the starting point of the project

give directions to the following process

inform stakeholders

**MIND
SHAKE**

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EMERGENCE

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E6² Model

Emergence phase

EMERGENCE

Identification of an opportunity

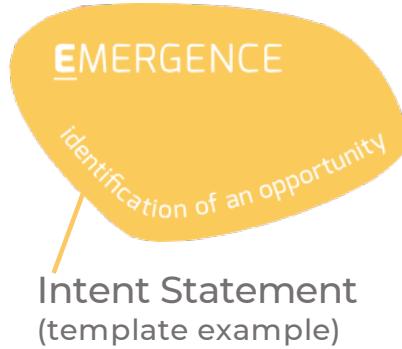
Intent Statement



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E6² Model

Emergence phase



EXAMPLE

PROBLEM Change the thinking about and the approach to the violence problem from one of suppression, punishment, and incarceration, to one of changing behavioural and social norms associated with violence

AUDIENCE Prioritize not only the high-risk, but also on the low-risk, those whose lives have been directly or indirectly impacted by violence.

FAILURES Prior efforts to contain violence have been based on the principal of punishment: incarceration, gun control, dry state, etc.

NEW VALUE The idea that violence is a behaviour that can be changed: an interesting parallel between epidemiology and the spread of violence that uses top down as well as bottom up processes to reduce violent incidents.

OPPORTUNITY Inspire and change behaviour through the use of a unique campaign that communicates a radical ideology by bridging the communication gap between the low-risk and the high-risk groups.

RISK The creation of a campaign lacking in energy/ gets a negative media response/unanticipated backlash.

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E6² Model

Emergence phase

EMERGENCE

Identification of an opportunity

Intent Statement
(template example)

HEALTH+

Designed scenario

“Intent Statement” developed by
students from previous years
(final version)

PROBLEMA: Melhorar os sistemas de saúde públicos já existentes e reduzir a carga horário dos profissionais de saúde, facilitando o acesso a um diagnóstico mais preciso de doenças e a marcação de consultas ou exames médicos mediante o diagnóstico obtido.

PÚBLICO-ALVO: Dar prioridade a grupos de riscos, assim como a utentes com maior probabilidade de contraírem determinadas doenças devido a condições hereditárias.

TENTATIVAS FALHADAS: Não existem profissionais de saúde suficientes para colmatar todas as necessidades dos utentes e continuam a suceder-se diversos erros no diagnóstico de doenças devido à falibilidade do ser humano.

NOVA PERSPECTIVA: Utilizar biossensores e nanotecnologia para a obtenção de telemetria do utilizador que, em conjugação com um sistema de análise de Big Data, permite diminuir o excesso de trabalho sentido por profissionais de saúde, assim como providenciar cuidados de saúde melhores e mais específicos para cada utente através da recolha de dados de erros médicos que aconteceram no passado.

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E6² Model

Emergence phase

EMERGENCE

Identification of an opportunity

Intent Statement
(template example)

TRUTH SOLUTIONS

Designed scenario

“Intent Statement” developed by
students from previous years
(final version)

Problema:

A corrupção é um problema mundial, causado pela mentira (entre outros fatores), que afeta a maioria das pessoas diariamente: seja no seu estilo de vida, na gestão do dinheiro, nas relações interpessoais, nas famílias, na educação e no mercado de trabalho, entre muitos outros aspectos. A mentira traz angústia e desconfiança e impede a raça humana de evoluir mais rápida e sustentavelmente.

Intenção:

O objetivo deste produto é eliminar todas as mentiras do mundo, consequentemente, a corrupção e a desconfiança, que são fatores que causam conflitos, guerras, má distribuição de recursos e impedem a raça humana de alcançar seu potencial.

Novo Valor:

Um mundo sem mentiras ou corrupção, onde a humanidade pode evoluir de forma rápida, confiante, consciente, sustentável e a cima de tudo, verdadeira. Dar as pessoas uma vida em que elas possam confiar ser real e possam de maneira honesta contribuir para o seu crescimento.

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E6² Model

Empathy phase



Who is going to benefit from the solution?

Who is involved in the problem, beyond them?

What do you know about them?

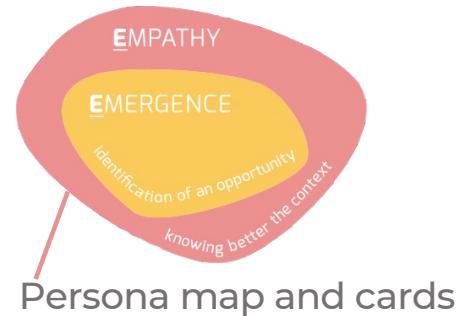
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E6² Model
Empathy phase



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E6² Model

Empathy phase



PERSONA MAP AND CARDS



defining different kinds of users present in a context

identify the users' characteristics and cultural backgrounds

discover features of an existing social group

discover stories

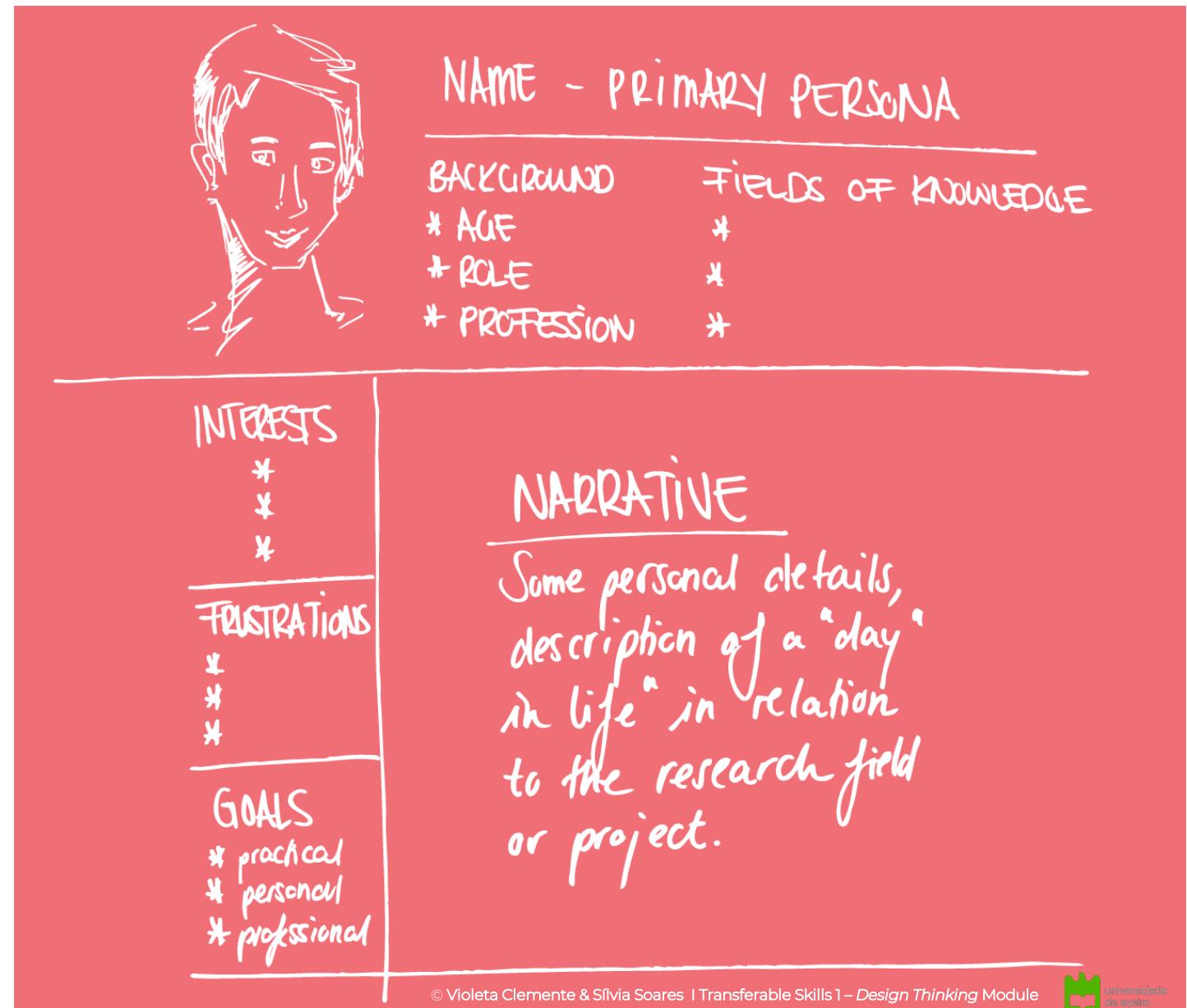
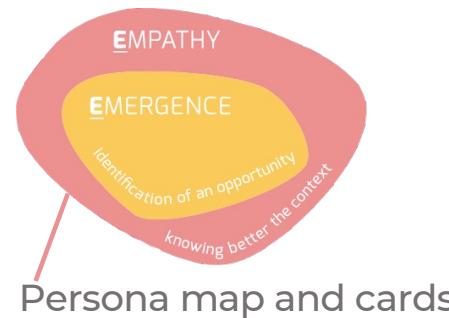
define directions

EMPATHY

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E6² Model

Empathy phase



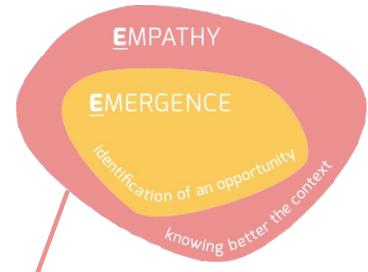
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E6² Model

Empathy phase

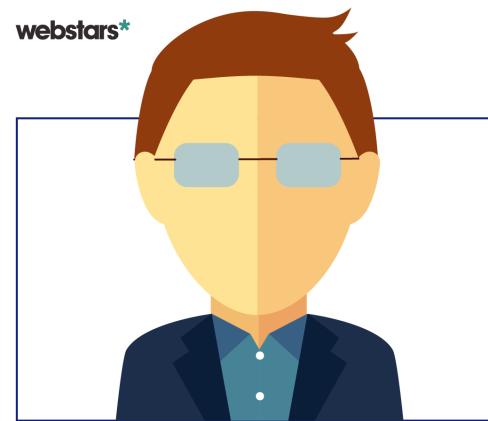


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E6² Model
Empathy phase



Persona map and cards

webstars*



USER PERSONA NAME Sample Simon

Who?

AGE

35-40

LOCATION

New York

EDUCATION

Post-Graduate Degree

JOB TITLE / SALARY

Associate Legal Manager -£65,000

FAMILY / LIVING SITUATION

Lives with boyfriend and cat

COMMUNICATION PREFERENCES

Phonecall with follow up minutes

What?

GOALS
Primary/secondary

To find a firm to help with a crisis
See all client facing staff
Quickly email or call a lawyer
Get a feel for reputation of firm

CHALLENGES
Primary/secondary

Busy working hours
Not particularly tech savvy

WHAT CAN WE DO...
...to help our persona achieve their goals
and overcome their challenges

Make website un-distracting
Design for the desktop/laptop user
Make calling a lawyer 1 click from mobile

Why?

REAL QUOTES
About goals, challenges, etc.

When I need legal support from a big firm
it's usually under duress and I need to
find information quickly. If I can't find
what I need quickly, I will go somewhere
else as you have already flustered me.

COMMON OBJECTIONS
Why wouldn't they buy your product/service
You aren't as well known as some other
big firms so I have some reservations.
If I am calling you, we are probably in
crisis mode so I will be expecting quick
responses. I need answers when the
directors come asking.

How?

MARKETING MESSAGING
How should you describe your solution to persona?

It's our business to understand yours.

ELEVATOR PITCH
Sell your persona on your solution!

We are the professional and prompt right
hand to your legal team, we keep our cool
but get results and are always available
to answer questions.



PREREQUISITES

- ✓ DOMAIN KNOWLEDGE
- ✓ OPTIONAL: PROVISIONAL PERSONAS
- ✓ LIKELY ROLES ARE IDENTIFIED
- ✓ RESEARCH PLAN



PERSONA CREATION IS BASED ON RESEARCH

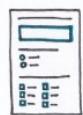


USER INTERVIEWS -
START WITH 5 / ROLE
(THEN ADD MORE LATER -
DOMAIN COMPLEXITY
IS THE KEY FACTOR HERE)

ADDITIONAL RESOURCES



CONTEXTUAL
INQUIRY



SURVEY



DIARY
STUDIES

CREATING PERSONAS

PART 1

UX Knowledge Base Sketch #13



PERSONA: REPRESENTATION OF A GROUP OF USERS, AN ARCHETYPE, THAT REFLECTS PATTERNS BASED ON BEHAVIOR, GOALS, ATTITUDE AND OTHER VARIABLES.



- ↗ USER-CENTERED MINDSET
- ↗ HELPS DESIGN DECISIONS:
"IS THIS SOLUTION GOOD FOR THIS PERSONA?"



ROLE ≠ PERSONA
↓ DEFINED BY
TASKS BEHAVIOR, GOALS,
 NEEDS, CHALLENGES ETC.



GO THROUGH YOUR NOTES
SEARCH FOR:

- GOALS & NEEDS
- PAIN POINTS / CHALLENGES
- TASK FREQUENCY
- PRIORITIES
- MENTAL MODELS
- SKILLS
- WHAT / WHO PLAYS AN IMPORTANT ROLE IN THE PROCESS (E.G. LIGHT CONDITIONS OR ANOTHER PERSON)
- DEMOGRAPHICS - ONLY IF IT IS CLOSELY RELATED TO BEHAVIOR

>>> TO BE CONTINUED IN PART 2! <<<

WHO ARE YOU DESIGNING FOR?

HOW MANY PERSONAS SHOULD BE CREATED?

DEPENDS ON THE COMPLEXITY,
2-6 / ROLE IS GOOD
IF IT IS NOT THAT COMPLEX.



BRAINSTORMING
SESSION WITH THE DESIGN TEAM

GOAL: FINDING PATTERNS

WRITE ~20 VARIABLES ON A WHITEBOARD

DO 1 ROLE AT A TIME

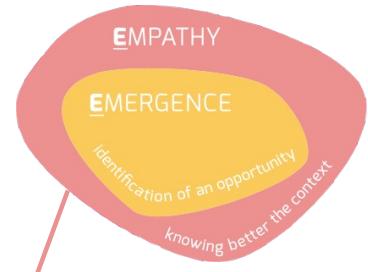
VARIABLES CAN HAVE 3 FORMS:

SPECTRUM
SOMETHING IS IMPORTANT SOMETHING IS NOT IMPORTANT

PAIR YES NO

MULTIPLE CHOICE REASON FOR...
 REASON 1 REASON 2
 REASON 3 REASON 4

lesson 4
E6² Model
Empathy phase



Persona map and cards

VERA MARTINS

- . 21 anos
- . Estudante universitária
- . 3º ano de licenciatura em Gestão pública
- . A Vera está sempre cansada e preocupada com os seus níveis de stress e horas de sono. Toma vitaminas não prescritas.

AMÁLIA VIEIRA CASTRO

- . 55 anos
- . Mãe de 3 filhos, 2 gémeos
- . Bibliotecária
- . Vive ativamente com um tumor no peito e faz análises e exames a cada 3 semanas. As estadias hospitalares estão a roubar-lhe tempo que considera precioso.

PEDRO ALVES

- . 33 anos
- . Consultor numa seguradora de sucesso
- . Licenciado em matemática
- . Apresenta ligeiros sinais de burnout e vê um terapeuta regularmente. A última vez que fez análises foi há 2 anos, pois diz não ter tempo.

Amália Vieira Castro

- . Gosta de cozinhar, vai à igreja todos os domingos e deseja poder passar os fins de semana a passear pelo seu país.

Quer ensinar o filho, João, a jogar futsal e passar tempo com a sua família.

HEALTH+
Designed scenario

"Persona Cards" developed by students from previous years (final version)

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E6² Model

Empathy phase



PERSONA



Rubén Aguiar

42 anos
Solteiro
Gerente de produtos

Sente que o país não tem tomado o ritmo que devia e acha que se deve ao haver muita falsidade entre os políticos

É muito reservado e introvertido. Acredita em um futuro sem corrupção

PERSONA



Bruno Oliveira

31 anos
Casado - 2 filhos
Psicólogo

Leva muito a sério o seu trabalho, por isso gostaria de saber sempre a verdade dos seus pacientes podendo assim suportá-los da melhor forma possível

Gosta de ir ao cinema, e está sempre atento ao que se passa no mundo. Tenta ser o melhor exemplo para os seus filhos

PERSONA



Petra Souza

23 anos
Casada
Dentista

Recentemente sente que o seu marido anda bastante ausente e tenta sempre desviar a conversa quando lhe pergunta onde esteve.

Sonha em comprar uma nova casa para viver com o seu marido e futuros filhos

TRUTH SOLUTIONS

Designed scenario

"Personas Cards" developed by students from previous years (final version)



universidade
de aveiro

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E6² Model

Empathy phase



Ailani Tamaya



- 21 anos
 - Solteira
 - Estudante de Biologia na Universidade do Hawaii
- Sendo uma das mais poluídas a praia Kamilo Beach, no Hawaii, Ailani ficou impossibilitada de praticar surf e como estudante de biologia sente-se frustrada por não conseguir ver efetivas mudanças no tema da poluição marinha.

Michael Scott



- 35 anos
 - Casado, sem filhos
 - CEO de uma empresa em ascensão
- Face ao agravamento da poluição marinha, decidiu tomar algumas medidas na sua empresa para pôr fim a este problema. Promoveu o desenvolvimento de todos os seus produtos à base de plástico 100% reciclado, oriundo dos oceanos.

OCEAN POD

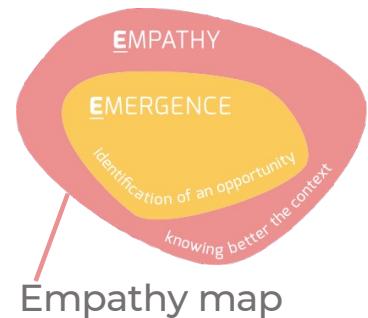
Designed scenario

"Persona Cards" developed by students from previous years (final version)

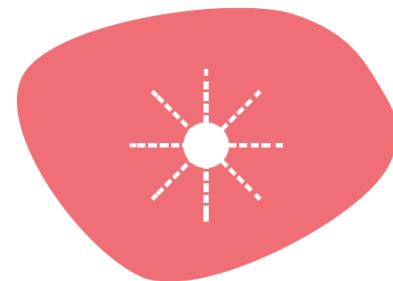
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E6² Model

Empathy phase



EMPATHY MAP



*developing the profile
of a typical user*

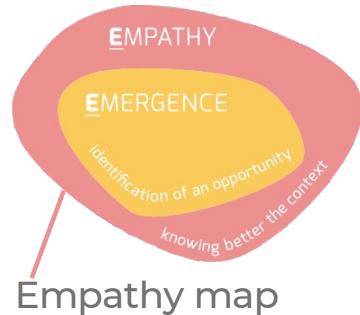
build empathy

find details about the users'
behaviour and values

identify patterns

EMPATHY

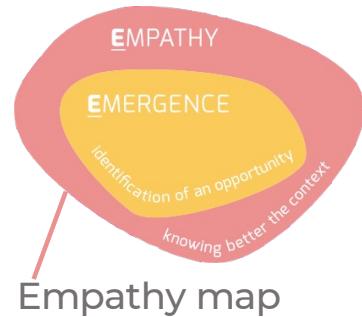
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E6² Model
Empathy phase



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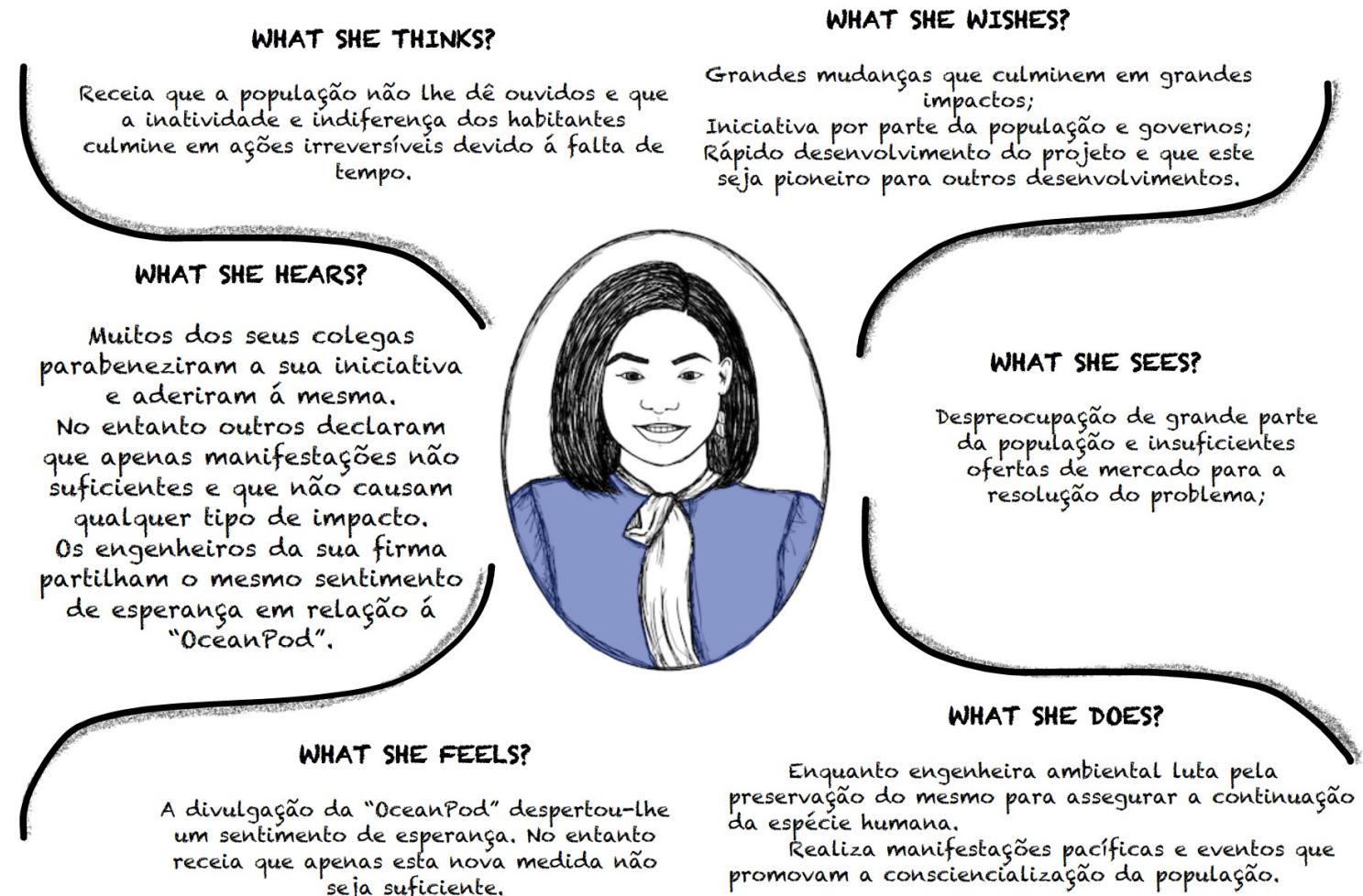
Empathy phase



OCEAN POD

Designed scenario

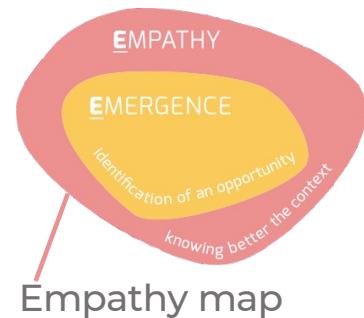
"Empathy map" developed by students from previous years (final version)



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E6² Model

Empathy phase



OCEAN POD

Designed scenario

"Empathy map" developed by students from previous years (final version)

WHAT HE THINKS?

Como Ministro do Ambiente pensa ser responsável pela falta de conhecimento e de atividade por parte dos habitantes e tem como primordial objetivo promover projetos para tornar o planeta Terra mais sustentável.

WHAT HE WISHES?

Espera alcançar juntamente com os restantes líderes mundiais as respostas para todos os problemas que assombram e ameaçam o planeta Terra.

WHAT HE HEARS?

Os restantes líderes partilham a mesma opinião quanto à urgência de apresentar soluções e tentam criar programas internacionais de apoio tanto para o suporte financeiro como para a própria idealização e conceção de projetos.



WHAT HE SEES?

Escassez de propostas inovadoras causadas não só pela falta de consciencialização de alguns indivíduos, mas também pela falta de apoio dos países.

WHAT HE FEELS?

O surgimento da "OceanPod" foi extremamente bem acolhido na comunidade intelectual e impactou vários indivíduos. Despertou no ministro e nos seus colegas um sentimento de ESPERANÇA e de gratidão por serem ouvidos.

WHAT HE DOES?

Ao longo da sua carreira, tenta orientar a sua força política para a promoção de ideias juntamente com outros ativistas.

Procura de forma exaustiva combater o grande problema que é a poluição.

lesson 4

WORK FOR NEXT WEEK



Create an **OPPORTUNITY MIND MAP** around the assigned ODS



Formulate the problema (write the **INTENT STATEMENT**)



Characterize the users of the solution to be developed (create **PERSONA CARDS**)