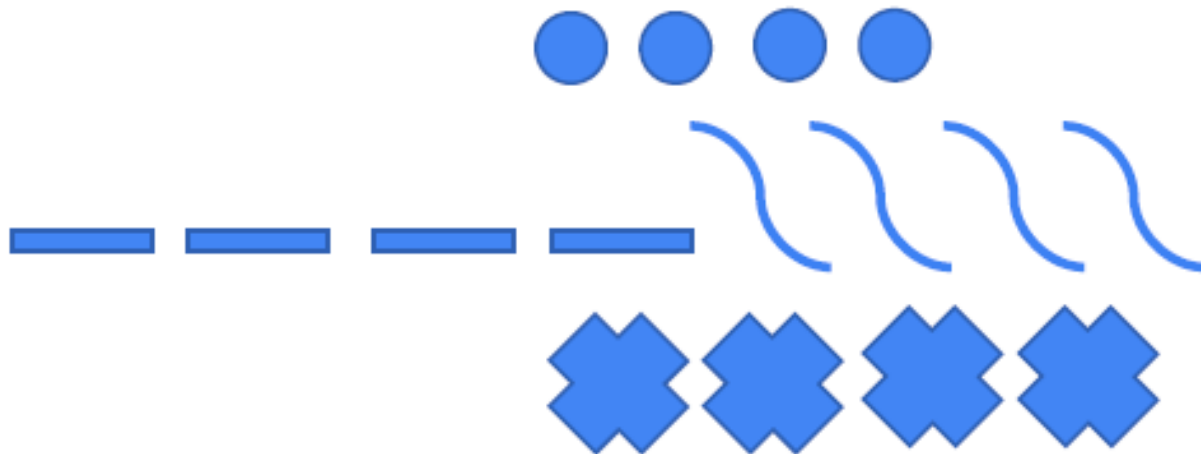


CREATIVITY

CREATIVITY

Design something useful to
someone using these shapes



EXAMPLES OF SOLUTIONS

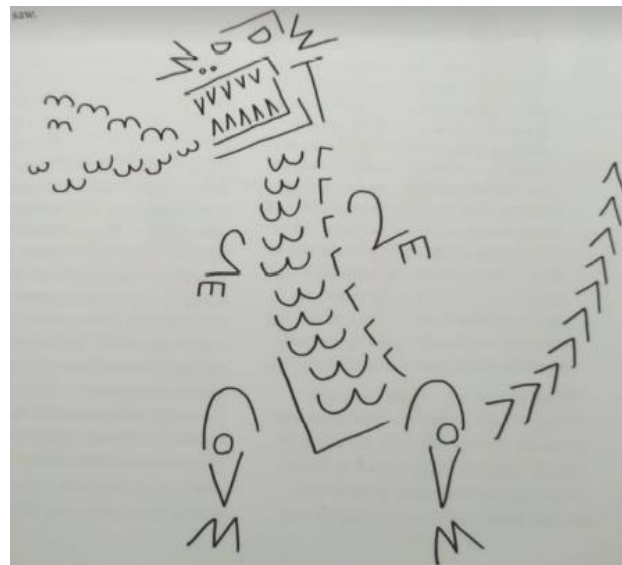
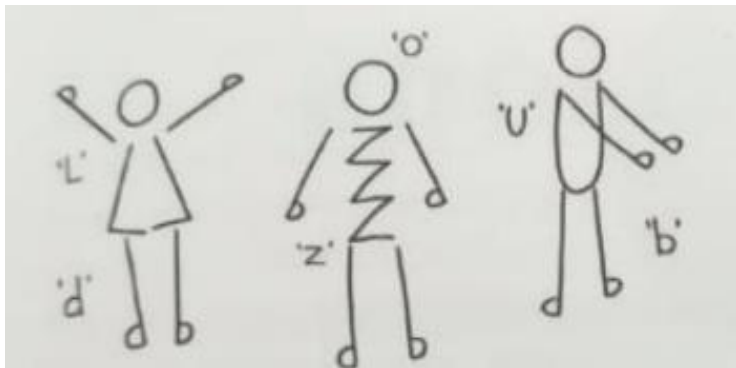


A broom



A hospital

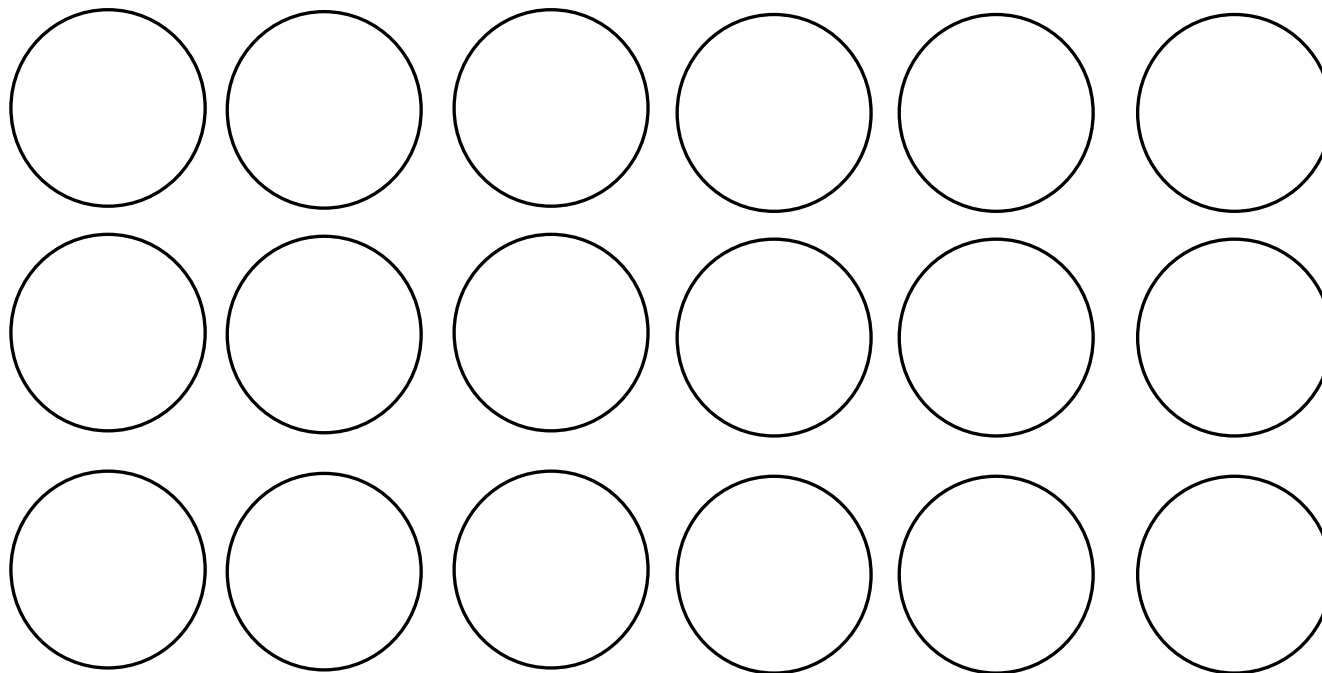
ALTERNATIVELY



Design stick people with letters (Creative arts for curious people, Anish Goel)

30 CIRCLES

(** THE DESIGN THINKING TOOLBOX, M. LEWRICK, P. LINK, L. LEIFFER)



Transform as many circles as possible to recognizable products.



TEAM BUILDING

16 PERSONALITIES

www.16personalities.com

TEAM NAME AND LOGO

Decide on a team name and design a logo

STORY OF YOUR NAME

(** CREATIVE ARTS FOR CURIOUS PEOPLE, S. GREENBERG)

1. Find someone in your group you don't know well and pair up. Exchange stories about your names
2. Find another pair and form a quartet. Discuss your skills for mutual survival when the jombie apocalypse hits
3. Remain in the quartets. Think about the present. How is each seen in their field of work or school today and how they would like to be seen

KNOWING OUR TEAM

(DESIGN THINKING TOOLBOX, M. LEWRICK, P. LINK, L. LEIFFER)

Has read 3 novels	Has eaten pizza prosciutto 3 times	Has travelled to Vietnam	Has visited 2 countries	Has designed a game
Has travelled to America	Has seen 3 James Bond movies	Has travelled to Malaysia	Favourite colour is blue	Has read all Harry Potter books
Speaks 3 languages	Has a parent from a different country	Has siblings	Plays a musical instrument	Likes sailing
Wears sneakers	Likes the sea	Likes the mountains	Has worked	Has been to the boy scouts
Has some design experience	Would like to start a company	Has programmed	Has seen all Star Wars movies	Likes islands

TEAM CANVAS

Team Canvas Basic

Most important things to agree on to kick off effective team project
and get members to know each other better

Version 0.8 | theteamcanvas.com | hello@theteamcanvas.com

Team name

Date

GOALS

What you as a group really want to achieve? What is our key goal that is feasible, measurable and time-bounded?

What are our individual personal goals?

ROLES & SKILLS

What are our names? What skills and strengths do we have on board of our group?
What composition of roles would help us get where we want to be?

What are we called as a group?

PURPOSE

Why we are doing what
we are doing in this
first place?

VALUES

What do we stand for? What are guiding principles? What are our common values that we want to be at the core of our team?

RULES & ACTIVITIES

What are the rules we want to introduce after doing this session?
How do we communicate and keep everyone up to date?
How do we make decisions?
How do we execute and evaluate what we do?

Team Canvas Basic by theteamcanvas.com. Created by Aleksey Iosadon, Dmitry Vozdorchuk
Team Canvas is inspired by Business Model Canvas by Strategizer.

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PROBLEM ASSIGNMENT

PROBLEM ASSIGNMENT

The same to all teams

Different for each team

Examples

Trash disposal

Green energy

Sustainable mobility

Green tourism

Sustainable food production



PROBLEM DISCOVERY

EXERCISE: NEIGHBOURHOOD WALK

Walk around your neighbourhood and observe what you see

Repeat the walk with an engineer

Repeat the walk with a gardener, civil engineering, transit worker, community volunteer

(Creative acts for curious people, Susie Wise, Melissa Pelochino, Alexandra Horowitz)

EXERCISE: IMMERSION

You want to enter a school or to receive insurance for an accident

- Go through the process without actually applying
- Sometimes the process is on-line, use the on-line system
- Time limit 25 min
- Act as if you don't have a computer at home; use a library computer or phone
- Reflect on what you learned

(Creative arts for curious people, Lena Selzer, Michael Brennan, Adam Seizer)

ASSOCIATIONS

Write down 3 ideas on Green IT

Examples

Green data centers

Green IT procuring

Low energy green devices

ASSOCIATIONS

Write down 3 ideas related to Green IT and people

Examples

Recycling equipment

Reduce CO2 emissions in data centers

ASSOCIATIONS

Write down 3 ideas related to Green IT and people

Examples

People discard electronic devices

People use data in their everyday life and work

Young students can reuse old electronic equipment that is outdated for professionals

ASSOCIATIONS

Write down 3 ideas on Green IT and locations

Examples

Computers at work

Access to the internet from home

Anywhere, anytime access

ASSOCIATIONS

Write down 3 ideas on Green IT and locations

Examples

IT at school

IT in industrial production

IT in tourism

IT in entertainment

ASSOCIATIONS

Write down 3 ideas on Green IT and feelings

Examples

I feel stressed when the energy bill is too high

I feel proud when I behave responsibly towards the environment

ASSOCIATIONS

Write down 3 more ideas on Green IT

Examples

IT and health

PROBLEM MAP

I feel sorrow when the environment is polluted

Re-purposing

IT in school

Re-use

Using clean energy in IT

IT in tourism

IT everywhere

IT in the park

I feel shame when animals suffer because of pollution

I feel pride when I am responsible for the environment

Cyclical economy

RESEARCH

Select 1 problem area

Describe the problem with 3 pictures

Find an article that describes the problem

Find a video that describes the problem

You may use information from the internet

Present your work

RESEARCH

Article: How to dispose of old electronics? How to Dispose of Electronics | Budget Dumpster

Carbon neutral data center

Carbon zero data centres - how the industry can deliver on its green commitments | BCS



Article: Proper disposal of electronic devices Proper Disposal of Electronic Devices | CISA





OBSERVATION INTERVIEWS

INTERVIEWS

Preparation

Consider:

- Who will you interview?
- Where?
- Prepare the questions
- At least 5 interviews
- Each interview 30 minutes
- Bring a reward

INTERVIEWS

Tips:

Each team needs 3 individuals: interviewer, observer, someone to take photos

The questions must be prepared in advance, order is not important

We don't know how the interview will evolve, must be prepared to adapt

INTERVIEW PREPARATION

Interview preparation

WHO?

(Why that group?)

WHERE? (Interview surrounding)

(Why there?)

QUESTIONS

- 1.
- 2.
- 3.
- 4.
- 5.
- 6.
- ...
- ...

Tips

1. Plan the location where you conduct interview!
2. Plan who can give you the most valuable information.
3. 3 team members are needed: one who conducts interview, one who takes notes, one who observes the interviewee/take pictures.
4. Come to interview with pre-defined questions, but don't focus of their order.
5. Remember that you can't predict the whole course of the interviews, be prepared but open to.

INTERVIEW DOCUMENTATION

Interview card

Picture / Photo



Name:
Sex:
Age:
Occupation:

Tips

1. Note everything!
2. Ask questions WHY?
3. Be curious as a child!
4. Observe your interlocutor!

WHERE? (Interview surrounding)

Notes

USER PERSONA

Describes a typical user

Not a specific person

An imaginary person that has the characteristics of the target group

CHARACTERISTIC USER

Photo + characteristics (not very creative)

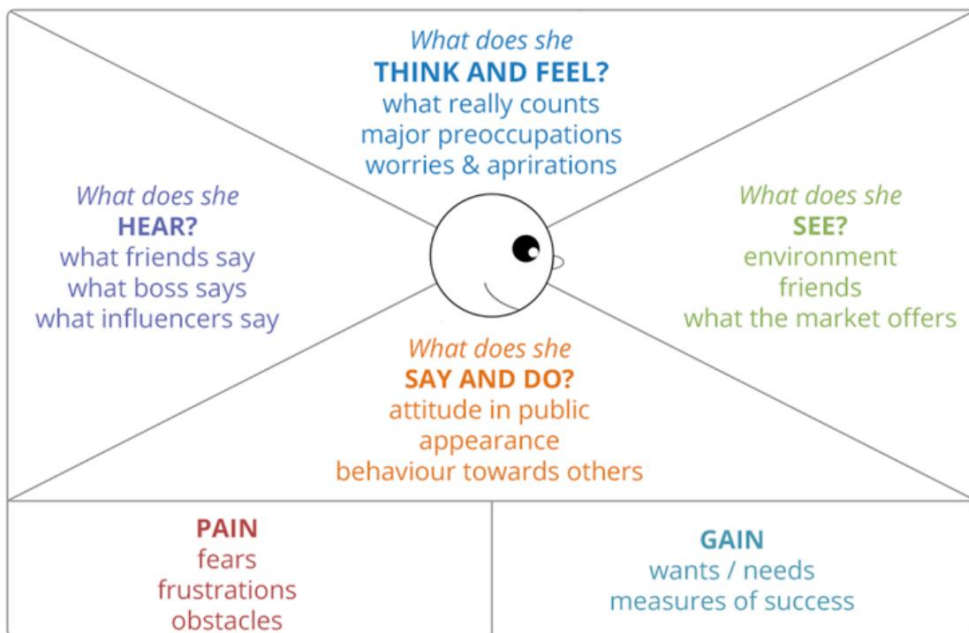
User journey. Where the user comes from, education, work, etc.

Mind map. The user in the middle, notes around

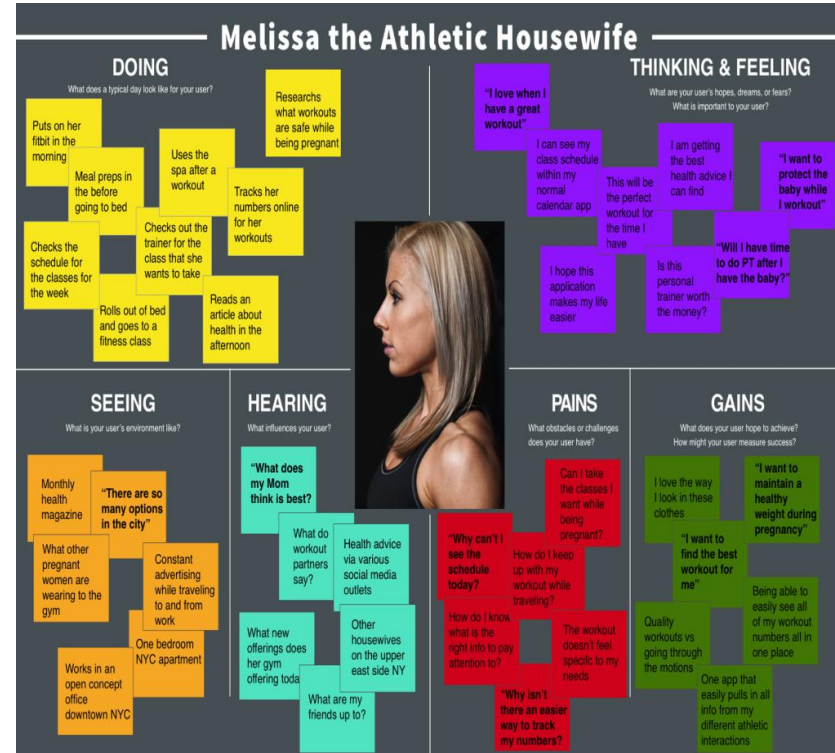
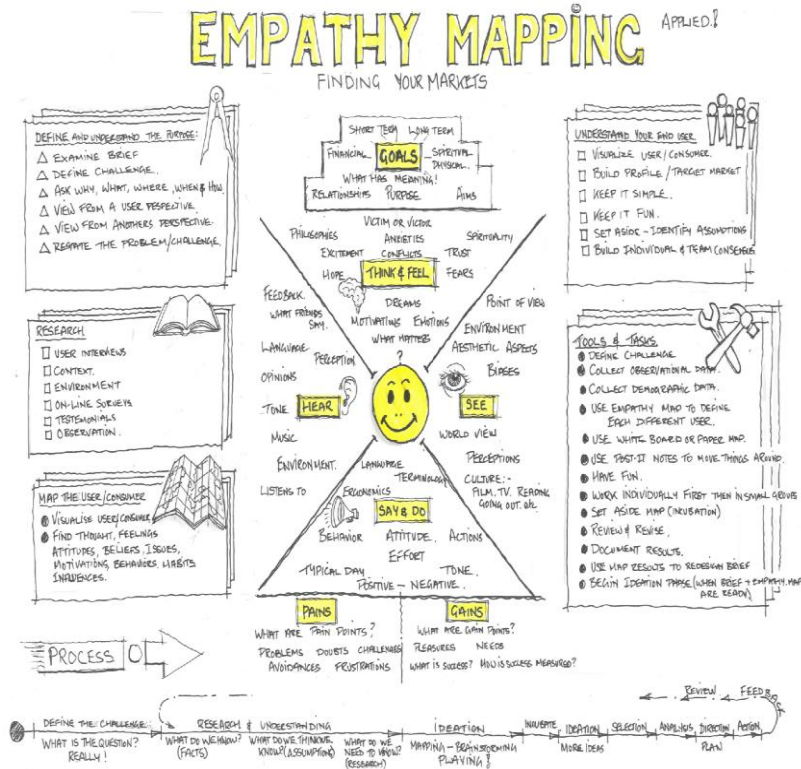
Empathy map. What the user does, sees, hears, feels

Our own design that combine the above

EMPATHY MAP

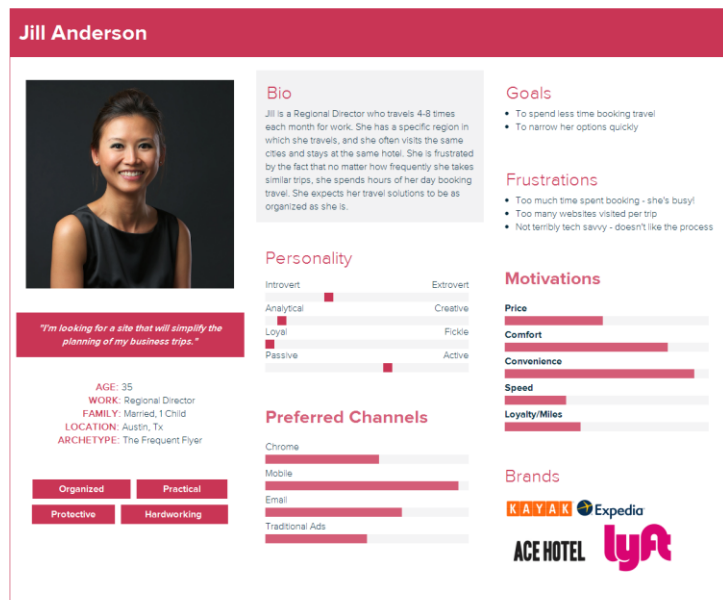


EMPATHY MAP



LIST

List of characteristics

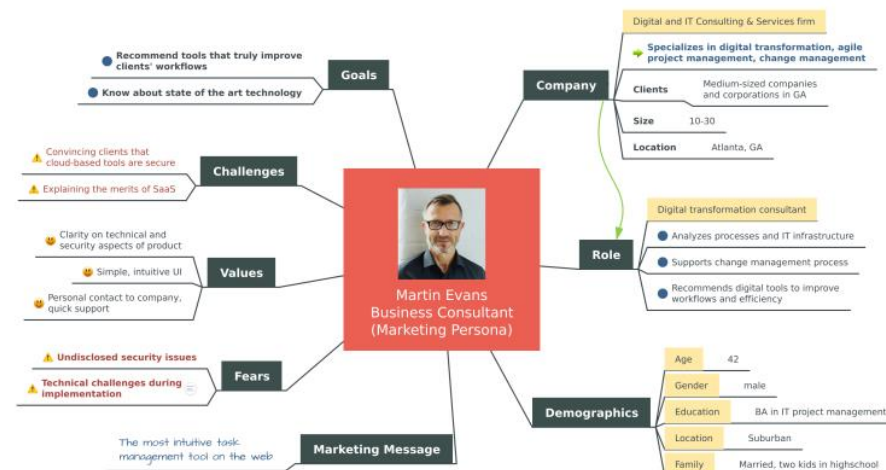
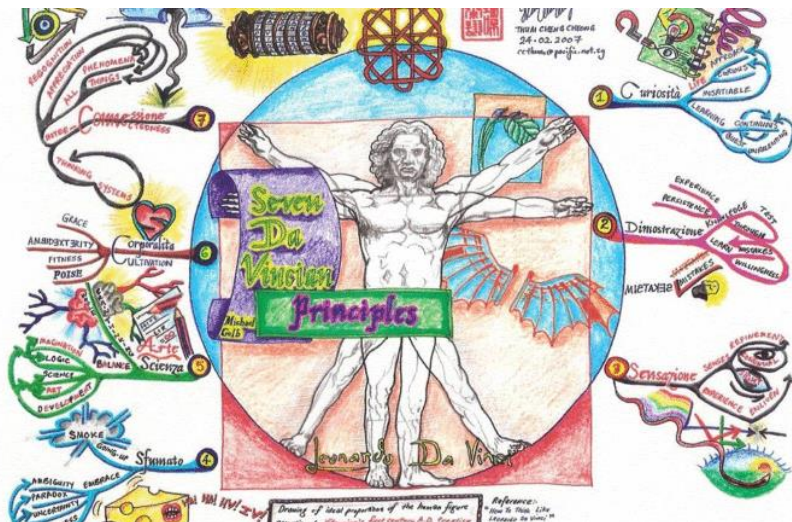


THE USER'S JOURNEY

Story telling



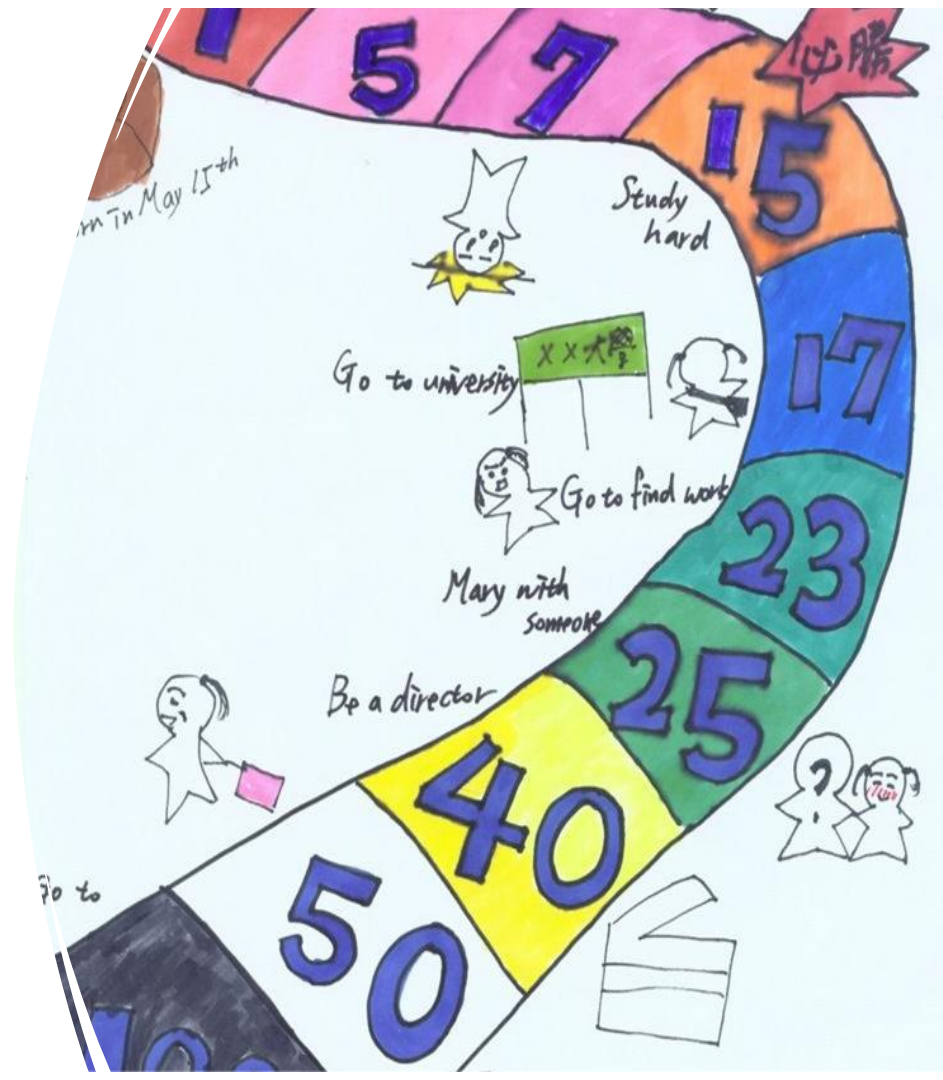
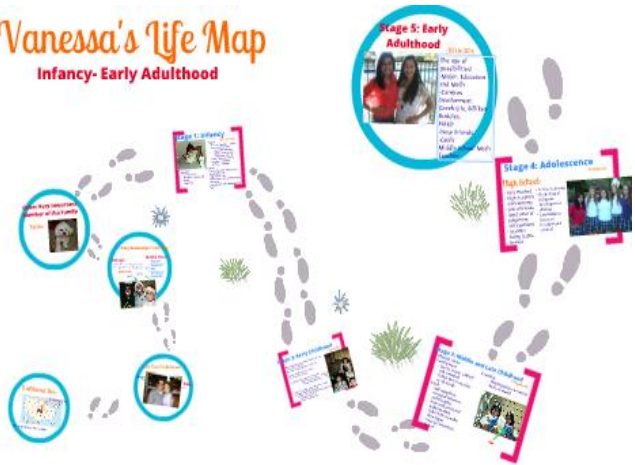
MIND MAP



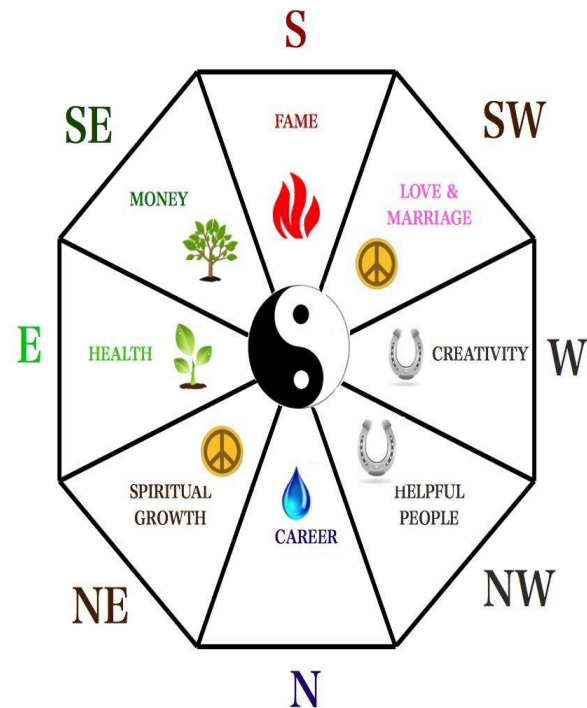
ROAD MAP

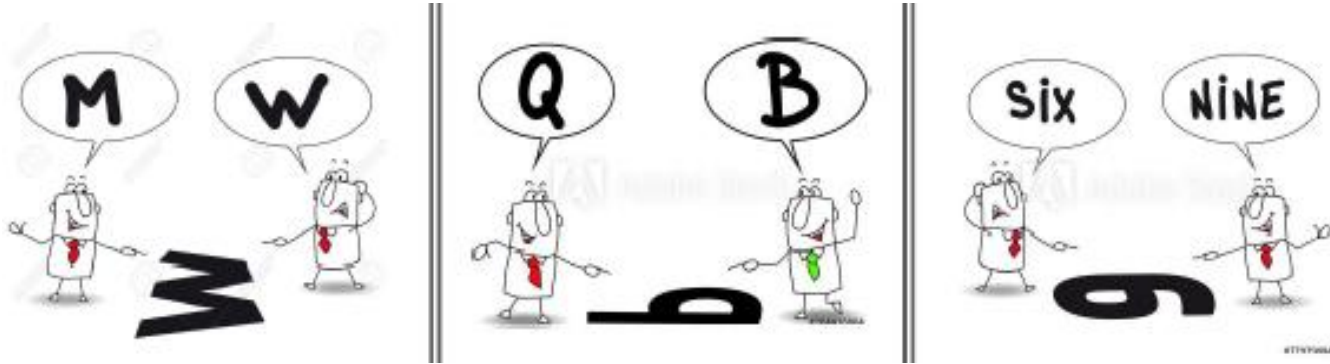
Vanessa's Life Map

Infancy- Early Adulthood



FENG SHUI MAP





PROBLEM STATEMENT
DEFINITION

POINT OF VIEW

Who

- The user

What

- ... needs a way to ...
(use verbs)

Why

- ... because ...
(insight)

POINT OF VIEW

How might we ... find a way to ... allow the user to ...

What are the ways we could ...

What kind of scenarios could we imagine?

How might we **ACTION**
WHAT for **WHOM** in
order to **CHANGE**
SOMETHING

EXAMPLE

“how might we design a solution for convincing people to recycle electronic devices?”



IDEATION

TIPS AND RULES

From quantity to quality

We are a team

One conversation at a time!

Don't judge the ideas of others

There are no stupid ideas!

Build on the ideas of others

Encourage out-of-the-box thinking

Creative feedback

IDEATION

Step 1

Avalanche

One idea from each letter of the alphabet

Examples

Avoid through trash on the street

Bring something for collecting trash

Create a supportive environment for recycling

...



IDEATION

Step 2

An idea that makes someone uncomfortable

Example

A fine

IDEATION

Step 3

What would be your solution if money is not an issue (you have all the money in the world)

Example

Buy machines that clean the beach automatically

IDEATION

Step 4

An idea that costs 1 Euro

Example

Send an SMS for awareness-raising

IDEATION

Step 4

What would you do if you had magic

HOW DO WE SELECT AN IDEA FOR PROTOTYPING?

Prepare a list of all ideas

Select

- The most innovative
- The most unlikely
- The most reasonable
- The most simple

Must be able to turn it into a prototype

For receiving feedback

6 – 3 – 5 METHOD

(** THE DESIGN THINKING TOOLBOX, M. LEWRICK, P. LINK, L. LEIFER)

Optimally, this exercise is performed in team of 6 participants

Each team member produces 3 ideas in the first round and writes them on a paper over a period of 5min

Then passes the paper clockwise to the next person on the team; this means that each team member also receives a paper with ideas from another member

Each team member then elaborates on the ideas on the paper she receives

The process is repeated 5 times

The exercise can produce up to 108 ideas within 30min



SELECTING AN IDEA

CLASSIC IDEA EVALUATION

(**STANDFORD D.SCHOOL)

Ask students to categorize ideas:

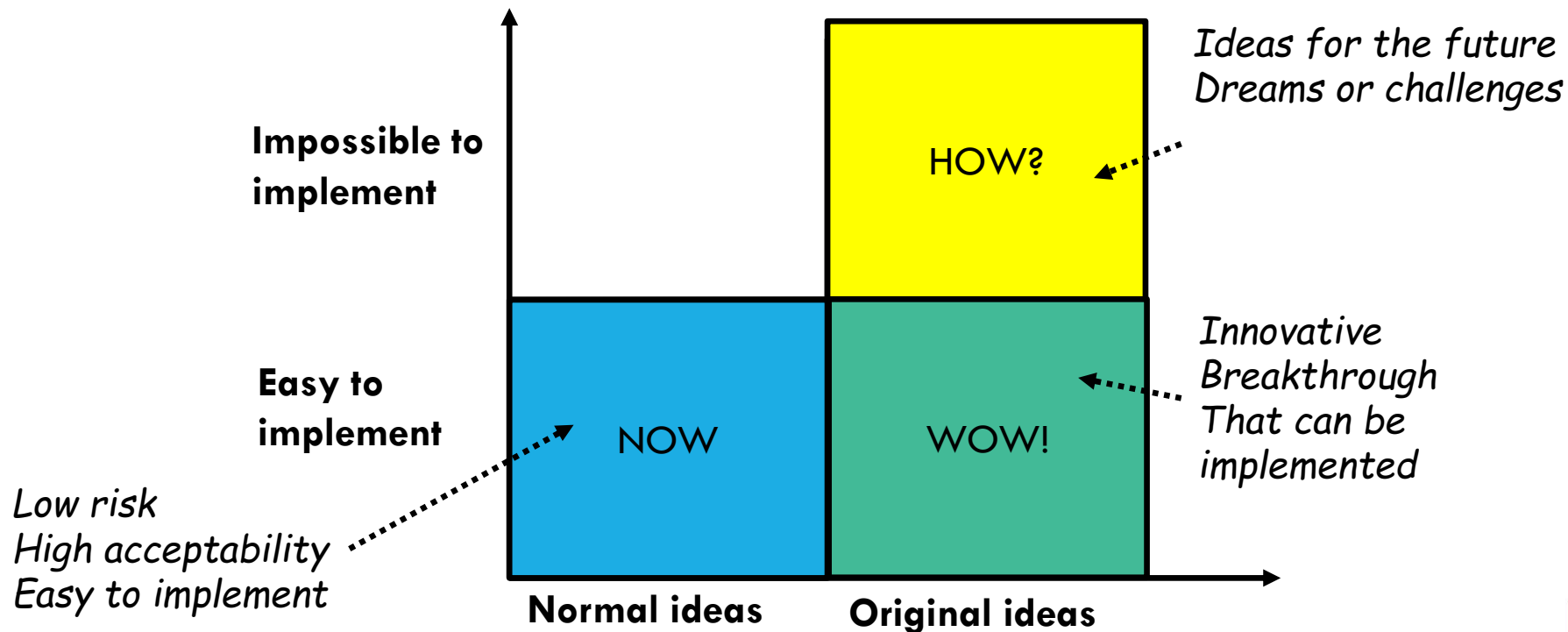
- The most logical
- The most attractive
- The most “crazy”

Then, ask them to select one for prototyping

- The prototype may be physical or digital
- But always must be interactive

HOW — NOW — WOW: CREATE THE MAP

(**GAMESTORMING)



HOW — NOW — WOW: EXPLANATIONS

**GAMESTORMING

Explanation of the labelling:

Now: Blue Ideas – Normal ideas, easy to implement. Usually fill gaps in existing processes (incremental ideas).

How: Yellow Ideas – Original ideas, impossible to implement. Breakthrough ideas in terms of impact, but impossible to implement right now given available technology and budget.

Wow: Green Ideas – Original ideas, easy to implement. Ideas with potential for significant impact and possible to implement today.

HOW — NOW — WOW: HOW TO PLAY

**GAMESTORMING

Give each student 3 sticky dots of each colour (blue, yellow, green)

Ask each student to mark ideas as blue, yellow, green

In the end, count the number of dots under each idea to categorize it

In case of a tie:

- If blue dots = green dots, the idea is blue
- If yellow dots = green dots, the idea is green

Students can implement immediately the blue ideas

They can continue working on the green ideas

They can keep an eye on the yellow ideas for the future



PROTOTYPE DESIGN

YOUR IDEA ON A POSTER



Co-funded by the
Erasmus+ Programme
of the European Union



POSTER TEMPLATE

INTRODUCTION TO THE TOPIC

Posters are popular method of presenting research findings in a concise and visually pleasing manner. Start by introducing the subject of your research and/or your hypothesis. Try to answer briefly those questions:
What are the questions about this topic that you want to answer? What new things can it contribute to the existing literature?
What is the background for the topic in real world?



OBJECTIVES

It is important for your audience to know what you want to achieve with your research. State this as clear as possible.



ICT IN YOUR PROJECT

Let people know how ICT enriches your solution. This may vary depending on your project. Highlight the areas of application (e.g. education, health, communications, etc.) and discuss ICT benefits.



TARGET GROUPS

State the target audience of your proposed solution. Think about:
- Their description
- Their motivation
- Their surrounding
- Their possibilities to use the solution



TEAM

Authors
Be proud of your work! Add the names of the people involved in this work!

Affiliation
We are also proud of the institutions that we are coming from. Let's let them know by adding their names and logos here.

LOGO
A place for
the team logo!

SOLUTION

Expand on your findings by discussing constraints and all the details of your proposed solution. Keep it simple and direct to the point. Use bullets for emphasis. Include key graphs, tables, illustrations, and other images that support the presentation and show a visual representation of your work.



Graphs are great in helping make numbers easier to understand



Write a caption that will clearly explain what this graphic is about and how it relates to the study.

MARKET IMPLEMENTATION POTENTIAL

Summarise your study and let the viewers know two to three key findings. You can also add a description of a possible market implementation potential of your solution.





REPORTING

REPORT

Based on the template



DURATION

DURATION

This is very flexible

From a few hours

To an entire semester (e.g. 2 weeks per step)