Design Thinking Taster

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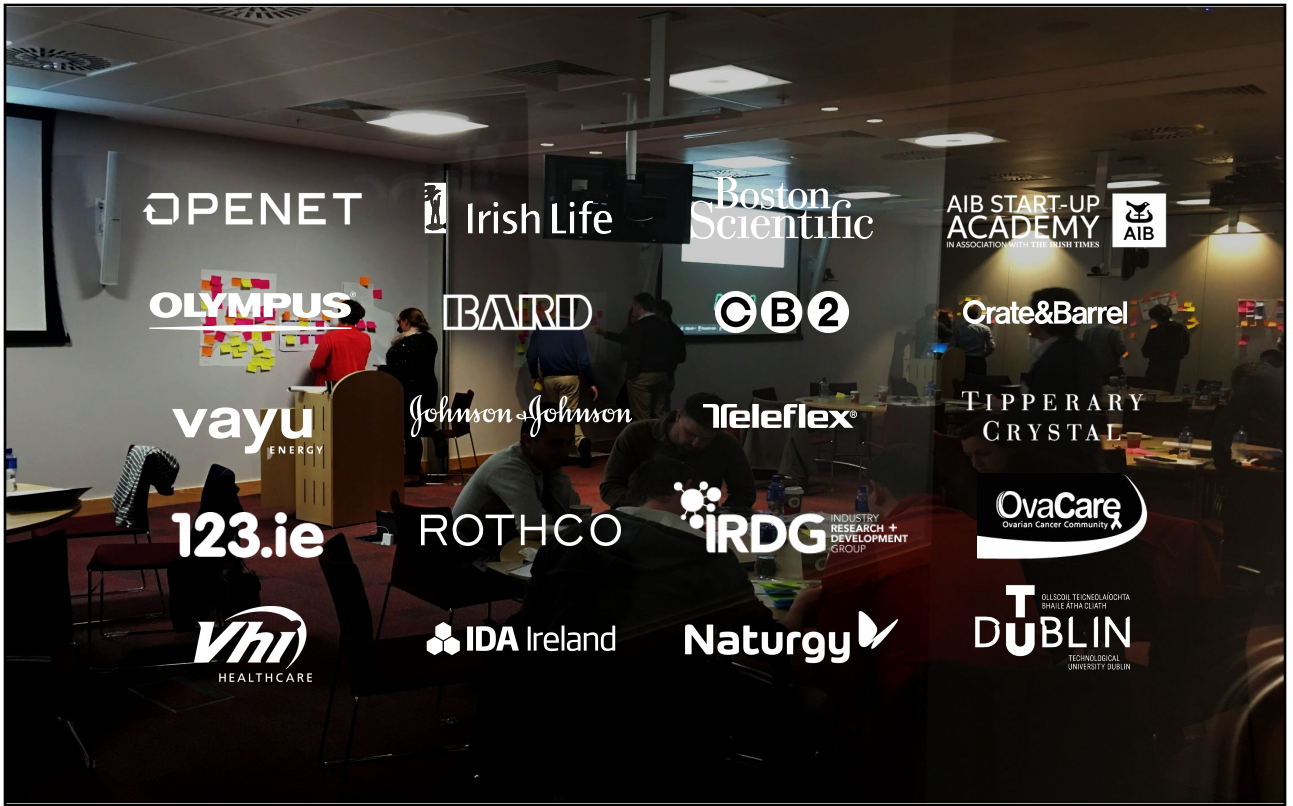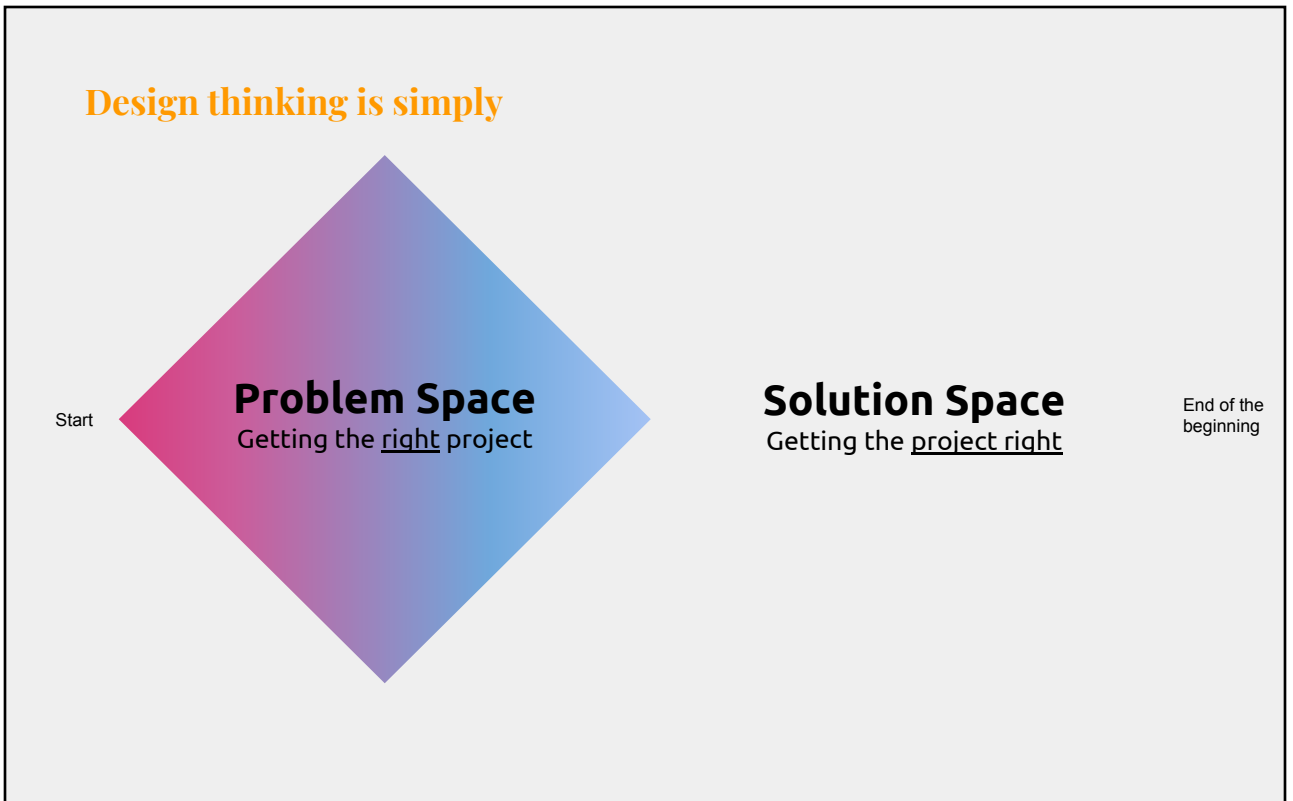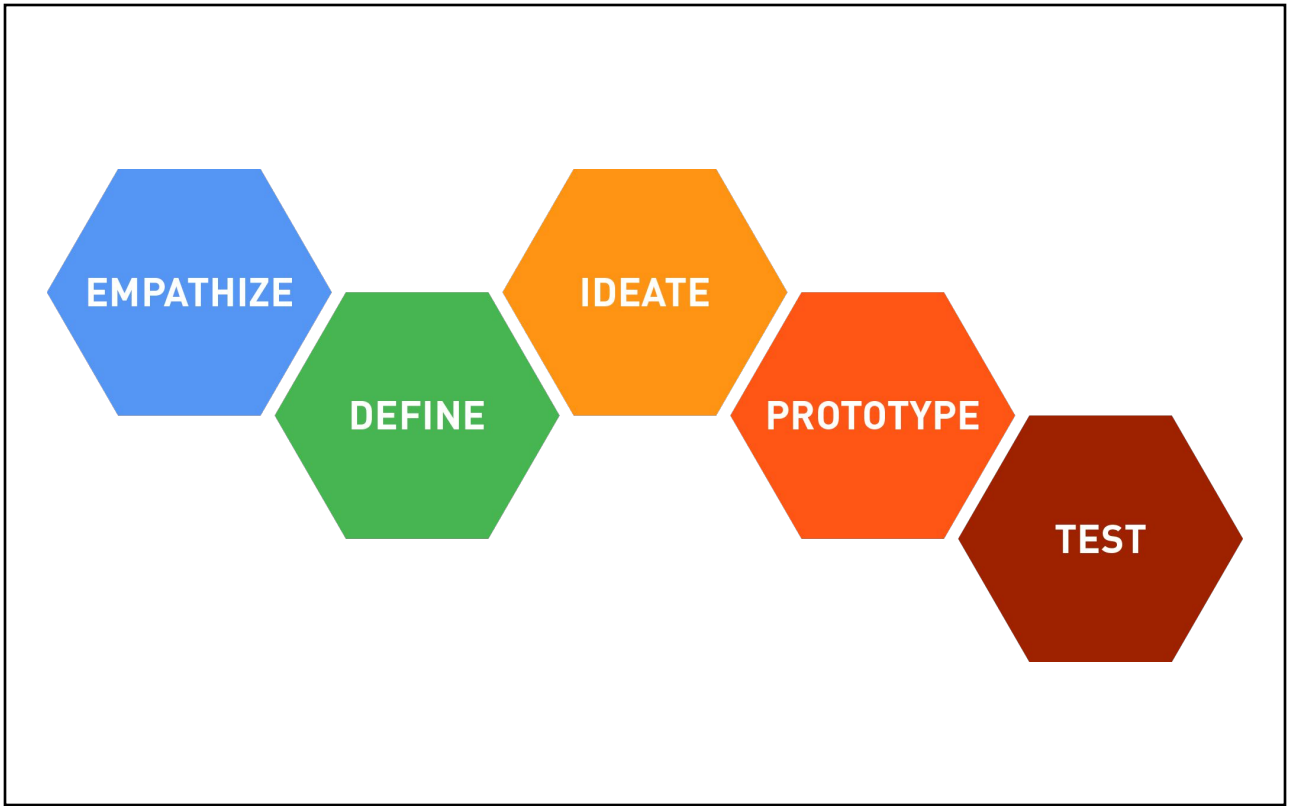
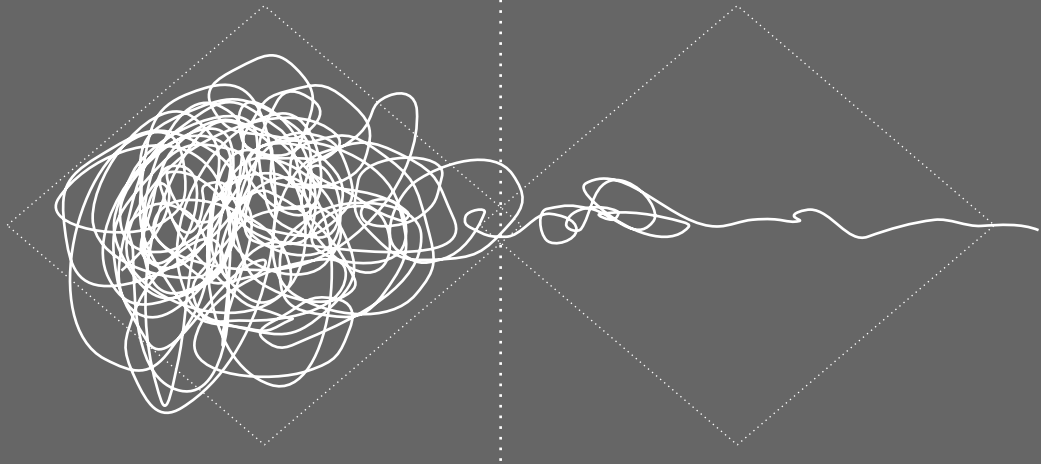# The biggest advance in saddles since...saddles

Research to Action ↻

Getting the right design getting the design right
An observation of 18 industry projects progressing through a structured design thinking process

Trevor Vaugh & Martin Ryan / Department of Design Innovation / Maynooth

19th DMI: Academic Design Management Conference
Design Management in an Era of Disruption
London, 2–4 September 2014

An Investigation into Design Thinking Behaviours in Early Stage Radical Innovation

Martin P. RYAN[*a] and Frank DEVITT[b]

[a] National University of Ireland, Maynooth 'a'; [b] National University of Ireland, Maynooth 'b'

The early stage of radical innovation is characterised by uncertainty, data overload and often high rates of change. Schumpeter's 'creative destruction' view of innovation is now exacerbated by 'hypercompetition' (D'Aveni, 199... a theory that describes the increasing rate and intensity of change in modern markets. In the design and strategy literature, design thinking is often positioned as an appropriate mediator of radical innovation in these circumstances, by facilitating interpretation of market uncertainties and moderating organisational behaviours. At its inception radical innovation is semi-consciously. In this study we set out to distinguish design thinking from analytical thinking and investigate the suitability of both for the effective early stage formation of radical innovation concepts. Additionally, whereas design thinking literature mostly investigates...

What is Design Thinking?

EMPATHIZE · **DEFINE** · **IDEATE** · **PROTOTYPE** · **TEST**

Design thinking is simply

Start

Problem Space
Getting the right project

Solution Space
Getting the project right

End of the beginning

Getting the right design&getting the design right

Systems level thinking

Emphasis

BEGINS HERE

Desirable

Feasible

Viable

ENDS HERE
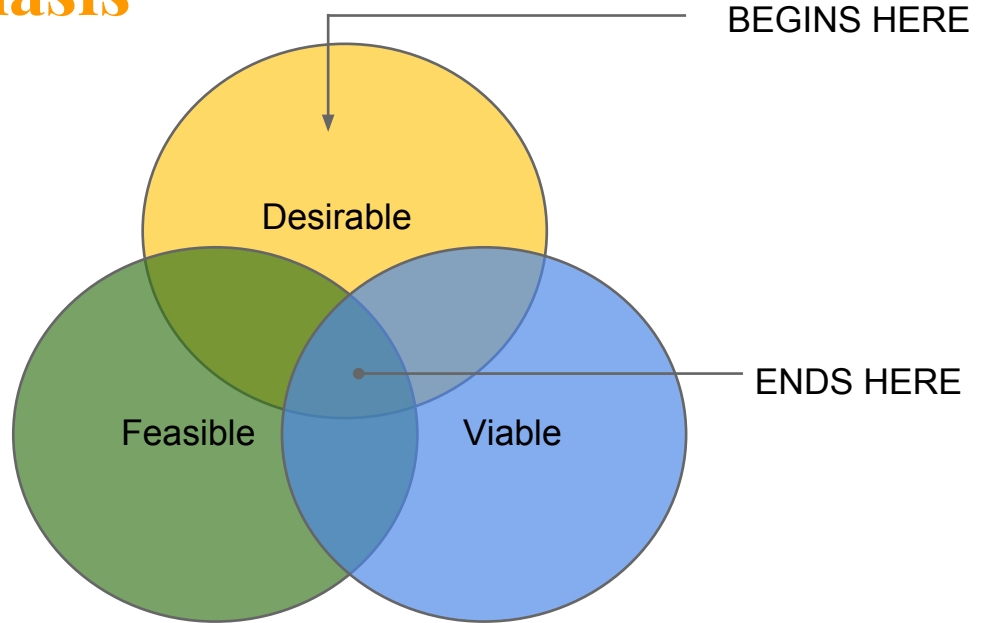
Design works because
Customer experience is the new battleground

89%
of companies expect to compete mostly on the basis of customer experience, versus 36% four years ago

50%
Of consumer product investments will be redirected to customer experience innovations

86%
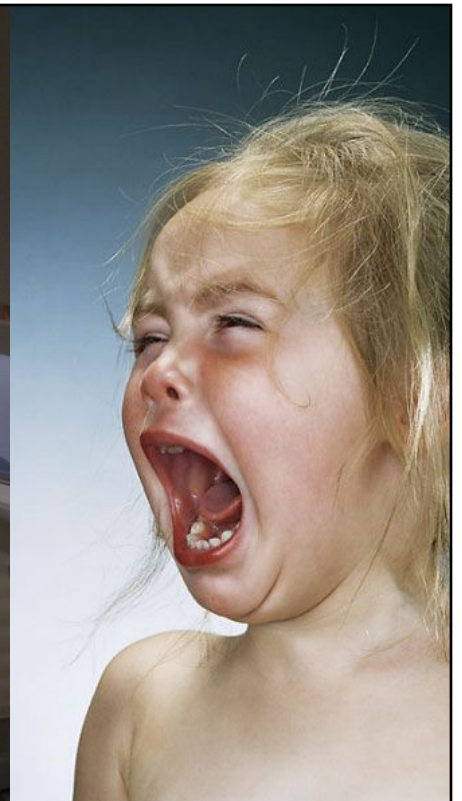of buyers will pay more for a better customer experience.

6x
More likely to buy with a positive emotional experience
- Temkin group

12X
More likely to recommend the company with a positive emotional experience
- Temkin group

5X
More likely to forgive a mistake if there is a positive emotional experience
- Temkin group

80%
Have to be
sedated

Sedation rates down by **85%**

- More procedures
- More MRI machines sold
- Happier Staff
- Patient satisfaction up 90%

Needs of **People** (desirability)

Child   Parents   Nurse/Clinical

DESIGN innovation

Possibilities of **Technology** (Feasibility)

Success for **Business** (Viability)

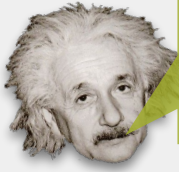**"If I had only one hour to save the world, I would spend fifty-five minutes defining the problem, and only five minutes finding the solution**

Start

Problem Space
Getting the <u>right</u> project

Solution Space
Getting the <u>project right</u>

End of the beginning

Problem Space
Getting the <u>right</u> project

Solution Space
Getting the <u>project right</u>

Discover *Define*

General problem

Specific problem

Specific solution

Values of design thinking

User-centered
Services should be experienced through the customer's eyes

Co-creative
All stakeholders should be included in the service design process

Iterative
Service design is an exploratory, adaptive, and experimental approach, iterating toward implementation

Holistic
The entire environment of a service should be considered

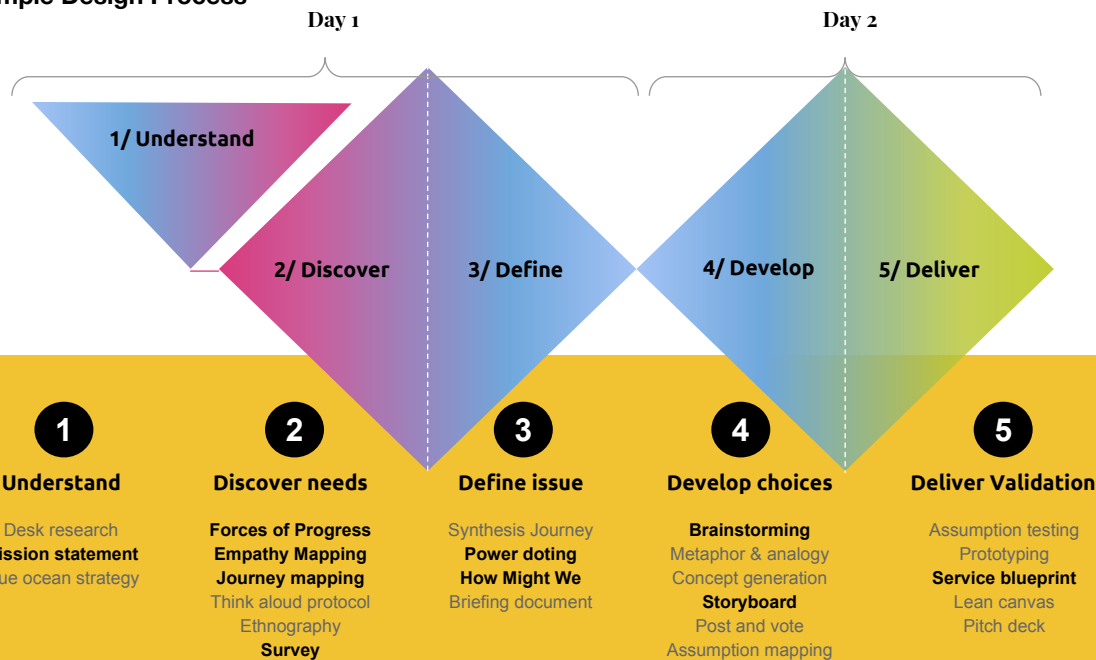Marc Stickdorn -This Is Service Design Doing

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MU Degree programmes

Programme?
Module?
Readiness for job?
Admin system?
Registration process?

Student

Transition to university
Suitability for course
Readiness for job
Sense of Belonging

Sample Design Process

Day 1   Day 2

1/ Understand

2/ Discover   **3/ Define**   **4/ Develop**   **5/ Deliver**

1
Understand
Desk research
Mission statement
Blue ocean strategy

2
Discover needs
Forces of Progress
Empathy Mapping
Journey mapping
Think aloud protocol
Ethnography
Survey

3
Define issue
Synthesis Journey
Power doting
How Might We
Briefing document

4
Develop choices
Brainstorming
Metaphor & analogy
Concept generation
Storyboard
Post and vote
Assumption mapping

5
Deliver Validation
Assumption testing
Prototyping
Service blueprint
Lean canvas
Pitch deck

Note: Tools adopted for this project are in bold typeface

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Discovery

actionable
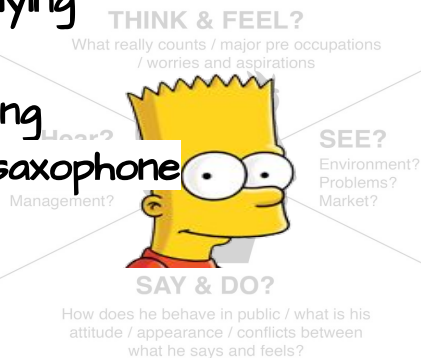Insight-led innovation, strategy & change

Empathy Mapping

Adapted from Tanner Bechtel article on Medium
https://medium.com/@tannerbechtel/bart-simpson-taught-me-everything-i-need-to-know-about-human-empathy-ec456fc07639#.jfo03g8ui

- Smartass
- troublemaker
- Loudmouth
- Disrespectful
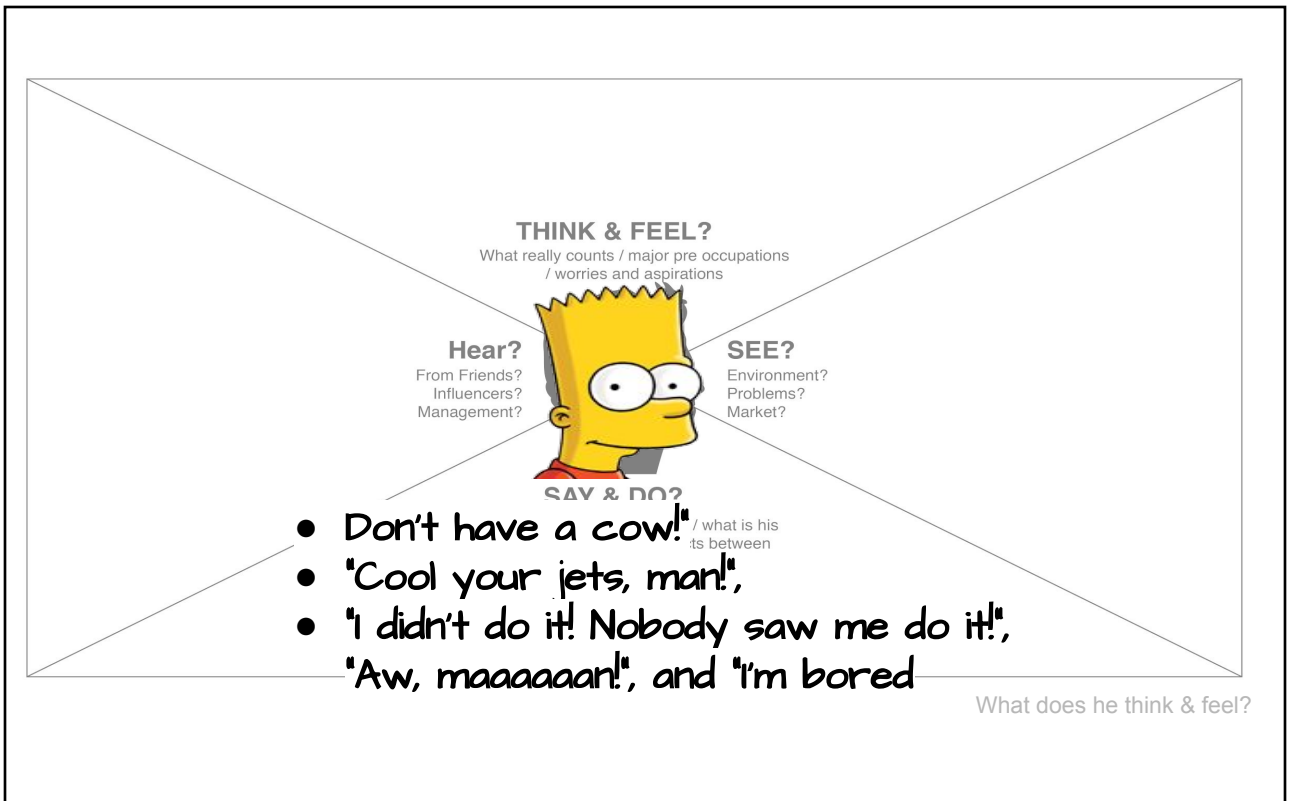- Obnoxious
- Clever
- Brat
- Risk-taker

What does he hear?

- Mockery and bullying
- Disappointment,
- His parents arguing
- Lisa playing her saxophone (perfectly),
- The baby crying,
- Judgement,
- Disapproval.

THINK & FEEL?
What really counts / major pre occupations / worries and aspirations

Hear?
Management?

SEE?
Environment?
Problems?
Market?

SAY & DO?
How does he behave in public / what is his attitude / appearance / conflicts between what he says and feels?

What does he See?

THINK & FEEL?
What really counts / major pre occupation / worries and aspirations

Hear?
From Friends?
Influencers?
Management?

SEE?
Environment?
Problems?
Market?

SAY & DO?
How does he behave in public / what is his attitude / appearance / conflicts between what he says and feels?

- Violent cartoons
- A lazy father
- An overachieving sister
- A father with no ambition
- An unhappy mother

What does he say?

THINK & FEEL?
What really counts / major pre occupations / worries and aspirations

Hear?
From Friends?
Influencers?
Management?

SEE?
Environment?
Problems?
Market?

SAY & DO?

- Don't have a cow!",
- "Cool your jets, man!",
- "I didn't do it! Nobody saw me do it!", "Aw, maaaaaan!", and "I'm bored

What does he think & feel?

- "It doesn't matter.",
- "It's not fair...",
- "I just want to have fun", "
- Dad's a loser.", :EL?
- "Lisa is perfect... *I'm a loser.*"

Hear?
From Friends?
Influencers?
Management?

SEE?
Environment?
Problems?
Market?

SAY & DO?
How does he behave in public / what is his
attitude / appearance / conflicts between
what he says and feels?
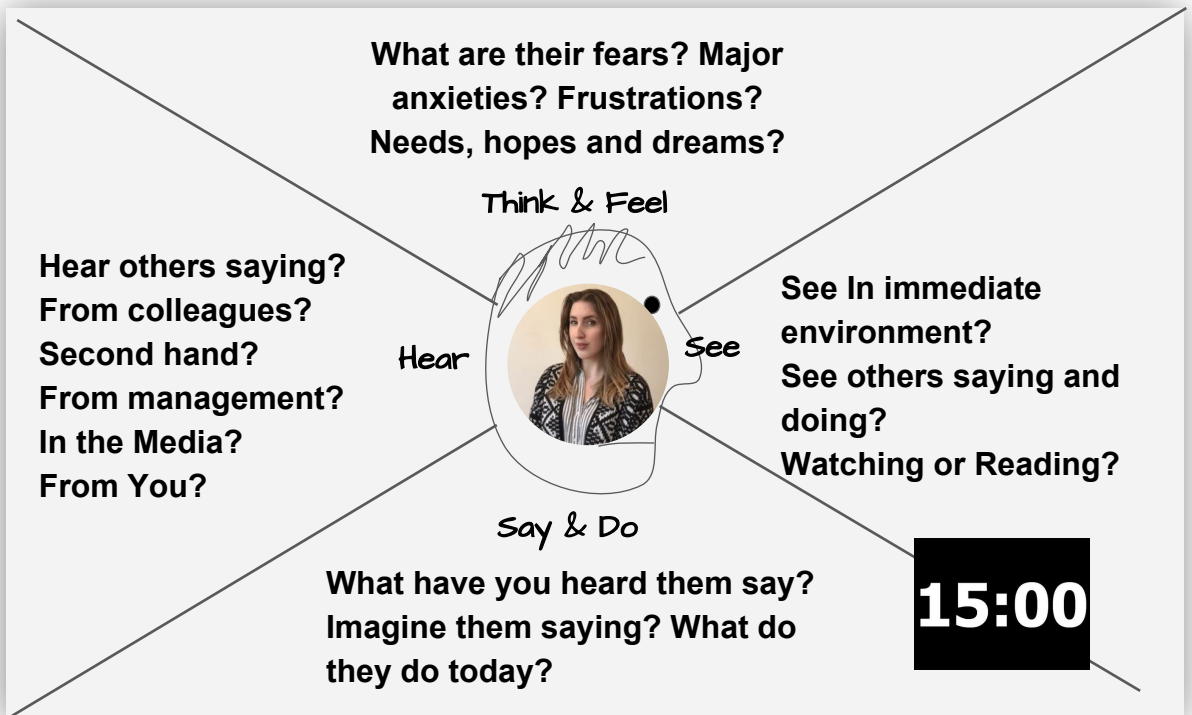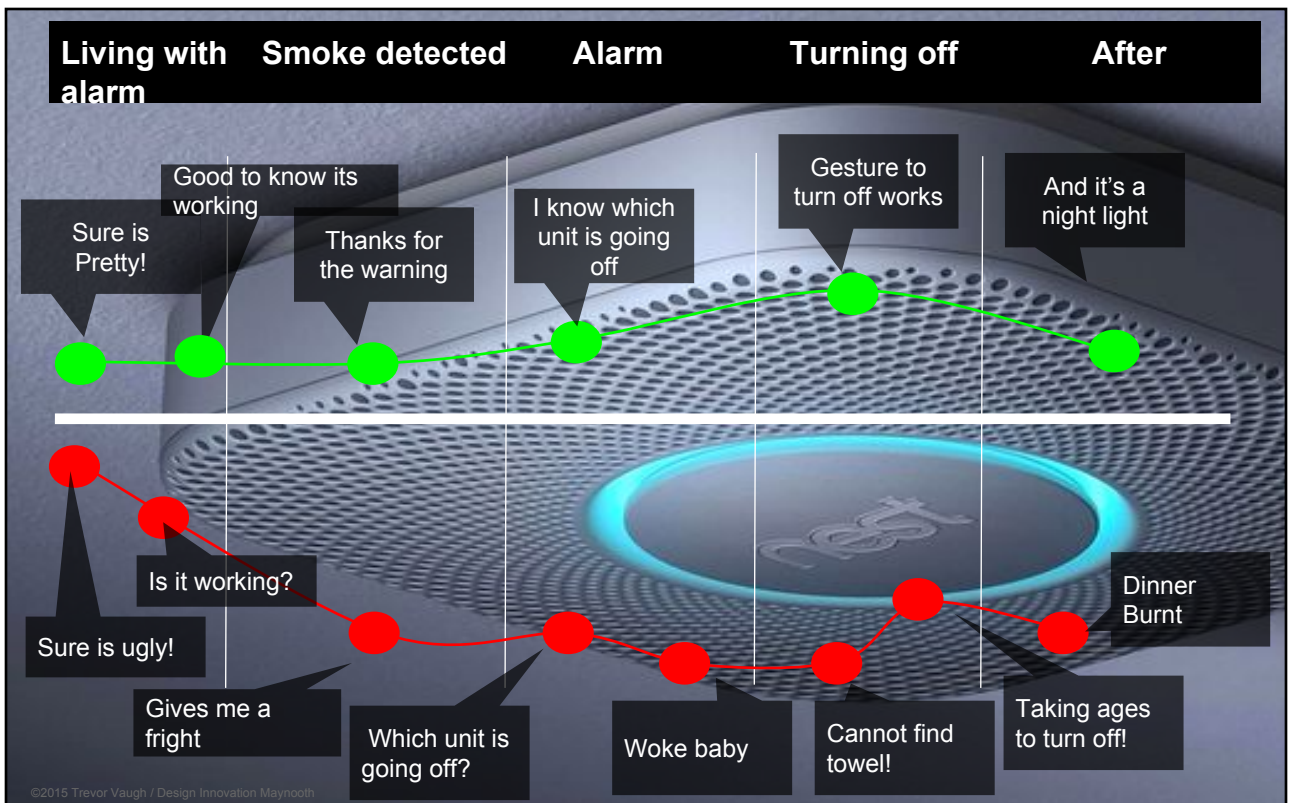
Student stakeholders

Undergrad

Taught masters

Research masters

PhD

What are their fears? Major anxieties? Frustrations? Needs, hopes and dreams?

Think & Feel

Hear others saying?
From colleagues?
Second hand?
From management?
In the Media?
From You?

Hear

See

See In immediate environment?
See others saying and doing?
Watching or Reading?

Say & Do

What have you heard them say? Imagine them saying? What do they do today?

15:00

actionable

Experience Mapping

Journey Map of

1. Stakeholder?

Pre-Programme | Education | Career

Journey stages

Awareness | Research | Decision | Entry | Year 1 | Year 2 | Year 3 | Year 4

VOICE OF CUSTOMER

2. Document different frustrations and motivations.

3. Describe the dominant experiences

15:00

RTÉ.ie

Define

actionable
Insight-led innovation, strategy & change

Data synthesis

GENDER
The average visitor is female

MALE 96
FEMALE 103

AGE
She is between 18 and 34

2-17 88
18-34 108
35-49 104
50-64 98
65+ 91

RACE/ETHNICITY
She is likely Asian or Pacific Islander

HISPANIC 100
WHITE 101
AFRICAN AMERICAN 94
ASIAN/ PACIFIC ISLANDER 103
AMERICAN INDIAN/ ALASKA NATIVE 102
OTHER 101

Bachelor's degree

HOOL R LESS 89
HOOL 102
UATE 99
LEGE 103
GREE 101
GREE 106
GREE 106

HOUSEHOLD INCOME
Her household income is less than $50,000 per year

UNDER $50K 102
$50K - $75K 99
$75K+ 98

Source: N

Who is easier to design for?

"We found in the past that if they didn't understand the buyer, designers would just go off and design something for themselves,"

Moray Callum, executive director of Ford Americas design

GENDER

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Source: N

Who is easier to design for?

Relatable Personal Familiar

Kate

Is a shy, reserved and studious 1st year student from Oranmore, Galway. She is balancing a part-time job to help fund a good student lifestyle while in college. She needs help in balancing her college and part-time work commitments. By the way she is very capable but struggling to balance course commitment with student / work activities.

How might we help Kate transition into a demanding workload and foster the right mindset and work ethic, without daunting her?

How might we communicate that this programme is a full timetable & workload (40/hr/Wk) so that she has a realistic expectation from the off?
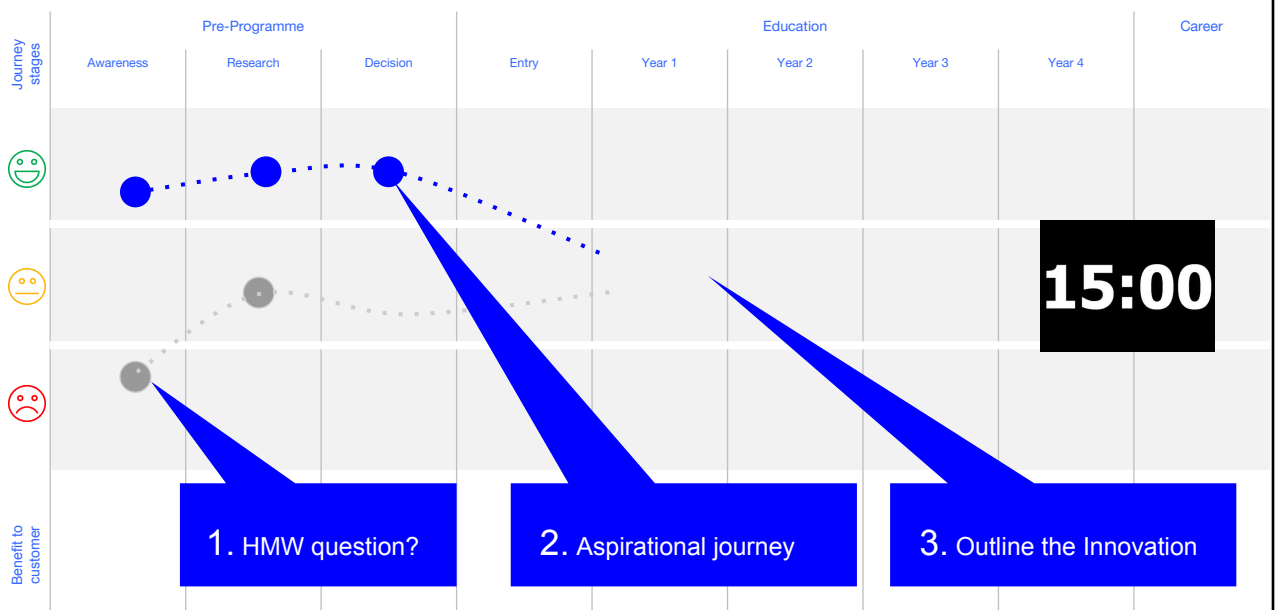
How might we accommodate the new norm of students having to work part time?
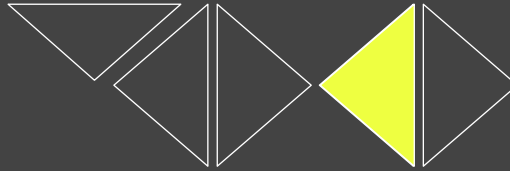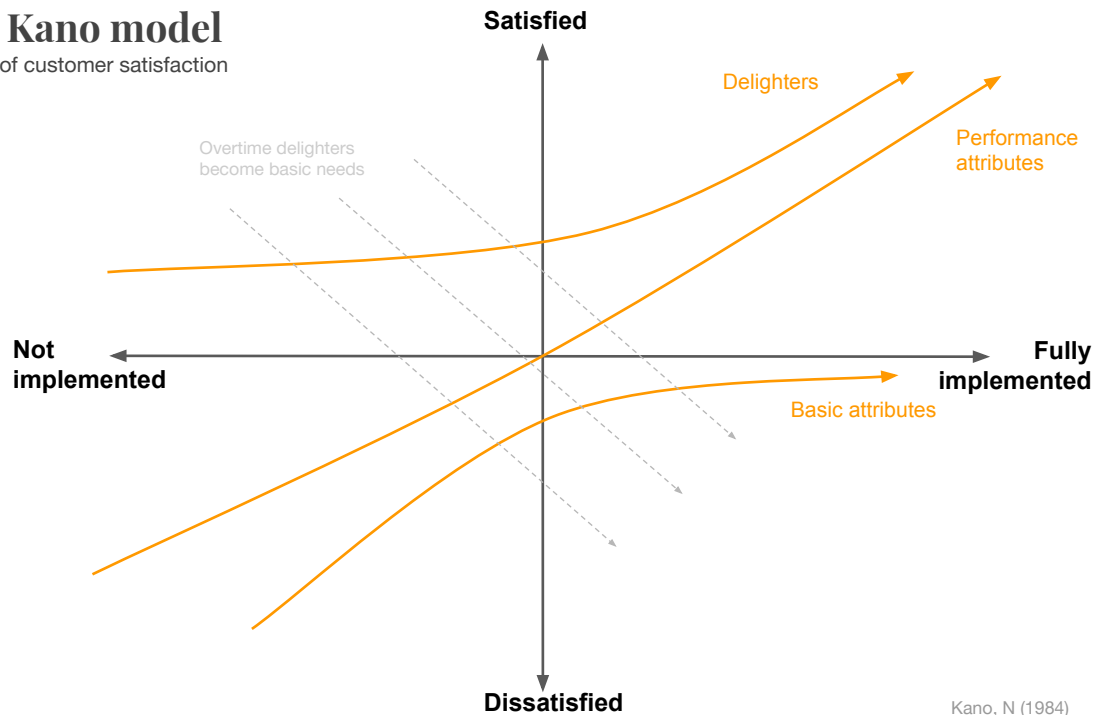
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Ideation

actionable

Aspirational Map

Journey stages

Pre-Programme | Education | Career

Awareness | Research | Decision | Entry | Year 1 | Year 2 | Year 3 | Year 4

Benefit to customer

15:00

1. HMW question?

2. Aspirational journey

3. Outline the Innovation

The Kano model
Theory of customer satisfaction

Satisfied

Delighters

Performance attributes

Overtime delighters become basic needs

Not implemented

Fully implemented

Basic attributes

Dissatisfied

Kano, N (1984)

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Peak & End rule
Satisfaction after time

Peak

End

Experience

See what you remember after 6 months
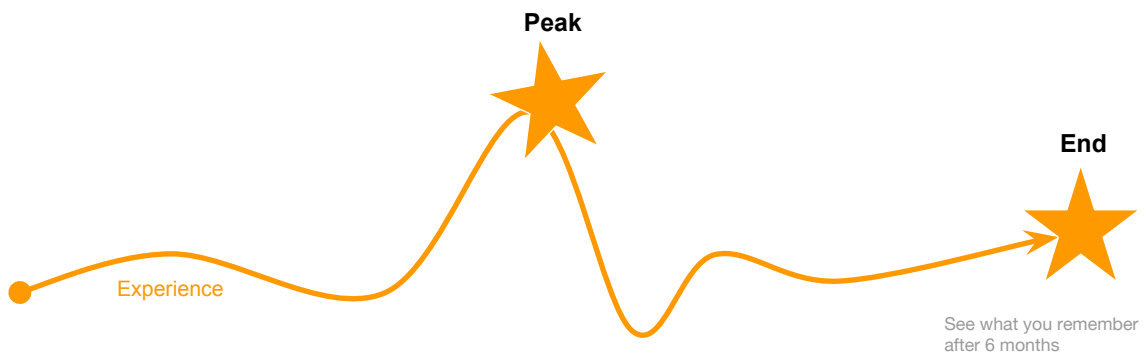
Barbara Fredrickson and Daniel Kahneman (1993)

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Aspirational Map

	Pre-Programme			Education					Career
Journey stages	Awareness	Research	Decision	Entry	Year 1	Year 2	Year 3	Year 4	

Replicate Delighters

Improve Mediocre

Raise negatives

1. HMW question?

2. Aspirational journey - How will it be delivered?

Benefit to customer

Thanks for listening
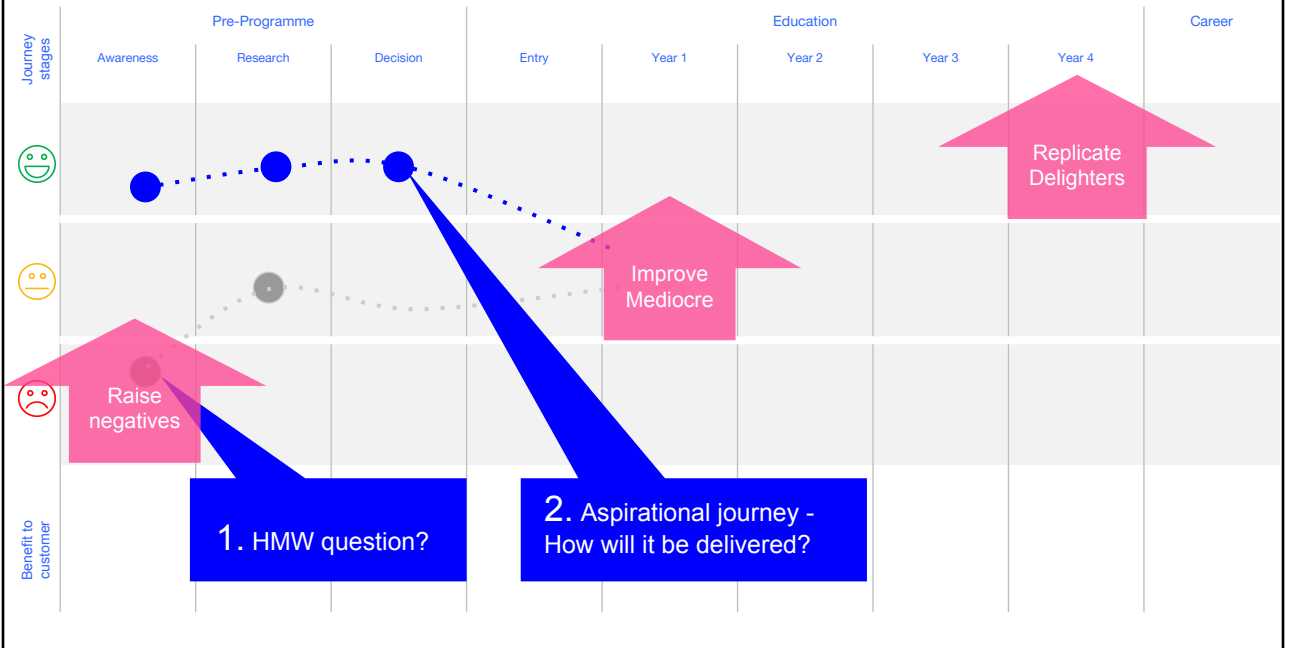
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