Design Thinking

Innovation is the central issue in economic prosperity

Michael Porter

Innovation is a new idea, device or process.[1] Innovation can be viewed as the application of better solutions that meet new requirements, inarticulated needs, or existing market needs.[2] This is accomplished through more effective products, processes, services, technologies, or ideas that are readily available to markets, governments and society. The term innovation can be defined as something original and more effective and, as a consequence, new, that "breaks into" the market or society.[3]

Wikipedia

Innovation Back Then

Innovation Today

Innovation Back Then

Innovation Today

Innovation Back Then

Innovation Today

The 50 Worst Inventions

From the zany to the dangerous to the just plain dumb, here is TIME's list (in no particular order) of some of the world's bright ideas that just didn't work out

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WORST INVENTIONS

Segway

By Dan Fletcher | Thursday, May 27, 2010

◀ 1 of 50 ▶
VIEW ALL

Give inventor Dean Kamen this: he's a master of buzz. A closely guarded secret that was supposed to change the world upon its release in 2001, the Segway never brought about its promised revolution in transportation. Though the technology is pretty cool — very expensive gyroscopes make the thing nearly impossible to tip over (though George W. Bush found a way) — the Segway's sales far underperformed vs. Kamen's predictions. It lives on as the vehicle of choice for mall cops and lazy tourists, but the Segway's best contribution might be as the vehicle of choice for failed magician Gob Bluth in *Arrested Development*.

Empathy – Gaining Insights
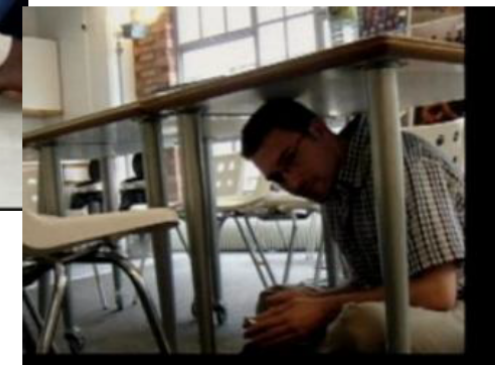
Design Thinking in Action - Result

Empathy – Gaining Insights

Design Thinking in Action - Result

Pirate Island

Slide 1

Social Innovation Project (SIP)

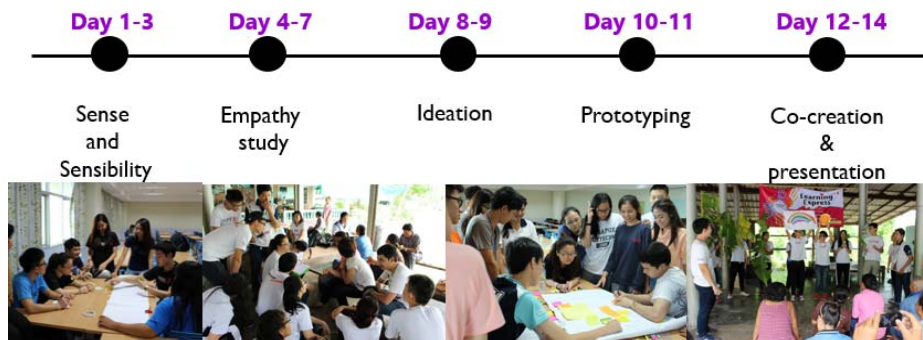**Year-two students use design thinking process to develop innovative ideas for social good.**

Based on their chosen theme:

Environment   **Social Integration**

Active Aging   **Healthcare**

From a thematic brief, identify a problem or an issue to work on.

Use EMPATHY study to listen to users

Draw INSIGHTS of unmet needs

Develop IDEAS & CONCEPTS to meet the needs

Slide 2

Embrace

https://www.youtube.com/watch?v=IVDb8QYr8GA

Slide 3

Learning Express Thailand (RMUTT)
LeX I 8 – 21 March 2015
LeX II 14 – 28 June 2015

Learning Express
A South-East Asia Vision

Day 1-3	Day 4-7	Day 8-9	Day 10-11	Day 12-14
Sense and Sensibility	Empathy study	Ideation	Prototyping	Co-creation & presentation

Slide 4
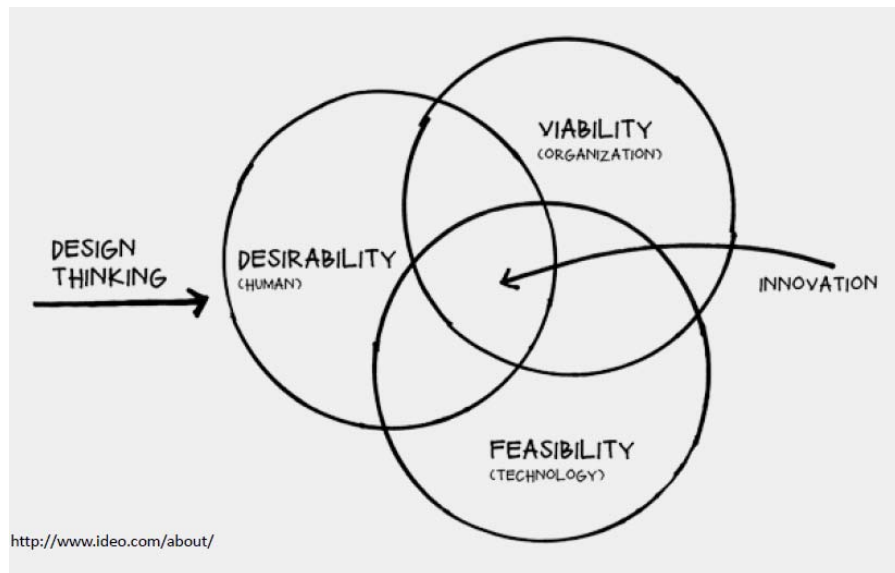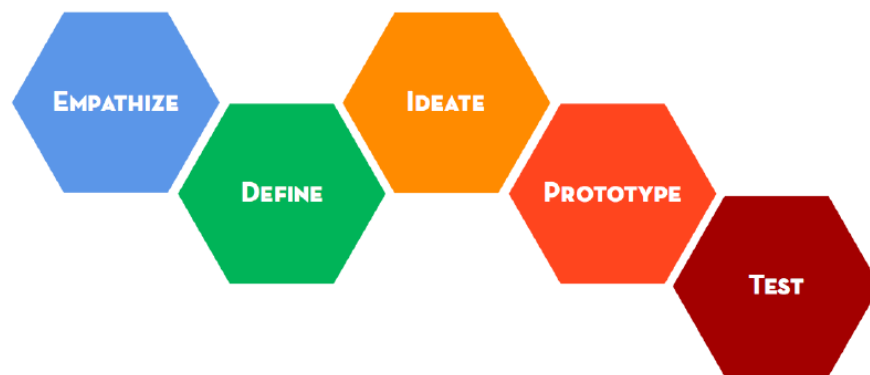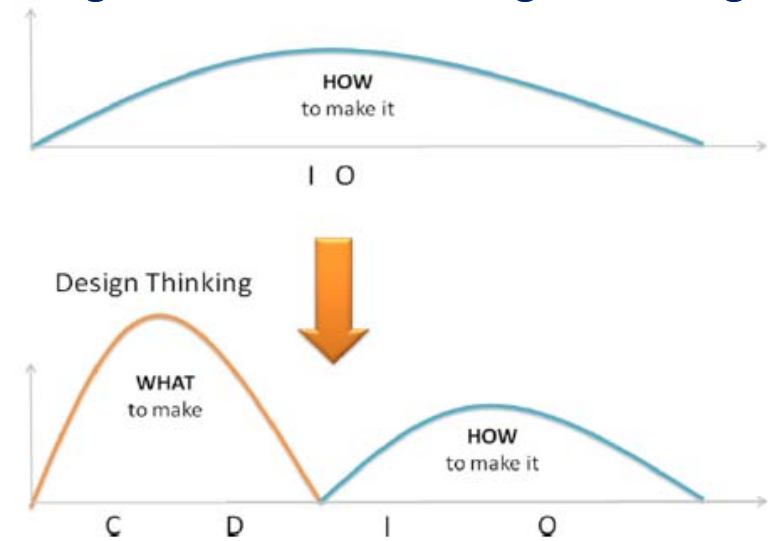
"Design thinking is a _human-centered approach_ to innovation that draws from the designer's toolkit to integrate the _needs of people_, the _possibilities of technology_, and the requirements for _business success_."

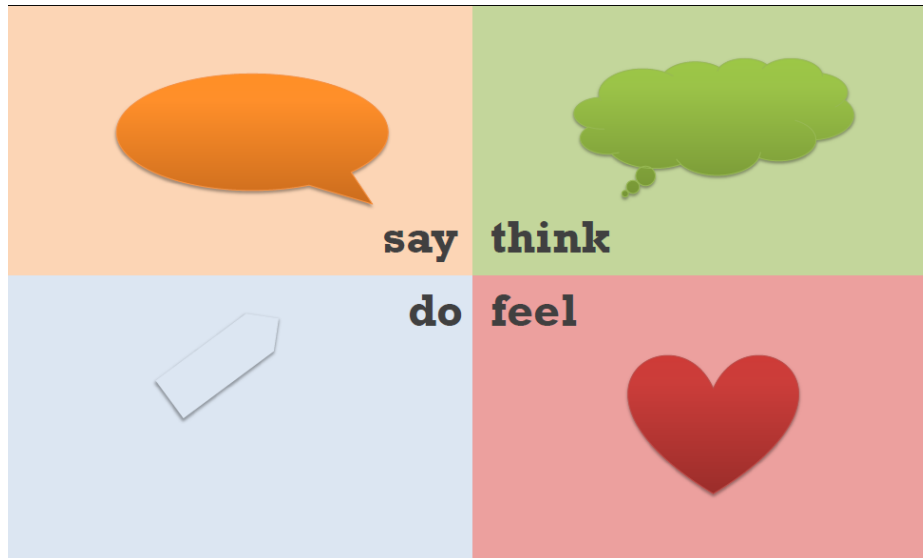Tim Brown on Design Thinking
CEO, IDEO

VIABILITY
(ORGANIZATION)

DESIGN THINKING

DESIRABILITY
(HUMAN)

INNOVATION

FEASIBILITY
(TECHNOLOGY)

http://www.ideo.com/about/

Strengthen CDIO with Design Thinking

HOW
to make it

I O

Design Thinking

WHAT
to make

HOW
to make it

C   D   I   O

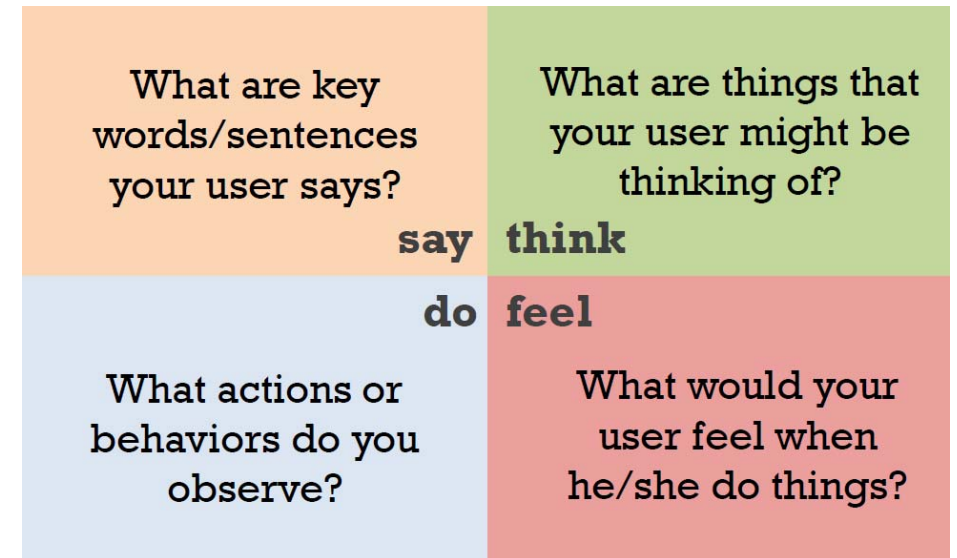
EMPATHIZE

DEFINE

IDEATE

PROTOTYPE

TEST

Empathy Studies

The goal is to identify **hidden customer needs** that customers don't even know they desire, or have **difficulty envisioning** due to lack of exposure to new technologies or being locked in the mindset of working with existing products and services.

Empathy Map

say	think
do	feel

Empathy Map

What are key words/sentences your user says?	What are things that your user might be thinking of?
say	**think**
do	**feel**
What actions or behaviors do you observe?	What would your user feel when he/she do things?

User Interview

- Gather information by asking:
  - What is your user like?
  - What is "purse" like for him/her?
  - What are his/her past experiences of using the purse
- Tips
  - Ask why
  - "tell me more"
  - Get as much information as possible
  - Write down all details of your user's answer

Exercise: Work in a group of 4
ให้ถามเพื่อนเกี่ยวกับกระเป๋าสตางค์

5 minutes interview your user

Define User Needs

An expat needs **a car** because **she has to commute.**

Define User Needs

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An expat in Thailand needs **to purchase a reliable second-hand car** because **she has a tight budget and won't stay for too long.**

Define User Needs

An expat needs **a car** because **she has to commute.**

An expat in Thailand needs **to purchase a reliable second-hand car** because **she has a tight budget and won't stay for too long.**

A European expat first-time in Thailand needs **to have a reliable and affordable way to commute** because **she has a tight budget and won't stay for too long.**

User Needs

_____ needs a better way to _____
user's name   *user's goal*

Because _____
surprising insight

Example:
Mike needs a better way to be motivated to eat vegetable because he does not want to go to see the doctor.
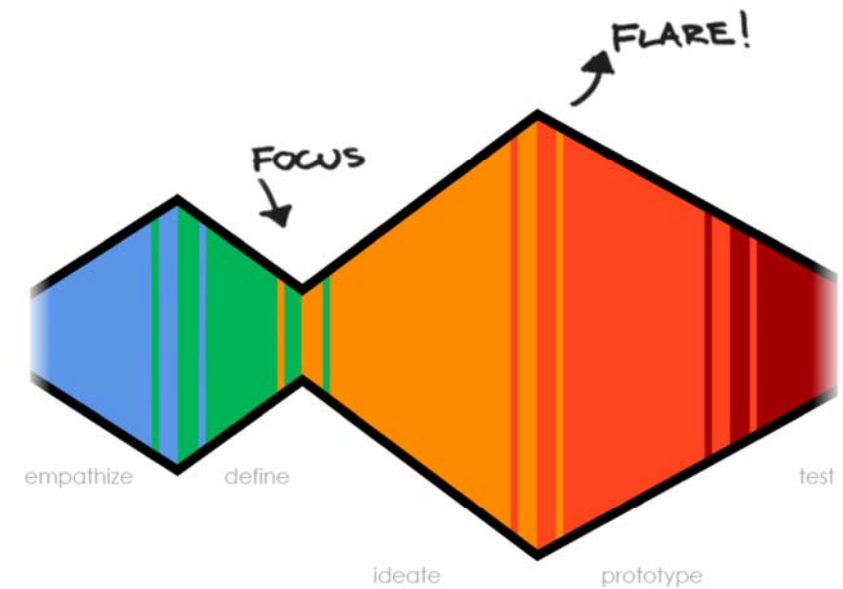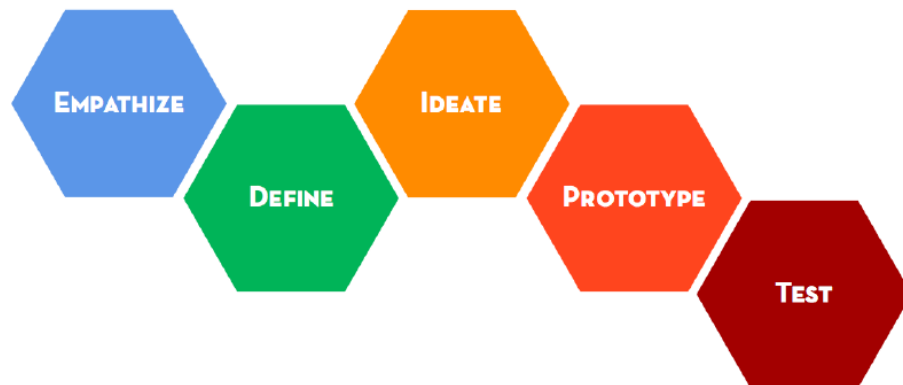

User Needs

Develop "Need Statement"

How can we help _____ to _____ ?
user's name   *user's goal*

Example:
•How can we help Mike to be motivated to eat vegetable?

BRAINSTORM RULES

one conversation at a time   encourage wild ideas

go for quantity   be visual

headline!   stay on topic

build on the ideas of others   defer judgment

Work Time

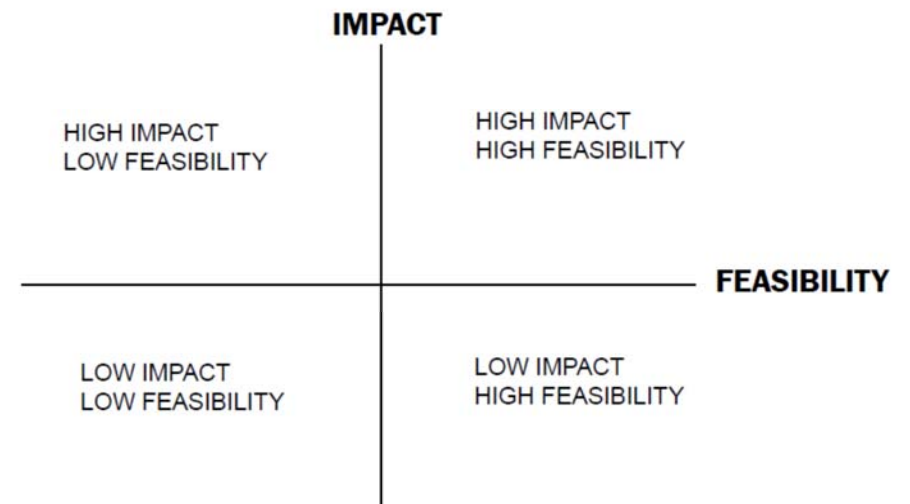**High Impact Brainstorming**

Round 1: 3 ideas (2 minutes)

Share to your teammates

Round 2: 3 more ideas (build up from your teammates)
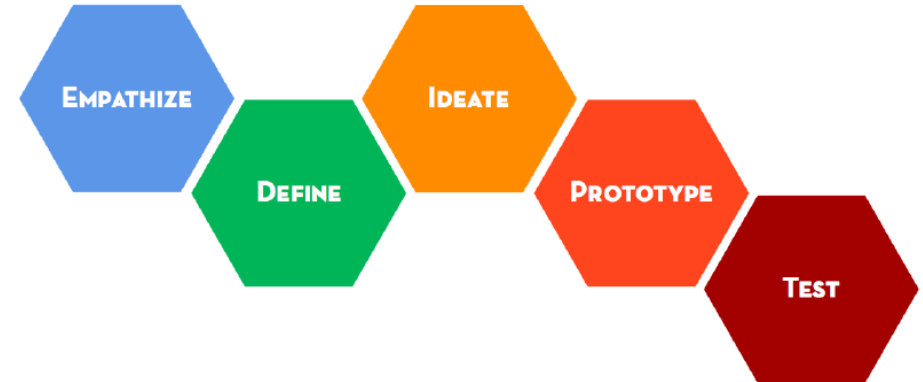

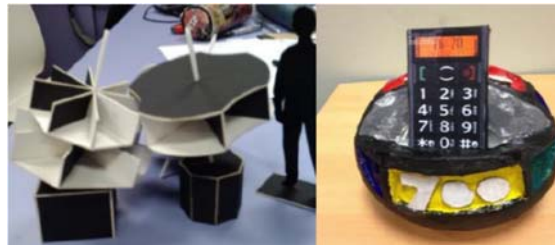## Select 3 best Concepts

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Selection Criteria – 2x2 matrix

IMPACT

HIGH IMPACT
LOW FEASIBILITY

HIGH IMPACT
HIGH FEASIBILITY

FEASIBILITY

LOW IMPACT
LOW FEASIBILITY

LOW IMPACT
HIGH FEASIBILITY

Title your concept

concept sketch

Prototype

Paper/Physical
Prototypes

Video

Role Play

Prototype

Storyboard

User Journey

Work Time
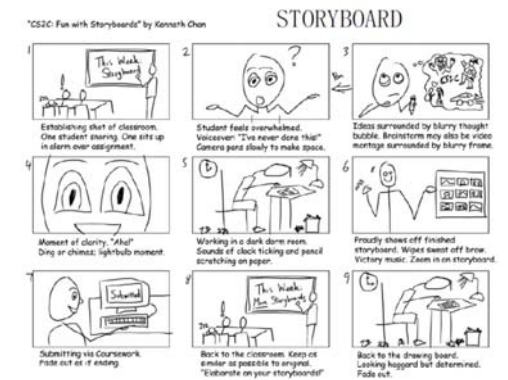
Make a Prototype
5 minutes

EMPATHIZE — DEFINE — IDEATE — PROTOTYPE — TEST
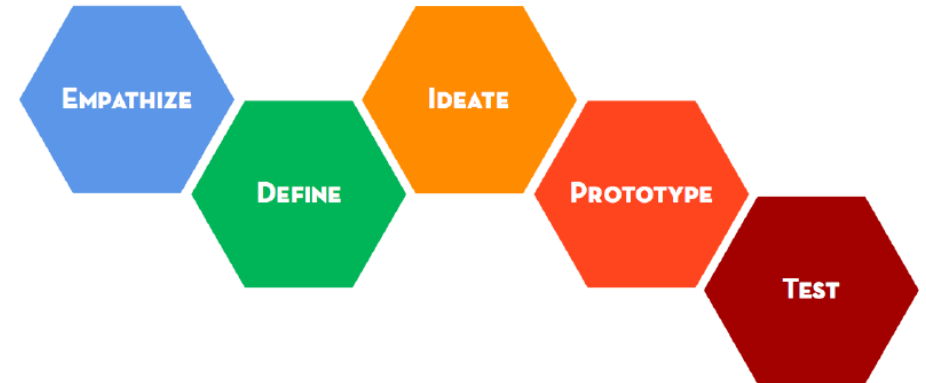
Co-Creation – User Feedback

BLAH BLAH BLAH

Creative

What do you like about it?

What do you don't like about it?

How can it be better?