# DESIGN THINKING

## *Workshop Guide*

Operational
Excellence Consulting
Empowering Sustainable Change

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# LEARNING OBJECTIVES

Acquire a deep understanding of the key concepts and principles of Design Thinking

Understand the mindsets, process, methods and tools in creative problem solving

Develop skills in applying Design Thinking mindsets and practices in problem solving

# CONTENTS

# 01 :

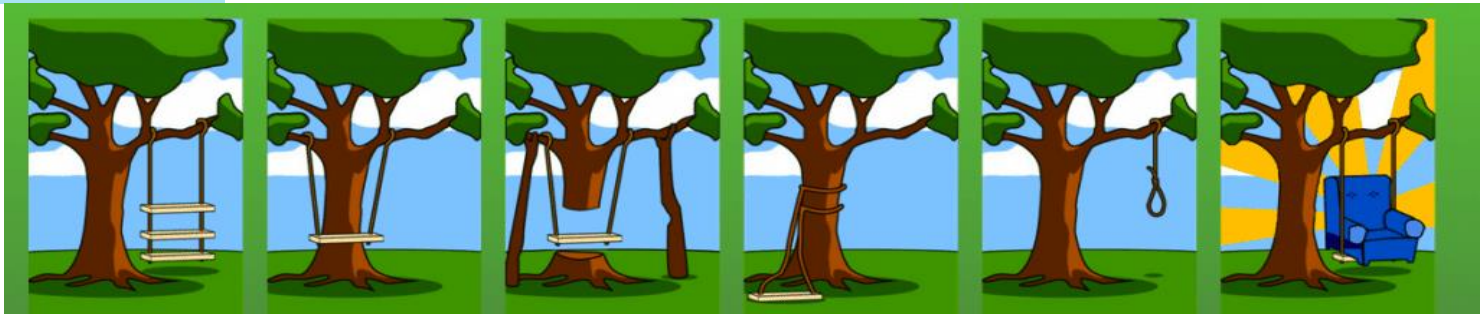
# KEY CONCEPTS & PRINCIPLES OF DESIGN THINKING

# PROBLEMS, PROBLEMS EVERYWHERE . . .

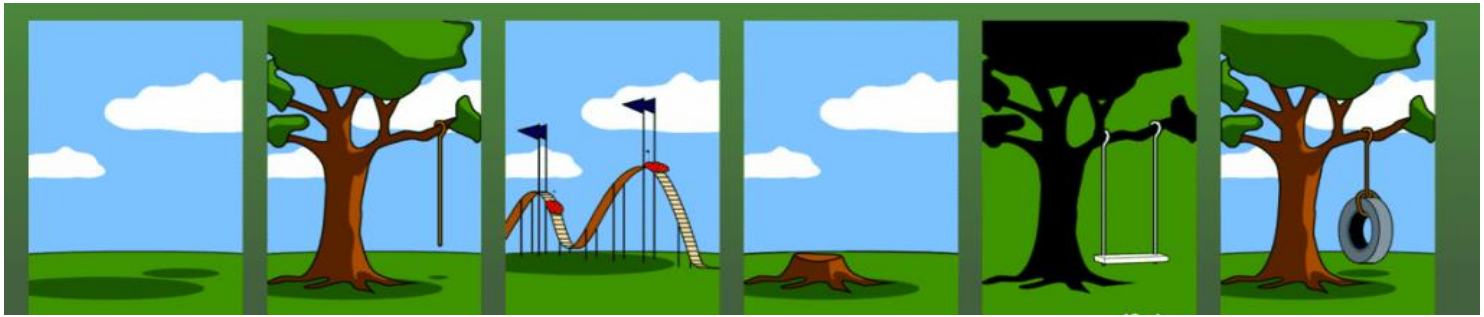
Problems that…

- Are poorly defined
- Lack information to define a solution
- Has strong impact on human needs
- Has changing context / situation

# THE DESIGNER PARADOX



How the customer explained it | How the project leader understood it | How the analyst designed it | How the programmer wrote it | What the beta testers received | How the business consultant described it



How the project was documented | What operations installed | How the customer was billed | How it was supported | What marketing advertised | What the customer really need

# AN EXAMPLE OF PROBLEM SOLVING: THE ENCUMBERED VS. THE FRESH MIND

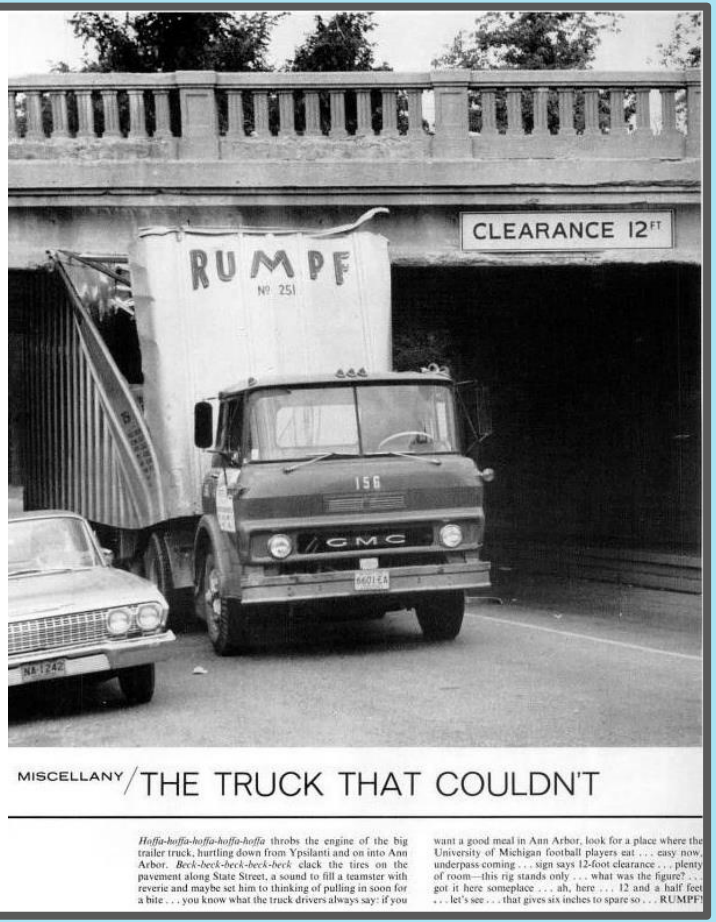
Some years ago, an incident occurred where a truck driver tried to pass under a low bridge. But he failed, and the truck was lodged firmly under the bridge. The driver was unable to continue driving through or reverse out.

The story goes that as the truck became stuck, it caused massive traffic problems, which resulted in emergency personnel, engineers, firefighters and truck drivers gathering to devise and negotiate various solutions for dislodging the trapped vehicle.

Emergency workers were debating whether to dismantle parts of the truck or chip away at parts of the bridge. Each spoke of a solution which fitted within his or her respective level of expertise.

A boy walking by and witnessing the intense debate looked at the truck, at the bridge, then looked at the road and said nonchalantly, "Why not just let the air out of the tires?" to the absolute amazement of all the specialists and experts trying to unpick the problem.

When the solution was tested, the truck was able to drive free with ease, having suffered only the damage caused by its initial attempt to pass underneath the bridge. The story symbolizes the struggles we face where oftentimes the most obvious solutions are the ones hardest to come by because of the self-imposed constraints we work within.



# WHAT IS DESIGN THINKING?

# DESIGN THINKING IS ‘OUTSIDE THE BOX’ THINKING

**Design thinking is an approach for *creative* problem solving.**

# DESIGN THINKING – A DEFINITION

> “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, IDEO**

Source: IDEO

# WHAT IS DESIGN THINKING?

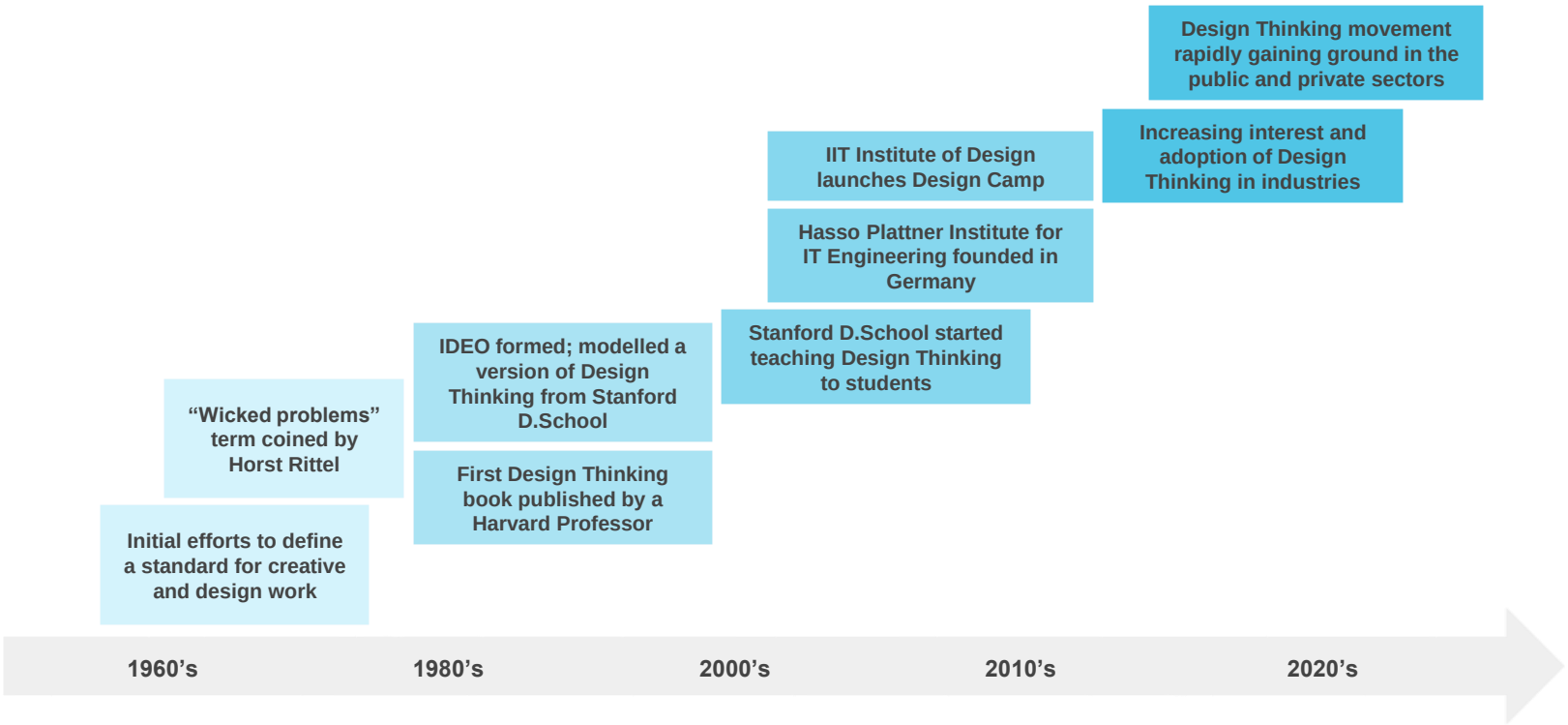
Design thinking takes a **human-centered** approach to problem solving

Helps us to get a deep understanding of customers' **unmet needs and wants**

It encourages creative consideration of a wide array of **innovative solutions**

It is as much a **mindset** as a **process**

# HISTORY OF DESIGN THINKING



# VIDEO: WHAT IS HUMAN-CENTERED DESIGN?

**https://www.youtube.com/watch?v=NBu1kkSCHfs**
(2 mins)

Video Credit: designkit.org

# THE THREE LENSES OF HUMAN-CENTERED DESIGN

## DESIRABILITY

What do people desire?

## FEASIBILITY

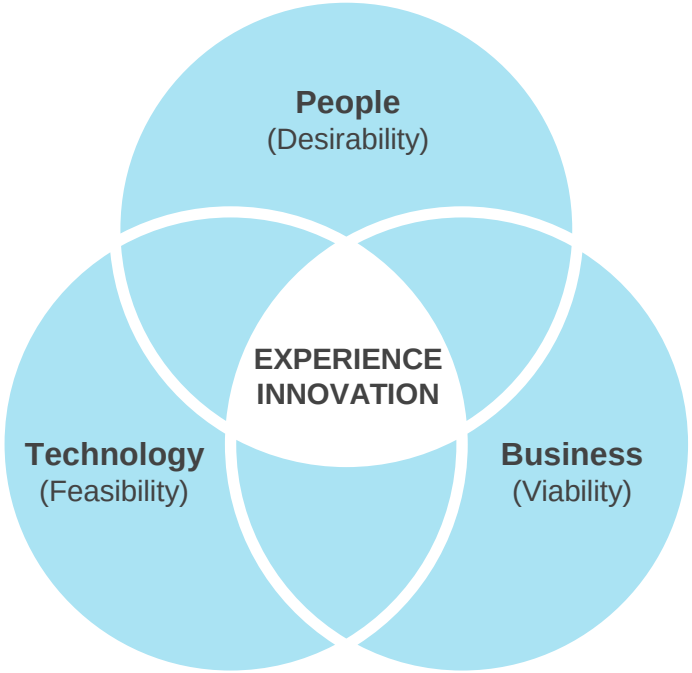
What is technically and organizationally feasible?

## VIABILITY

What can be financially viable?

Source: Adapted from IDEO

# THE 3 LENSES OF HUMAN-CENTERED DESIGN PROVIDES A HOLISTIC APPROACH FOR EXPERIENCE INNOVATION




Source: IDEO

Design must reflect the practical and aesthetic in business but above all… good design must primarily serve people.”

**THOMAS J. WATSON**

# THE MINDSET OF A TRADITIONAL THINKER

# TRADITIONAL THINKING vs. DESIGN THINKING

| TRADITIONAL THINKING | VS | DESIGN THINKING |
|---|---|---|
| Lots of reports and documentation | | Show don't tell |
| Scared of failing | | Learn from failure |
| Certainty is key | | Embrace ambiguity |
| Focus on solution | | Focus on human values |
| Get it perfect the first time | | Iterate |
| Talk about your idea | | Make your idea |

# DESIGN THINKING COMBINES CREATIVE & ANALYTICAL THINKING

## LEFT BRAIN

Analytical
Rational
Objective
Present & Past
Facts
Order/pattern
Planned



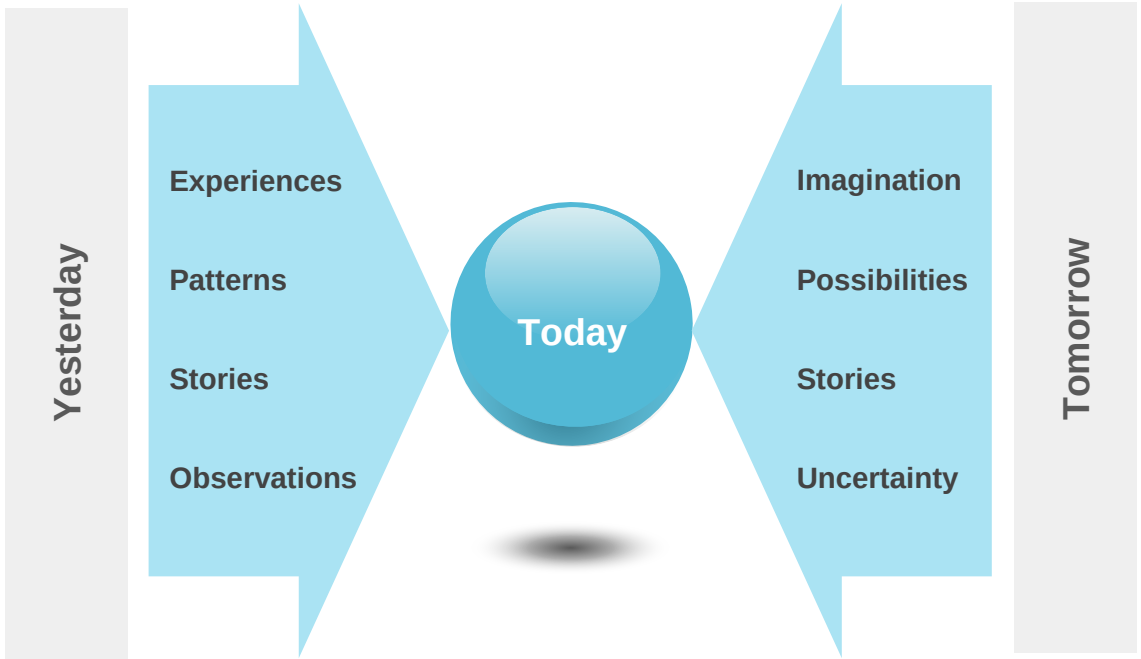
## RIGHT BRAIN

Creative
Holistic
Subjective
Present & Future
Feelings
Spatial
Spontaneous

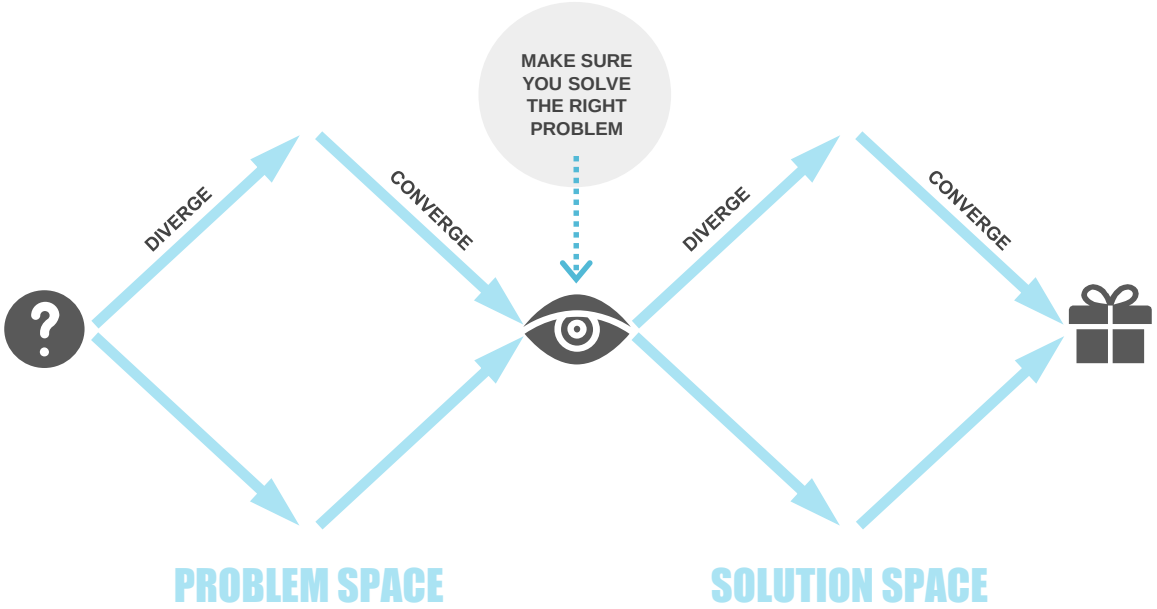
***Design Thinking uses both sides of the brain to solve problems.***

Source: Adapted from Strategyzer, 2010

# DESIGN THINKING USES BOTH DEDUCTIVE & ABDUCTIVE APPROACHES TO SOLVE PROBLEMS



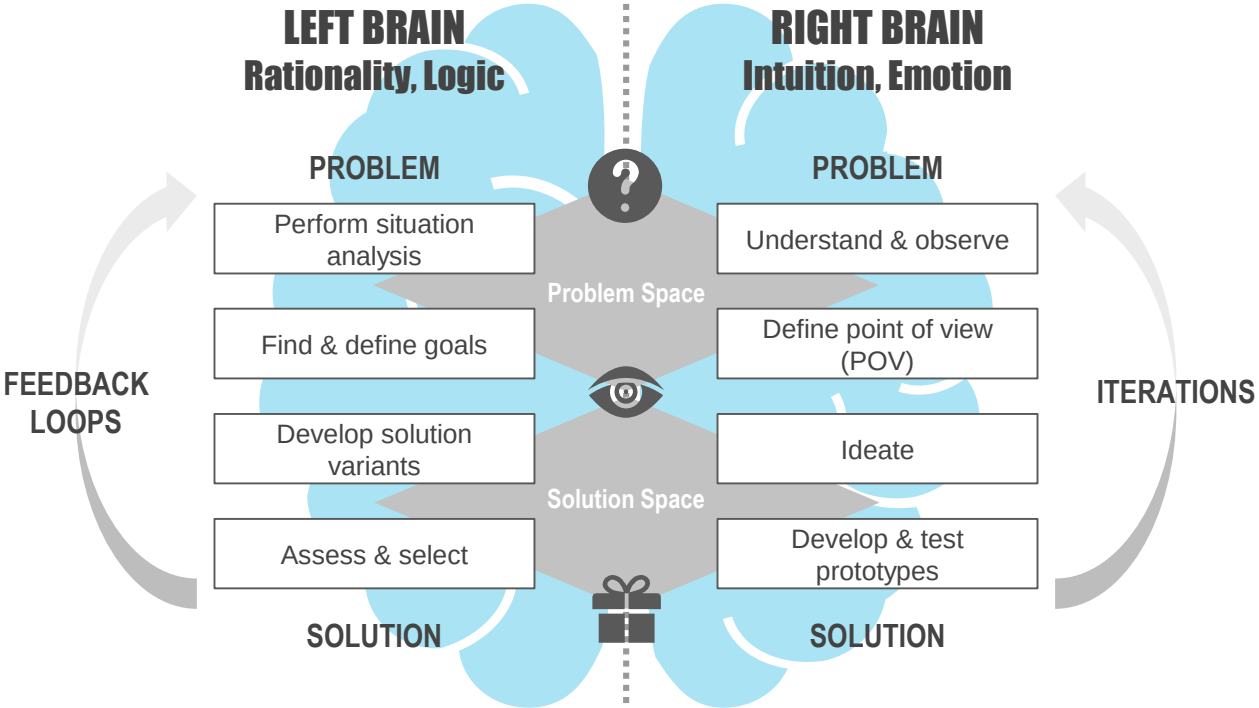
# DIVERGENT & CONVERGENT THINKING




***Diverge to create choices, converge to make choices.***

Source: Adapted from Lewrick et al., 2018

# TWO APPROACHES TO PROBLEM SOLVING




Source: Adapted from Lewrick et al., 2018

# ACTIVITY: UNDERSTANDING THE NEED FOR DESIGN THINKING

1. In your respective groups, discuss the following:

    a) What are the key innovations that inspire you? How could you make some things better?

    b) What are some human problems that you face everyday? How would you solve them?

2. What will design thinking help you to compete in?

3. List your ideas on the flip chart.

4. Present your findings to the class.


**Time allowed: 10 mins**

# WHAT IS UNIQUE ABOUT DESIGN THINKING?

## Human-centered

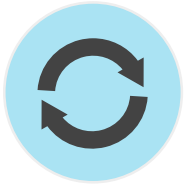
Discover people’s real needs and wants. Be able to gain deep insights of their motivations and share the feelings of others.

## Highly-creative

Look at situations differently. Push past obvious solutions and existing alternatives to get to breakthrough ideas.

## Collaborative

Work as a team to look at the problem holistically and implement solutions to improve people's experience.



## Iterative

Repeat each phase backwards and forwards and arrive at each decision or desired result, after rounds of learning and discovery.

## Hands-on

Ideas are made tangible through prototyping. Build rough or lo-fi prototypes to learn how to make ideas better.

## Show, don’t tell

Enable the user to experience the story through action, words, thoughts, senses and feelings rather than pure description.

# WHAT DESIGN THINKING IS NOT

Only for the “creative” people or product designers

A narrow equation to aesthetics and craft

Just a brainstorming session

A “one-day” process where problems can be solved in 24 hours

An approach to replace analytical problem solving

A silver bullet for all types of problems

# WHAT ARE THE BENEFITS OF DESIGN THINKING?

Create better customer and employee experiences

Deepen and widen customer relationships

Improve customer retention (loyalty)

Reduce inefficiencies

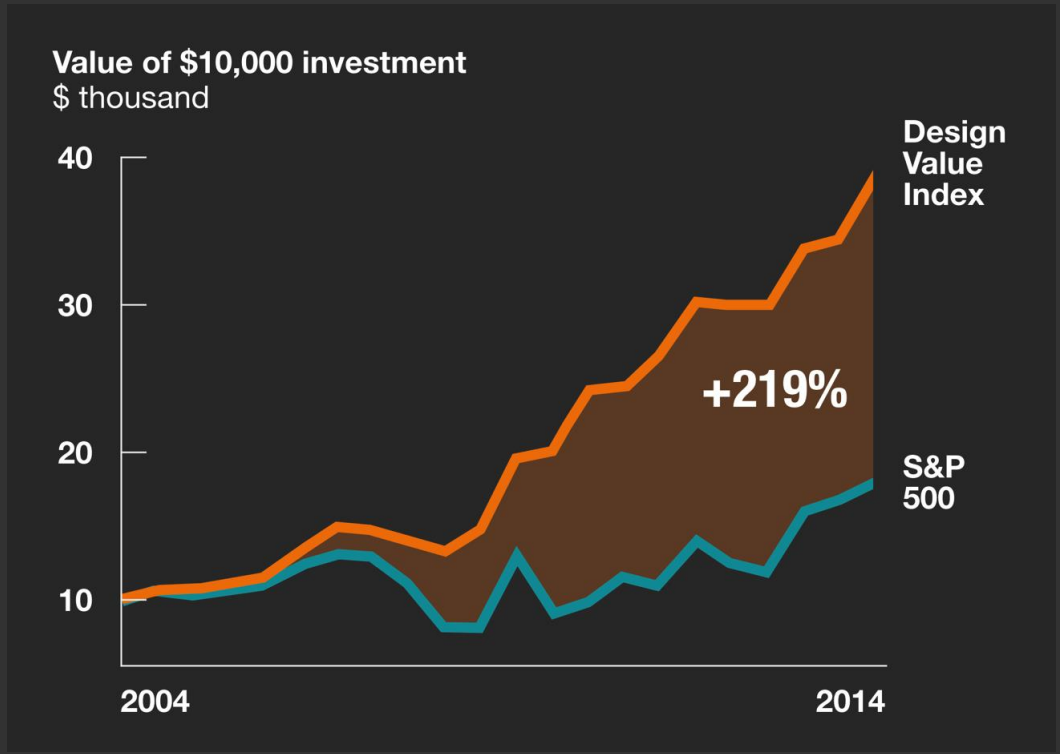
Design new business models

Increase value to society

# THE IMPACT OF DESIGN THINKING

According to the Design Management Institute's Design Value Index, for example, design-driven companies have maintained a significant stock-market advantage, outperforming the S&P 500 by an extraordinary 219 percent over the past ten years.

Design-centric companies include: Apple, Starbucks, Nike, Procter & Gamble, Walt Disney, Starwood, Whirlpool, Coca-Cola, etc.




Source: Design Management Institute

# WHO'S DOING IT?

| | | |
|---|---|---|
| Apple | Starbucks | Ikea |
| Google | Procter & Gamble | GE |
| IDEO | AirBnB | Nike |
| Tesla | Nespresso | Samsung |
| Uber | Singapore Airlines | SAP |

# APPLICATIONS OF DESIGN THINKING

P&G

Launched Tide PODS so customers don't have to measure.

***Estimated earning of $131 million in 2012.***

Retail stores designed around activities, not products.

***Most profitable retail store per square foot.***

Adobe

Changed product-based model to a cloud-based subscription model.

***Creative Cloud software revenue increased by 44% since 2013.***

# SUCCESS STORY 1 – STARBUCKS

***Localization of Starbucks Stores***

***SOLUTION***


Hyper-paced over-expansion; “Brand-y” image; Customers see the same stores everywhere they go.

**Through observing and engaging in their communities, designers learned…**

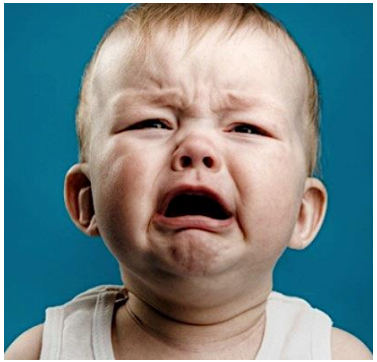
Customers dislike the chain’s cookie-cutter feel and lack of local relevance.

**Stores are designed with a *“global reach and local relevance”*, reflecting the neighborhood and its architectural history; Beverages are offered based on local preferences.**

Source: Starbucks

# SUCCESS STORY 2 – GE HEALTHCARE

***MRI for Children***



MRI scans require a person not to move, but little kids cry and move around.

**By immersing in the experience of a kid they learned that …**

… for a kid an MRI room must be very stressful and a frightening experience.

***SOLUTION***

**Kid-friendly MRI. Simple commands to get the scan done accurately become part of an adventure.**

Source: GE Healthcare

# SUCCESS STORY 3 – NIKE

***SB Line of Shoes***

Nike struggled to become a prominent brand amongst the skateboarding community.

**By engaging skateboarders in the design process and having conversations…**

…Nike gained a better understanding of the needs and wants of the skateboarding community.

***SOLUTION***

**Released its Nike SB line of shoes. Nike has experienced tremendous success within the skateboarding culture.**

Source: Nike

# AREAS WHERE DESIGN THINKING CAN APPLY

- Product Design
- Business Design
- Service & Experience Design
- Leadership
- Organizational Change

# VIDEO: AN APPLICATION OF DESIGN THINKING

***Nordstrom Innovation Lab: Sunglass iPad App Case Study*** *(7 mins)*

https://www.youtube.com/watch?v=2NFH3VC6LNs

Video Credit: Nordstrom

# VIDEO: CASE STUDY

## DESIGN THINKING & INNOVATION AT APPLE

(7 mins)

https://www.youtube.com/watch?v=ir3E-TEUk48&t=81s

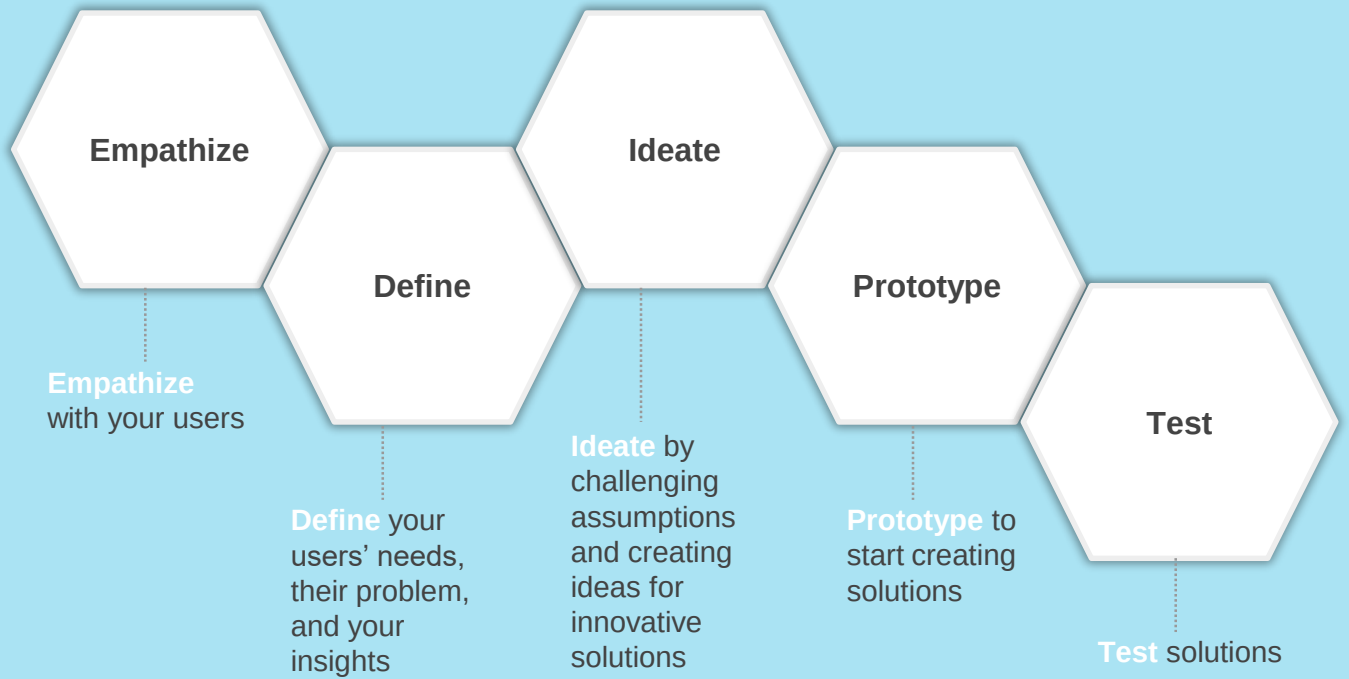
Video Credit: Wei Li

# ACTIVITY: BRAINSTORMING OF PROBLEMS

1. In your respective groups, brainstorm problems that occur in:
    a) **Society** (e.g. overcrowding in trains)
    b) **Business & Services** (e.g. bad online experience in re-contracting mobile/broadband service)
    c) **Processes & Operations** (e.g. backlog issue, excess inventory)
    d) **Situations** (e.g. customer complaints, natural disasters)
2. List your ideas on the flip chart.
3. Present your findings to the class.


**Time allowed: 10 mins**

# FRAMEWORK OF DESIGN THINKING




Source: Based on Stanford d.school

# UNDERSTANDING THE FRAMEWORK OF DESIGN THINKING

**DESIGN**

means to

*“mark out and take action”*

+

**THINKING**

means to

*“ponder and consider”*

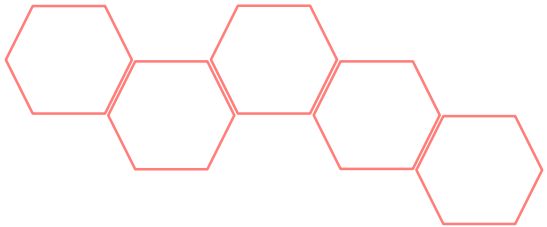
***Design thinking is the proper attitude and frame of mind, along with the right series of actions, in order to solve a problem.***

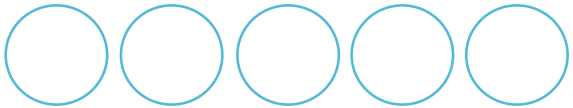
# UNDERSTANDING THE FRAMEWORK OF DESIGN THINKING

DESIGN + THINKING

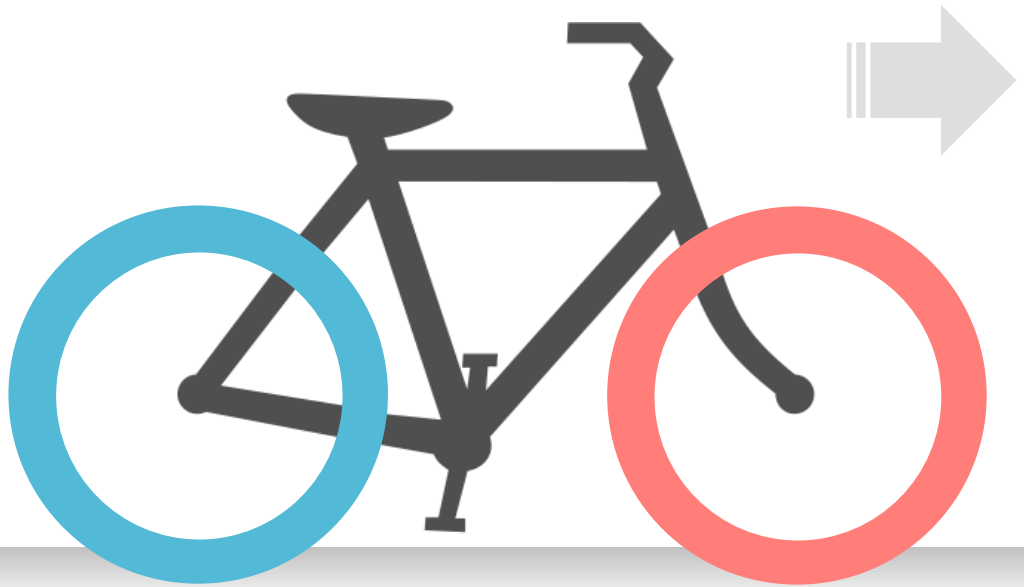
Action Plan

Mindsets





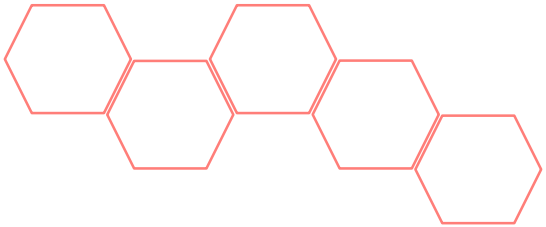
# UNDERSTANDING THE FRAMEWORK OF DESIGN THINKING



**Mindsets** **Action Plan**

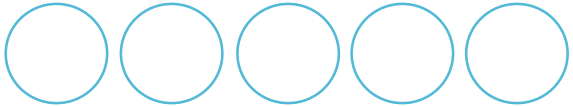
# UNDERSTANDING THE FRAMEWORK OF DESIGN THINKING

## Action Plan



A **design action plan** is a series of action phases that execute the design thinking process

## Mindsets



A **mindset** is a set of thinking traits or behaviors that runs the design thinking process consistently and effectively

***The Action Plan and Mindsets are required to run together!***

# DESIGN THINKING CHECKLIST – TOOLS & MATERIALS

| | |
|---|---|
| 1 | Space for collaboration |
| 2 | Paper |
| 3 | Writing tools |
| 4 | Cutting and sticking tools |
| 5 | Sketchbook |
| 6 | Post-its |
| 7 | Cardboard |
| 8 | Whiteboard / Wall / Pin board |
| 9 | Cards |
| 10 | Materials for prototyping |

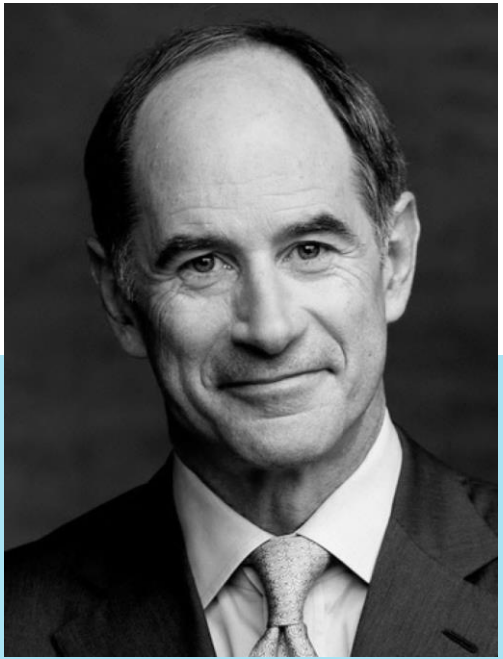
# DESIRED TRAITS OF A DESIGN THINKER

- Able to step into the shoes of your customers
- Have empathy on users and stakeholders
- Like to challenge the status quo rebelliously
- Able to ask the right questions - even to your boss
- Draw and sketch instead of typing an email
- Like to collaborate in multi-disciplinary meetings instead of working in silo
- Able to look at the big picture and think holistically
- Generate many new ideas and not afraid to share
- Find and reiterate alternatives to approach your desired goals
- Willing to fail early and often

Business people don’t just need to understand designers better; they need to become designers.”

**ROGER MARTIN**

DEAN, ROTMAN SCHOOL OF MANAGEMENT

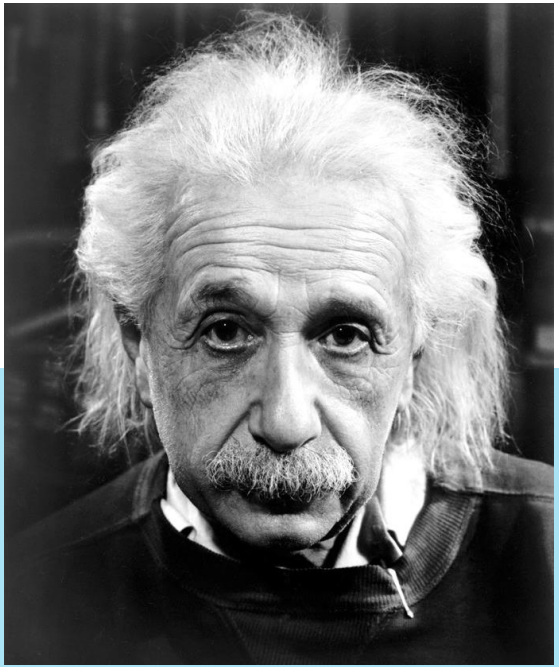


# 02 :

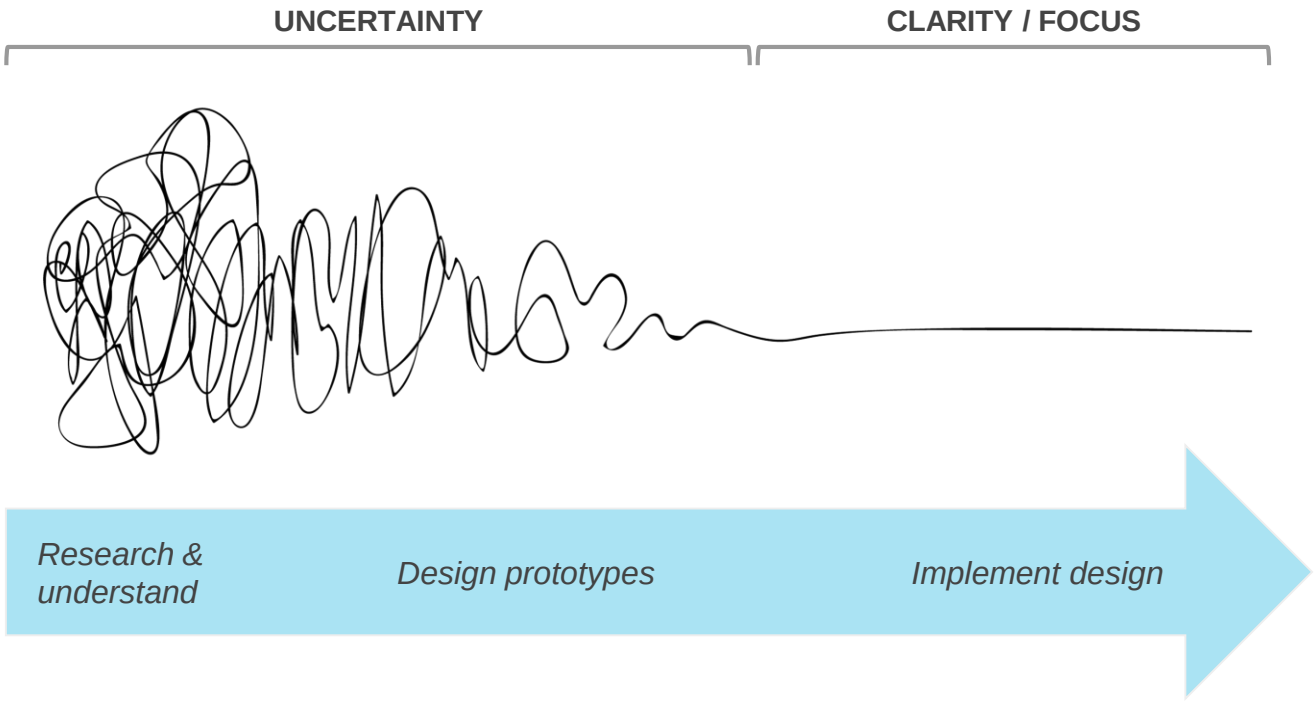
# DESIGN THINKING MINDSETS

Insanity is doing the same thing over and over again and expecting different results.”

**ALBERT EINSTEIN**



# THE DESIGN THINKING ATTITUDE




Source: Adapted from Damien Newman

# DESIGN THINKING REQUIRES CERTAIN MINDSETS TO ENSURE SUCCESSFUL APPLICATION

- The **answer won't be clear from the start** and even though this is not comfortable it allows for unexpected solutions
- It is **okay to fail** - failure is an incredibly powerful tool when it comes to learning
- **Stop talking and start making** - Design Thinking relies on the power of tangibility
- **Human Focus** - the people you are looking to design for are ultimately your path to innovative solutions
- By **learning and iterating**, there is a greater chance of generating successful solutions

# THE 5 MINDSETS OF DESIGN THINKING

**Think users first**

**Ask the right questions**

**Believe you can draw**

**Commit to explore**

**Prototype to test**

***Without the proper mindsets, the action plan is just a theory.***

# MINDSET 1 – THINK USERS FIRST

**Requirement:**

**Develop your ability to keep thinking users first. A design thinker in every project will constantly make sure that the team will put the end users, or the customer, first in all design decisions.**

**Traits to follow:**

- Constantly ask about what customers/end users will think
- Check back all design decisions with the customers/end users
- Step into the shoes of the customers
- Be constantly engaged with the end users
- Be proactive in making positive refinements for the benefit of the customers
- Focus your attention and efforts on solving customers' problems, rather than on business objectives

**Traits to avoid:**

- Stuck in your office cubicle and not interacting with a single customer/end user
- Ignore customer feedback
- Blindly following what the company told you to do, and not checking with the end user/customer first
- Focus on business objectives more than solving customer's problems
- Think that the customer can be trained

# MINDSET 2 – ASK THE RIGHT QUESTIONS

**Requirement:**

**Develop your ability to ask the right questions. In every project, a design thinker will need to ask the right questions first, to help the stakeholders and team-mates understand and define project objectives well. Asking the right questions to the end users will help to uncover underlying issues or problems to solve.**

**Traits to follow:**

- Like to challenge the status quo and the “normal” way of doing things
- Able to ask the right questions - even to your boss
- Be curious and find out how things work
- Always find out the underlying motivation beneath the reason

**Traits to avoid:**

- Following your boss’s decision blindly without asking questions
- Conform to constraints, legacy and red tape without any discussion
- Agree to everything that others say
- Not finding out why users/customers say what they say

# WHY DO YOU NEED TO ASK THE RIGHT QUESTIONS?

- Empathize your end-users and stakeholders
- Connect and collaborate with more aligned objectives
- Gather better information
- Examine and define the problem more effectively
- Increase your persuasion and influence
- Improve your negotiation skills
- Reduce potential for mistakes or miscommunication
- Discover potential issues and opportunities

# WHAT ARE THE DIFFERENT TYPE OF QUESTIONS?

**Opening questions**

**Navigating questions**

**Examining questions**

**Experimenting questions**

**Closing questions**

***They are most commonly applied during the DEFINE PHASE of the design thinking process.***

# OPENING QUESTIONS

- **Purpose:** to understand the context and options, assess the situation, provoke thought and possibilities and jumpstart the brain

- **Examples:**
  - What is the problem we are trying to solve?
  - What are we looking at?
  - What kind of things do we want to explore?
  - What are the problem areas in this?

# NAVIGATING QUESTIONS

- **Purpose:**
  - To assess or adjust the course of the meeting while the discussion is ongoing
  - It helps to assure and bring the stakeholders together

- **Examples:**
  - Are we on the right track?
  - Did I understand this correctly?
  - Are we aligned on all this?
  - Does anyone have any questions?

# NAVIGATING QUESTIONS

- **Purpose:**
  - Examining questions challenges and focus into details of the project
  - It helps to facilitate and define the project deeper by quantifying and qualifying it

- **Examples:**
  - What is it made of?
  - How does it work?
  - How much of it are we selling at the moment?
  - What happens after that?

# EXPERIMENTING QUESTIONS

- **Purpose:**
  - Unlike examining questions, experimenting questions are more divergent in nature
  - It invokes the imagination and possibilities
  - These questions are especially useful during **ideation** sessions

- **Examples:**
  - What if we did this using plan B?
  - What else could we use this?
  - What is missing over here?
  - How would we handle if we are operating like a school?

# CLOSING QUESTIONS

- **Purpose:**
  - Closing questions puts the tire on the road and brings the project into a pragmatic and realistic state
  - These are crucial set of questions as it defines the action plan and steps to take

- **Examples:**
  - How can we prioritize these ideas?
  - What are the action steps?
  - Who is going to do what?
  - What should we see in the next 2 weeks?
  - Which one will bring us forward?

# WHO SHOULD YOU ASK QUESTIONS?

Customers

Stakeholders

Management

Vendors

# MINDSET 3 – BELIEVE YOU CAN DRAW

**Requirement:**

**Develop a belief in the benefits of drawing. In every project, a design thinker will need to believe that he/she can draw, so that he/she can inspire others to do the same. You don't have to be Picasso! You do not need to draw well to be a design thinker!**

**You just need to visualize correctly so that you can convey your message and story well. Drawing is the language of a design thinker.**

| Traits to follow: | Traits to avoid: |
| --- | --- |
| ▪ Draw or sketch instead of typing an email | ▪ Not picking up a pen to draw |
| ▪ Able to look at the big picture and think holistically | ▪ Afraid that people will criticize your drawing |
| ▪ Visualize discussions on the board during meetings - Facilitate and encourage others to draw | |

# WHY SHOULD WE COMMUNICATE BY DRAWING?

- Drawings and pictures allow people to agree on what they see, and not what they imagine
- Drawing saves time by replacing words to explain a particular situation

# WHAT IS THE VALUE OF DRAWING?

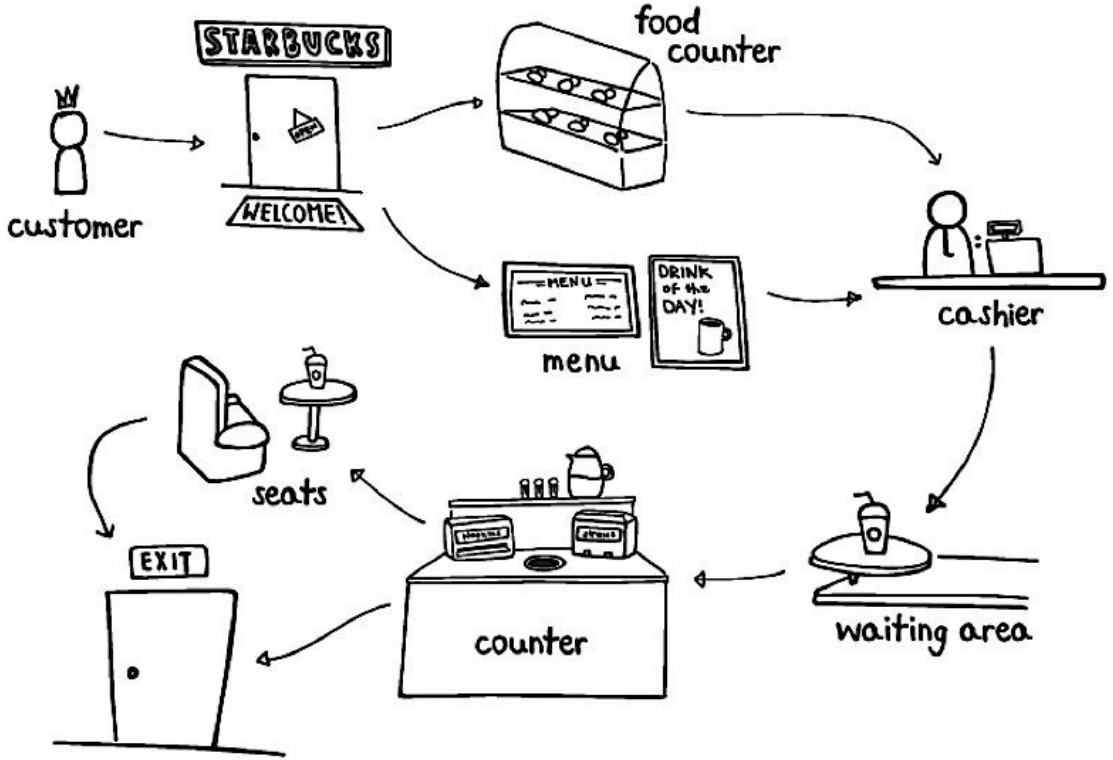
Imagine better ideas

Figure things out

Explain and give instructions

Helps to remember

# LEARN HOW TO DRAW A JOURNEY OR A PROCESS



# LEARN HOW TO DRAW YOUR PROBLEM

***Instead of expressing the problem in textual format…***

THE PROBLEM:

CREDIT CARD SALES HAVE BEEN DROPPING

- lack of motivation in sales staff
- increasing competition
- lack of awareness
- unattractive card benefits
- lack of presence in the online space

***We can visualize the problem by drawing it out.***

# MINDSET 4 – COMMIT TO EXPLORE

**Requirement:**

**Develop the ability to explore. In every project, a design thinker will need to commit to explore and think out of the box, look for solutions that are usually not thought of before.**

**To explore all possibilities is the core foundation of a design thinker, and without it there is no divergence and no basis for innovation and creativity.**

**Traits to follow:**

- Always realize that there is more than one solution to a problem
- Create many ideas and concepts – it doesn't matter whether they are feasible
- Constantly brainstorm ideas with teammates
- Involve in co-creation and collaborative activities
- Constantly learn from the mistakes and experiences of others
- Receive inspiration like a sponge
- Share ideas with everyone

**Traits to avoid:**

- Following your boss's decision blindly without asking questions
- Conform to constraints, legacy and red tape without any discussion
- Agree to everything that others say
- Ignore feedback from the users/customers

# MINDSET 5 – PROTOTYPE TO TEST

**Requirement:**

**Cultivate the hands to test out prototypes, so don't be afraid to get them dirty! A design thinker will need to build more and talk less in every project – always see the need to visualize and build to convey concepts and solutions in a quick and decisive way.**

**Traits to follow:**

- Always have tools ready on your desk or meeting tables to build stuff
- Think of everything as an experiment
- Believe in testing solutions quickly and cheaply
- Refrain from looking into details when prototyping
- Believe in quick iteration and building from user feedback
- Be mentally prepared that not everyone will agree with your idea

**Traits to avoid:**

- Spending too much time on perfecting a solution
- Afraid of failing the first time
- Refuse to ask for feedback on your ideas
- Spending money to launch a solution immediately without testing
- Leaving everything to the last minute to test
- Too biased and protective of your ideas

# SUMMARY OF THE 5 THINKING MINDSETS

**Think users first**

**Ask the right questions**

**Believe you can draw**

**Commit to explore**

**Prototype to test**

***The secret of a successful design thinker is actually the mindsets.***

# SUMMARY OF THE 5 THINKING MINDSETS

| Mindsets: | Need to cultivate: | Traits to follow: | Trait to avoid: |
|---|---|---|---|
| **1. Think Users First** | ▪ Ability to understand and put user's needs above every thing else when designing | ▪ Step into the shoes of your customers<br>▪ Have empathy on users and stakeholders | ▪ Think that you know best about your customer and putting business needs first |
| **2. Ask the Right Questions** | ▪ Ability to ask the questions to uncover deep lying issues of the project | ▪ Like to challenge the status quo rebelliously<br>▪ Able to ask the right questions, even to your superiors | ▪ Follow your management's decision and conform to red tapes |
| **3. Believe You Can Draw** | ▪ Ability to believe and be confident in drawing and facilitating your ideas to your audience | ▪ Draw and sketch instead of typing an email<br>▪ Like to collaborate in multi-disciplinary meetings instead of working in silo | ▪ Afraid of people criticizing your drawing |
| **4. Commit to Ideate** | ▪ Ability to commit in always exploring and searching for innovative ideas to solve a problem | ▪ Look at the big picture and work holistically<br>▪ Generate many new ideas and not afraid to share | ▪ Thinking that one solution is enough |
| **5. Prototype to Test** | ▪ Ability to work on creating tangible ideas to test with users by prototyping | ▪ Find and reiterate alternatives to approach your desired goals<br>▪ Willing to fail early and often | ▪ Launch a solution without prototyping and testing |

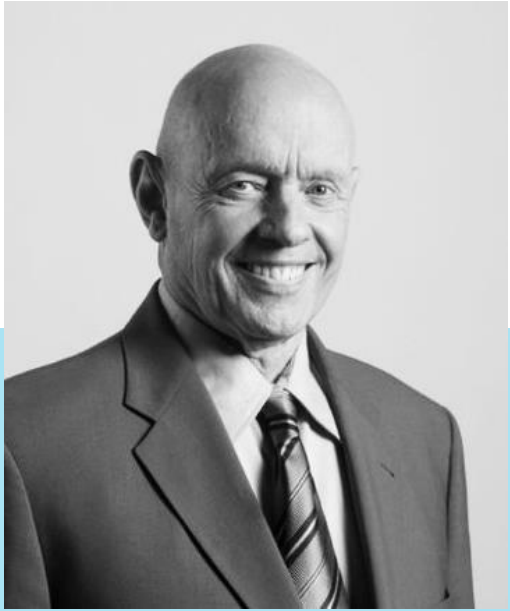
# ACTIVITY: 5 THINKING MINDSETS


**Time allowed:**
**5 mins**

1. In your respective groups, identify ***two*** mindsets that your team find most enlightening. Why?
2. What benefits would the adoption of these thinking mindsets bring to your team and/or the organization?
3. List your ideas on the flip chart.
4. Present your findings to the class.

If you want small changes in life, work on your attitude. If you want big and primary changes, work on your paradigm.”

**STEPHEN COVEY**

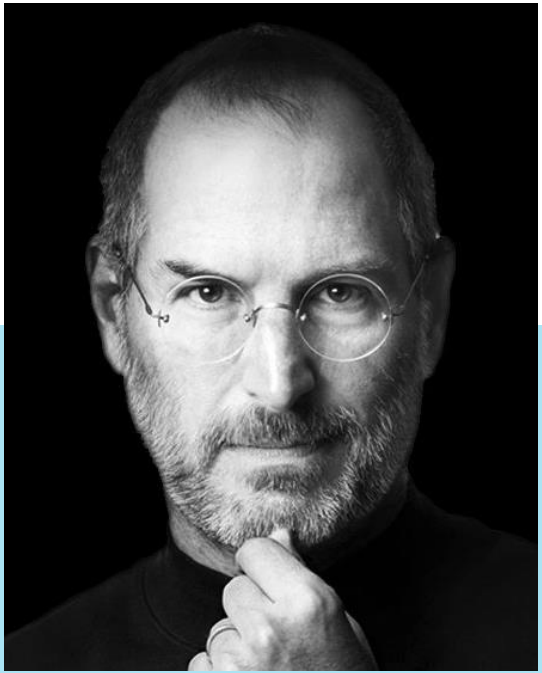


# 03 :

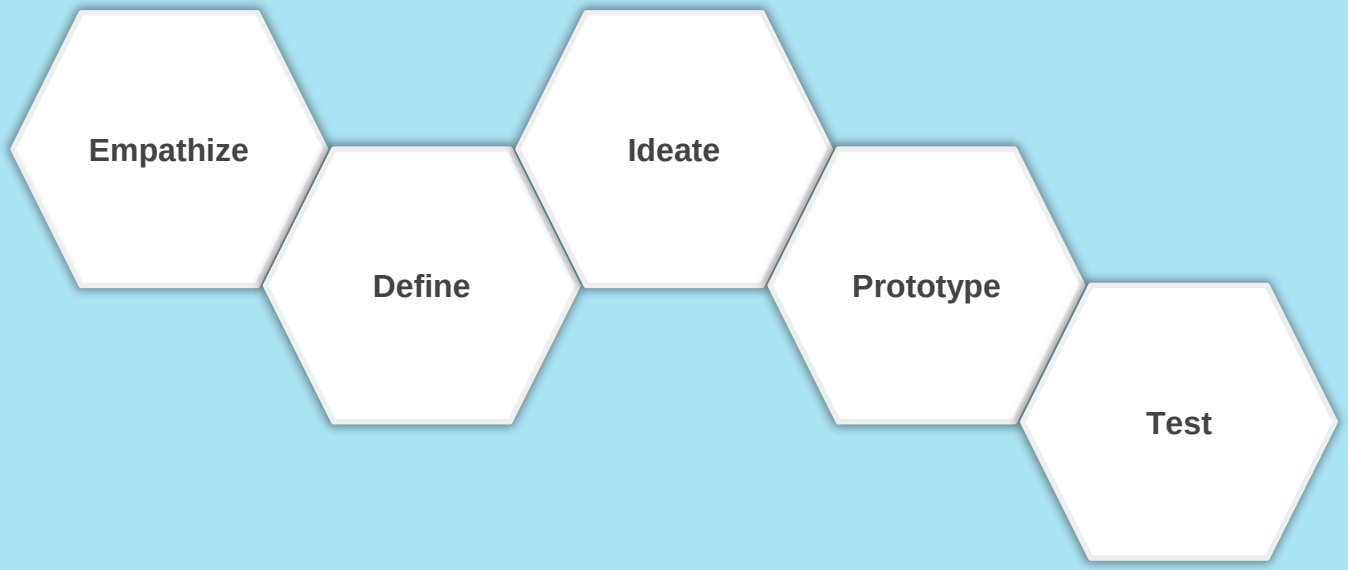
# DESIGN THINKING PROCESS, METHODS & TOOLS

Design is not what it looks like or feels like. Design is how it works.”

**STEVE JOBS**



# THE DESIGN THINKING PROCESS CONSISTS OF 5 ACTION PHASES



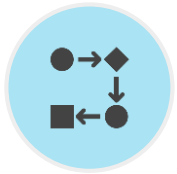

Source: Based on Stanford d.school

# 5 ACTION PHASES OF DESIGN THINKING

| | DESCRIPTION |
|---|---|
| Empathize | ▪ Learning about the audience for whom you are designing |
| Define | ▪ Creating your Point of View (POV) based on your insights from the empathy stage |
| Ideate | ▪ Brainstorming and coming up with creative solutions |
| Prototype | ▪ Building a representation of one or more of your ideas to show to others |
| Test | ▪ Returning to your original user group and testing your ideas for feedback |

# CHARACTERISTICS OF THE DESIGN ACTION PLAN

It is not just a brainstorming session or a “one-day” process



It is an iterative process

It contains phases of both divergent and convergent thinking

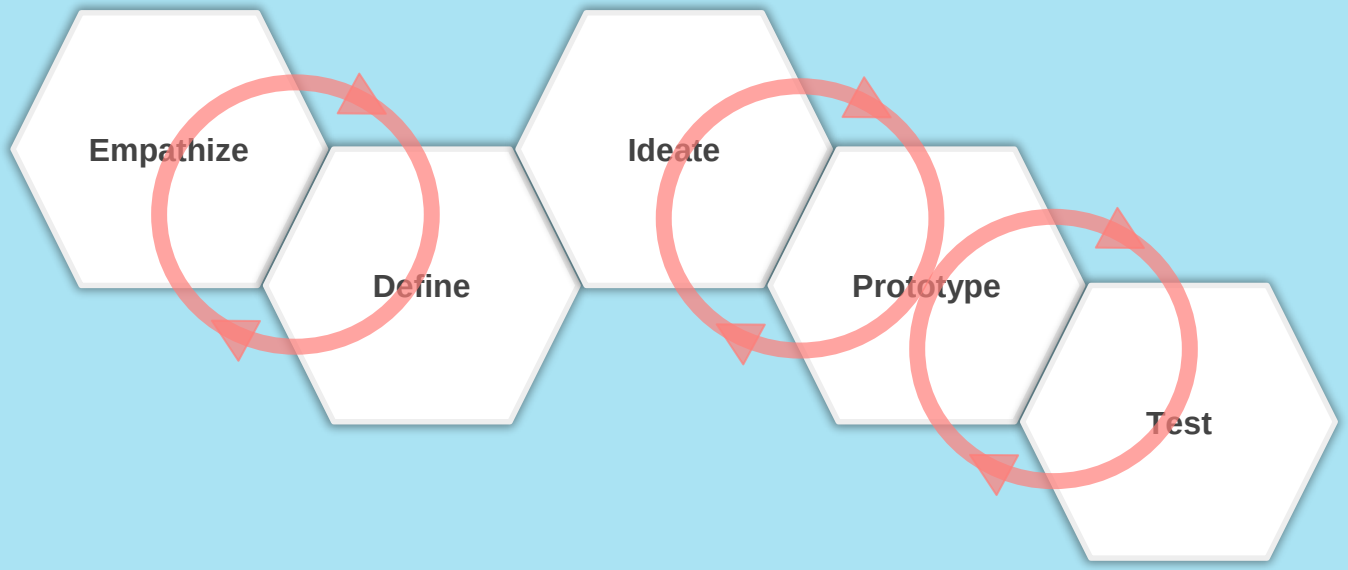
It requires everyone to collaborate and go through the process together

There are deliverables at every phase

# 1. NOT JUST A BRAINSTORMING SESSION

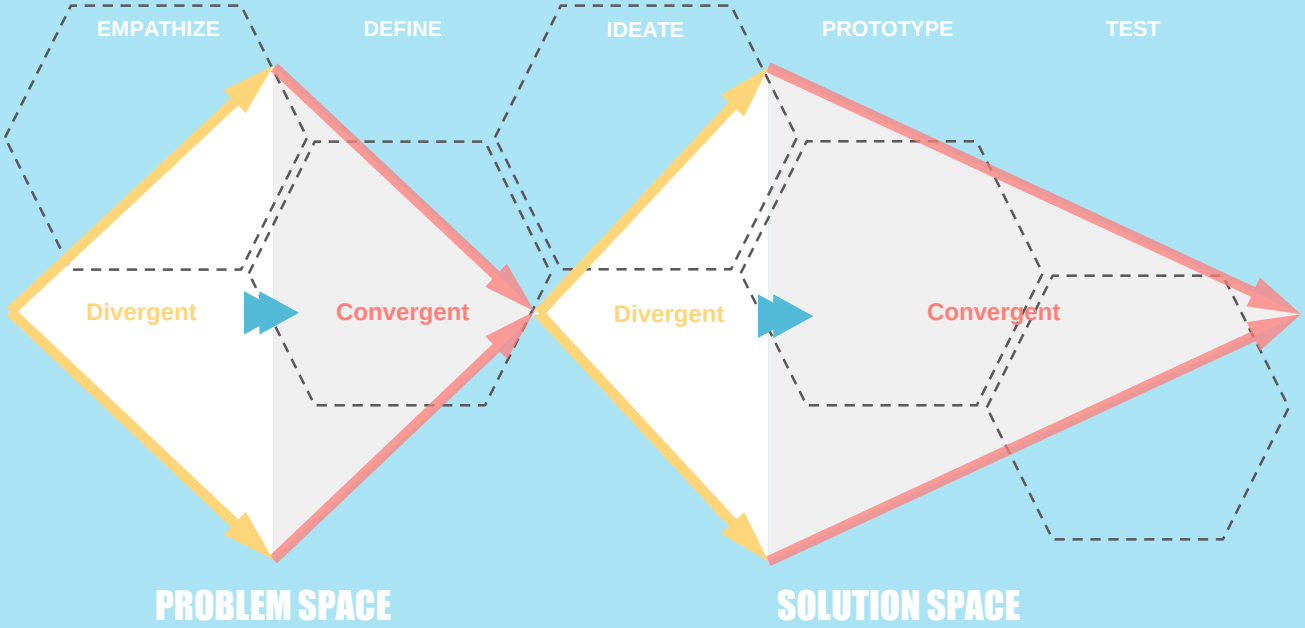
1. The design action plan is not a process that works instantly
2. It requires time and effort from committed users and stakeholders involved with the same objective to make it work
3. It is not a “one-day” process where problems can be solved in 24 hours
4. There are phases where you need multiple iterations, such as testing and checking back with users and then refining the solution

# 2. THE DESIGN PHASES IS AN ITERATIVE PROCESS




Source: Based on Stanford d.school

# 3. THE DESIGN THINKING PROCESS CONTAINS BOTH DIVERGENT & CONVERGENT THINKING



# 4. COLLABORATION IS REQUIRED FROM EVERYONE FROM START TO END

- The design action plan requires collaboration from everyone
- All the team members should participate in the process from start to end with a common objective
- This is because everyone in the team requires deep insight of what the issues are and what are needs of the users so that everybody is on the same page

# 5. THERE ARE DELIVERABLES AT EVERY PHASE

| | DESCRIPTION | DELIVERABLES | |
|---|---|---|---|
| **Empathize** | ▪ To understand your customers / users | ▪ Personas<br>▪ Empathy map | ▪ List of user feedback<br>▪ Problems identified |
| **Define** | ▪ To define clear project / business objectives | ▪ Design brief (POV + HMW)<br>▪ Stakeholder map | ▪ Context map<br>▪ Customer journeys<br>▪ Opportunity map |
| **Ideate** | ▪ To explore ideas and solutions | ▪ Ideas / concepts<br>▪ Sketches<br>▪ Prioritization map | ▪ Affinity map<br>▪ Idea evaluation |
| **Prototype** | ▪ To build and visualize ideas and solutions | ▪ Physical prototypes<br>▪ Wireframes<br>▪ Storyboards | |
| **Test** | ▪ To review and decide | ▪ List of user feedback<br>▪ Observation | ▪ Evaluation map<br>▪ Proposed refinement |

# SUMMARY OF THE 5 DESIGN ACTION PHASES

| Phase | Activities | Tools to use | Deliverables |
|---|---|---|---|
| ***Empathize*** | ▪ User interview<br>▪ Informal chats<br>▪ Observation<br>▪ Shadowing<br>▪ Mystery shopping<br>▪ Picture-taking<br>▪ Immersion | ▪ Interview checklist<br>▪ Observation checklist<br>▪ Writing tools<br>▪ Flipcharts and paper Camera | ▪ Personas<br>▪ Empathy map<br>▪ List of user feedback<br>▪ Problems identified |
| ***Define*** | ▪ Workshops<br>▪ Shareholder meetings | ▪ Drawing and writing tools<br>▪ Post-its<br>▪ Flipchart / Whiteboard<br>▪ User feedback *(from Empathize)* | ▪ Design brief (POV + HMW)<br>▪ Stakeholder map<br>▪ Context map<br>▪ Customer journeys<br>▪ Opportunity map |
| ***Ideate*** | ▪ Ideation activities<br>▪ Brainstorming<br>▪ Workshops<br>▪ Mindmaps<br>▪ Sketching/drawing | ▪ Drawing and writing tools<br>▪ Post-its<br>▪ Flipchart / Whiteboard<br>▪ Personas *(from Empathize)*<br>▪ Design brief *(from Define)*<br>▪ Brainstorming tools | ▪ Ideas / concepts<br>▪ Sketches<br>▪ Prioritization map<br>▪ Affinity map<br>▪ Idea evaluation |

# SUMMARY OF THE 5 DESIGN ACTION PHASES

| Phase | Activities | Tools to use | Deliverables |
|---|---|---|---|
| ***Prototype*** | ▪ Space prototyping<br>▪ Physical prototyping<br>▪ Paper construction<br>▪ Wireframe building<br>▪ Storyboards<br>▪ Role-plays | ▪ Paper<br>▪ Cardboard<br>▪ Construction materials<br>▪ Cutting and writing tools<br>▪ Space<br>▪ Props | ▪ Physical prototypes<br>▪ Wireframes<br>▪ Storyboards |
| ***Test*** | ▪ User testing<br>▪ Observation<br>▪ Picture-taking<br>▪ Evaluation<br>▪ Discussion | ▪ Briefing checklist<br>▪ Interview checklist<br>▪ Observation checklist<br>▪ Prototypes to test *(from Prototype)* | ▪ List of user feedback<br>▪ Observation<br>▪ Evaluation map<br>▪ Proposed refinement |

# PROJECT ACTIVITY: LET'S START TO DESIGN!

Design your ideal wallet. Sketch it out below, or on a piece of paper.


**Time allowed:**
**5 mins**

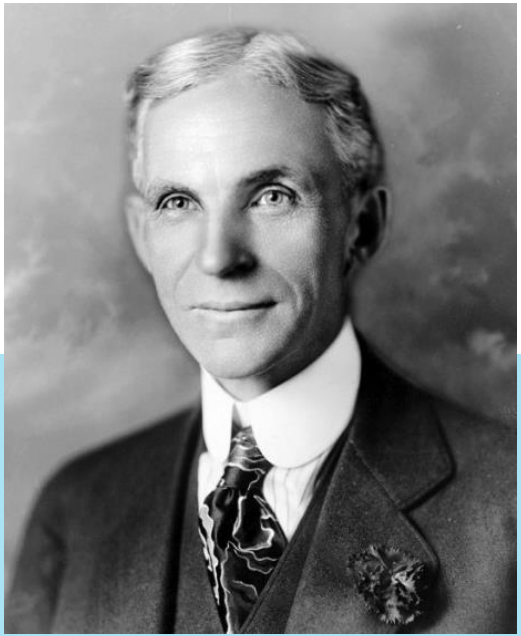
Empathize

# DESIGN THINKING

Operational
Excellence Consulting
Empowering Sustainable Change

If I had asked people what they wanted, they would have said faster horses.”

**HENRY FORD**

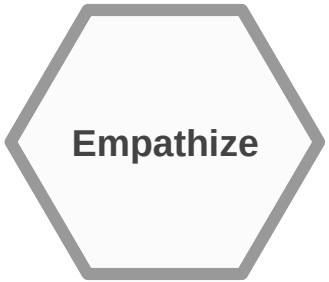


# 76%

of consumers expect companies to understand their needs and expectations.

Source: Salesforce Research

# EMPATHIZE PHASE




**Objective:** To understand the experience, situation and emotion of the user for whom you are designing

- **Observe:** View users and their behavior in the context of their lives. Don’t judge.
- **Engage:** Interact with people in conversations and interviews.  Ask why.
- **Immerse:** Experience what your user experiences.

# DESIGNING WITHOUT EMPATHY: GOOGLE GLASS

- Google launched its first wearable product, the Google Glass in 2013
- The commercial failure of Google Glass can be traced to Google's lack of empathy towards users: voice-activated actions are socially awkward, the camera creates a privacy concern for people around the Glass user, and the device doesn't seem to solve any specific user needs

# EMPATHIZE – OBSERVATION & ENGAGEMENT

## Example: Airport lounge experience


In the face of competition, Singapore Airlines wants to create a consistent experience to stay as the world's most preferred airline.


**Through observing and engaging with their customers, staff and management, designers learned…**

Customers want distinct personal spaces, greater personalized services, and a delectable selection of food and beverages.

***SOLUTION***

**SilverKris Lounges designed with *"home away from home"* experience. Brings Singapore Airlines in-flight experience to the lounge in 15 cities.**

Source: Singapore Airlines

# EMPATHIZE – ENGAGEMENT

## Example: Water accessibility

Water wells installed by NGO's are not being used.

**Through engaging in their environment, they learned…**

The road to the water wells is long and the water barrels too heavy.

***SOLUTION***

**90-litre Hippo Roller enables user to collect 5 times more water than a single bucket and improved water access.**

Source: Hippo Roller

# EMPATHIZE – IMMERSION

## Example: Life insurance servicing

Consumer feels overwhelmed with the many insurance products in the market; lack of engagement after the policy is “sold”.

**By immersion through interviews, shadowing, desk observations of end customers and distribution partners, they learned that …**

… policy holders want relationships to be nurtured and their current insurance products be reviewed for adequacy and suitability to their lifetime needs.

***SOLUTION***

**Develop *“signature moments”* such as year-end thank you cards to policy beneficiaries that they are being protected, simplified 2-minute upfront risk check to provide immediate price guidance, etc.**

Source: McKinsey

# EMPATHY – METHODS & TOOLS

| | | |
|---|---|---|
| Assume a beginner's mindset | Prepare for interview | Story share and capture |
| What? – How? – Why? | Interview for empathy | Empathy map |
| Use camera study | Engage extreme users | Journey map |

# TO EMPATHIZE, YOU HAVE TO UNDERSTAND YOUR USER'S INHERENT NEEDS

| | |
|---|---|
| 1 | Wealth |
| 2 | Security |
| 3 | Being liked |
| 4 | Status and prestige |
| 5 | Health and fitness |
| 6 | Praise and recognition |
| 7 | Power and popularity |
| 8 | Knowledge |
| 9 | Love and companionship |
| 10 | Self-actualization |

# HOW DO YOU EMPATHIZE YOUR USER?

## Observe

Watch your user in action and take note of non-verbal cues and body language.

## Meet

Arrange to meet your user to find out more about his life, workplace or even his home. You will develop empathy into the context or situation he/she is in.

## Ask questions

Ask non-leading and open-ended questions that find out more.

## Listen

Allow your user to tell his story.

# ASK QUESTIONS – WHAT DO YOU NEED TO KNOW FROM YOUR USER OR CUSTOMER?

- Who they are
- What they do
- Why they buy
- How they buy
- What makes them feel good about buying
- What they expect from you
- What they think of you

# INTERVIEW YOUR USER TO GATHER FEEDBACK

## Prepare for the interview

- A list of questions
- Use User Feedback template

## Start a conversation, not an inquisition

- Don’t interrogate customer with an endless stream of questions
- Let your questions emerge from the conversation

## Use non-leading, open-ended questions

- Ask “How,” “What” or “Why” ?

# USER FEEDBACK – EXAMPLE

ILLUSTRATIVE

## USER FEEDBACK

### Customer profile:

- Alice Smith, 53
- Housewife
- Existing customer at ABC Bank
- Other banking relationship with XYZ Bank
- Has 2 children
- Likes to trade during free time
- Dislikes internet banking

### Questions to ask:

***List of questions:***

- Have you seen / aware of this credit card?
- What do you think of its benefits?
- How is it compared to other credit cards?

***Why do we ask those questions?***

- Understand awareness level
- Understand if the benefits are relevant to customer
- Understand how it is compared among other competitors

### User feedback:

***Observations and feedback:***

- Generally unable to recall where she has seen the card
- Frowned and talked about the painful application process of the card
- Emphasizes the benefit of groceries rebate

***Insights / Actions:***

- Advertising visibility could be improved
- Application process may be painful for customer
- Could strengthen and highlight groceries rebates in marketing

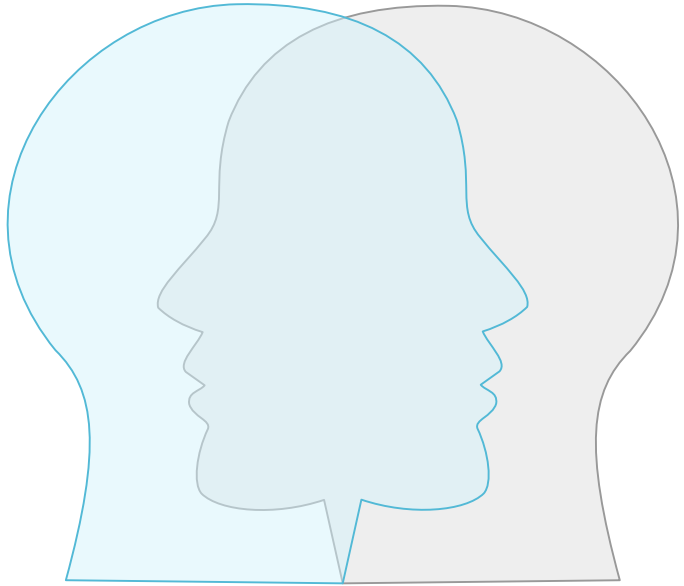
# USER FEEDBACK TEMPLATE

| USER FEEDBACK | |
|---|---|
| **Customer profile:** | |
| | |
| **Questions to ask:** | |
| *List of questions* | *Why do we ask those questions?* |
| **User feedback:** | |
| *Observations and feedback* | *Insights / Actions* |

# DESIGNERS USE EMPATHY TOOLS TO GAIN DEEP INSIGHTS INTO CUSTOMER'S NEEDS

- Gaining empathy of customers requires a deep understanding of:
  - Customer's **jobs-to-be-done**
  - Customer's **pains**
  - Customer's **gains**

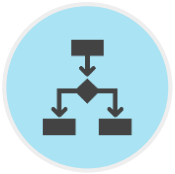
- Popular design thinking tools for gaining empathy include the **Persona** and **Empathy Map**



# PERSONAS

- A persona is a description of a fictional person that represents **one target customer segment** that you are developing a product/ service for
- Creating personas will help you to understand your customers' needs, goals, expectations, behaviors and experiences
- You may create more than one persona for your consideration of different target segments
- Be careful of **stereotyping** when using personas that only show the demographic attributes

# BENEFITS OF PERSONA



Identify opportunities and product gaps to drive strategy

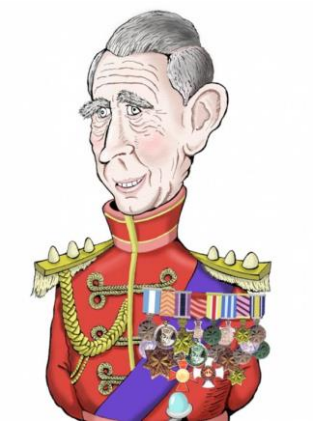
Provide a quick and cheap way to test, validate and prioritize ideas

Give focus to projects by building a common understanding of customers across teams

Help development teams empathize with users, including their behaviors, goals and expectations

Serve as a reference tool that can be used from strategy through to implementation

# PERSONA TWINS



PRINCE CHARLES

Born in 1948

Grew up in England

Married twice

Has children

Successful, rich

Take vacations in the Alps

Likes dogs

OZZY OSBOURNE

***Although the core elements are the same, the potential users couldn't be more different. Designers need to dig one level deeper to understand the needs and get greater insights.***

Source: Adapted from Lewrick et al., 2018

# PERSONA – EXAMPLE

ILLUSTRATIVE

| Name: John Smith, 38 | |
|---|---|
| **Profile / Lifestyle** | **Characteristics** |
| ▪ *Lawyer, single*<br>▪ *Likes to play golf once a week*<br>▪ *Owns an apartment in New York* | ▪ *Ambitious*<br>▪ *Knowledgeable*<br>▪ *Financially savvy* |
| **Goals / Ambitions** | **Behaviors / Habits** |
| ▪ *Wants to invest money for his retirement*<br>▪ *Aiming for promotion to Senior Counsel later this year* | ▪ *Impatient*<br>▪ *Prim and proper*<br>▪ *Don't take no for an answer* |
| **Fears / Challenges** | **Influencers & Activities** |
| ▪ *Not working well with colleagues*<br>▪ *Unable to find time with family* | ▪ *Uncle, who is also a lawyer*<br>▪ *Golf* |

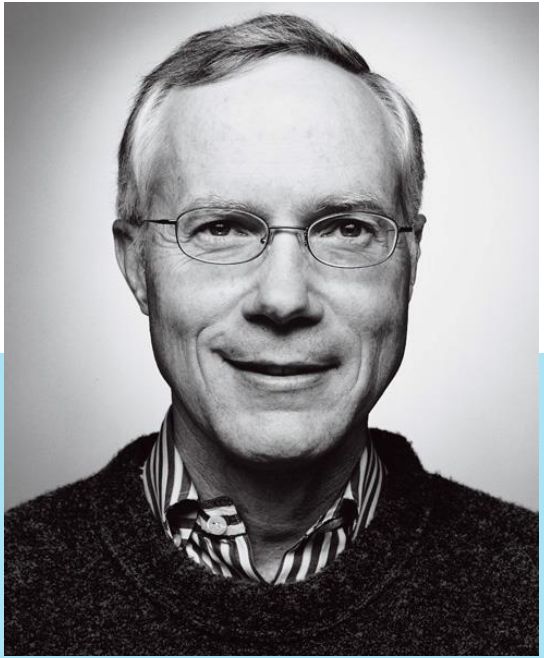
# PERSONA TEMPLATE

| Name: | |
|---|---|
| **Profile / Lifestyle** | **Characteristics** |
| | |
| **Goals / Ambitions** | **Behaviors / Habits** |
| | |
| **Fears / Challenges** | **Influencers & Activities** |
| | |

# EMPATHY MAP

- An **Empathy Map** is a visualization tool which can be used to synthesize your observations and gain a deeper insight into your customers
- Much like a user persona, an empathy map can represent a group of users, such as a customer segment
- While personas reveal more about the person, empathy map reveals more about how the person feel about an experience
- You may create the empathy map based on co-creation with stakeholders or from interview with customers
- An empathy map helps to define what problems are we trying to solve with design thinking

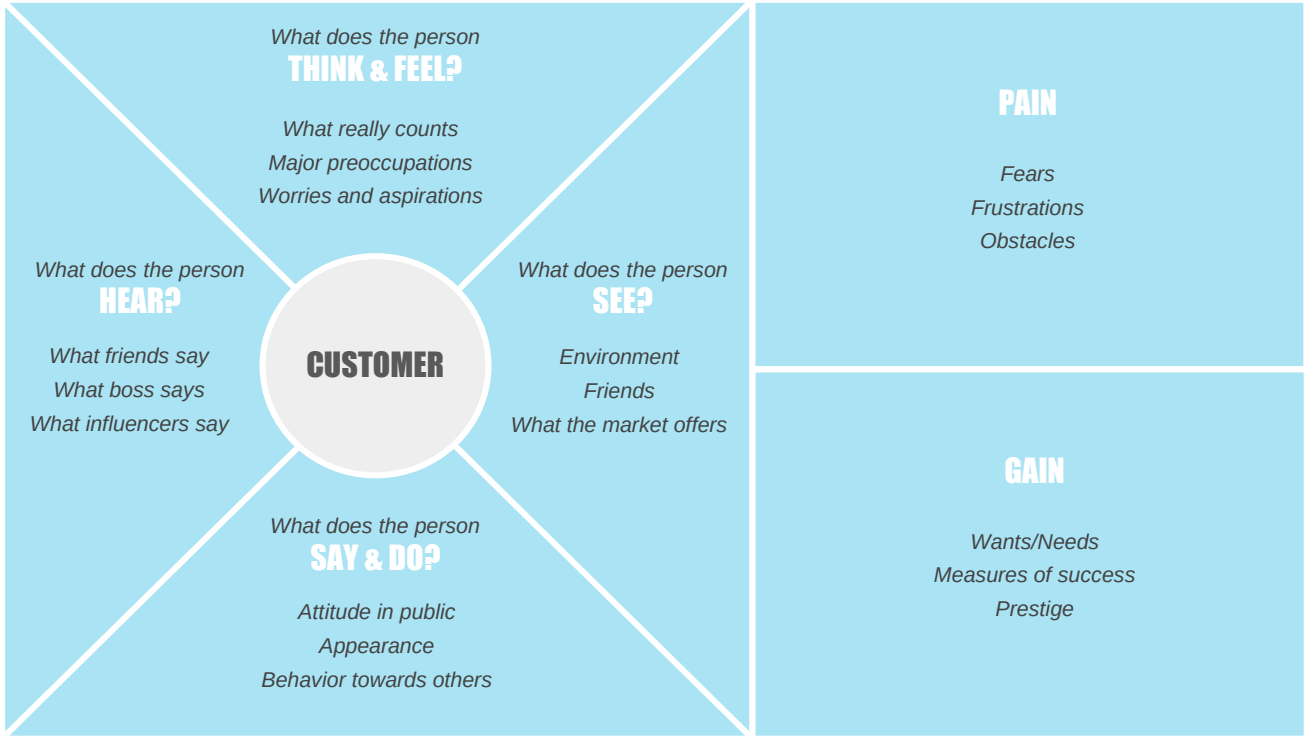
Empathy is not just about walking in another's shoes. First, you must remove your own shoes."



**SCOTT COOK**

FOUNDER OF INTUIT

# EMPATHY MAP




Source: Adapted from Xplane

# ELEMENTS OF AN EMPATHY MAP

## WHAT DOES HE SEE?

**DESCRIBE WHAT THE CUSTOMER SEES IN HIS ENVIRONMENT**

- *What does it look like?*
- *Who surrounds him?*
- *Who are his friends?*
- *What types of offers is he exposed to daily (as opposed to all market offers??*
- *What problems does he encounter?*

## WHAT DOES HE HEAR?

**DESCRIBE HOW THE ENVIRONMENT INFLUENCES THE CUSTOMER**

- *What do his friends say?*
- *Who really influences him, and how?*
- *Which media channels are influential?*

## WHAT DOES HE REALLY THINK & FEEL?

**TRY TO SKETCH OUT WHAT GOES ON IN YOUR CUSTOMER'S MIND**

- *What is really important to him (which he might not say publicly)?*
- *Imagine his emotions. What moves him?*
- *What might keep him up at night?*
- *Try describing his dreams and aspirations*

# ELEMENTS OF AN EMPATHY MAP

## WHAT DOES HE SAY & DO?

**IMAGINE WHAT THE CUSTOMER MIGHT SAY, OR HOW HE MIGHT BEHAVE IN PUBLIC**

- *What is his attitude?*
- *What could he be telling others?*
- *Pay particular attention to potential conflicts between what a customer might say and what he may truly think or feel*

## WHAT IS THE CUSTOMER'S PAIN?

- *What are his biggest frustrations?*
- *What obstacles stand between him and what he wants or needs to achieve?*
- *Which risks might he fear taking?*

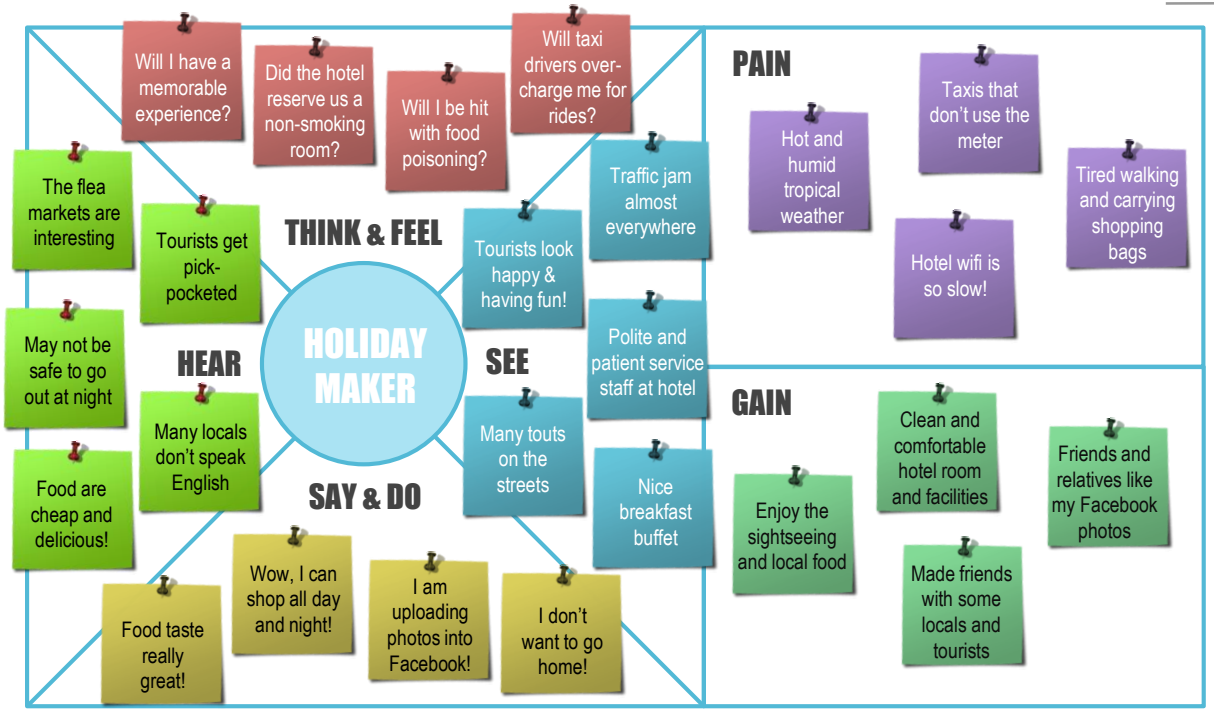
## WHAT DOES THE CUSTOMER GAIN?

- *What does he truly want or need to achieve?*
- *How does he measure success?*
- *Think of some strategies he might use to achieve his goals.*

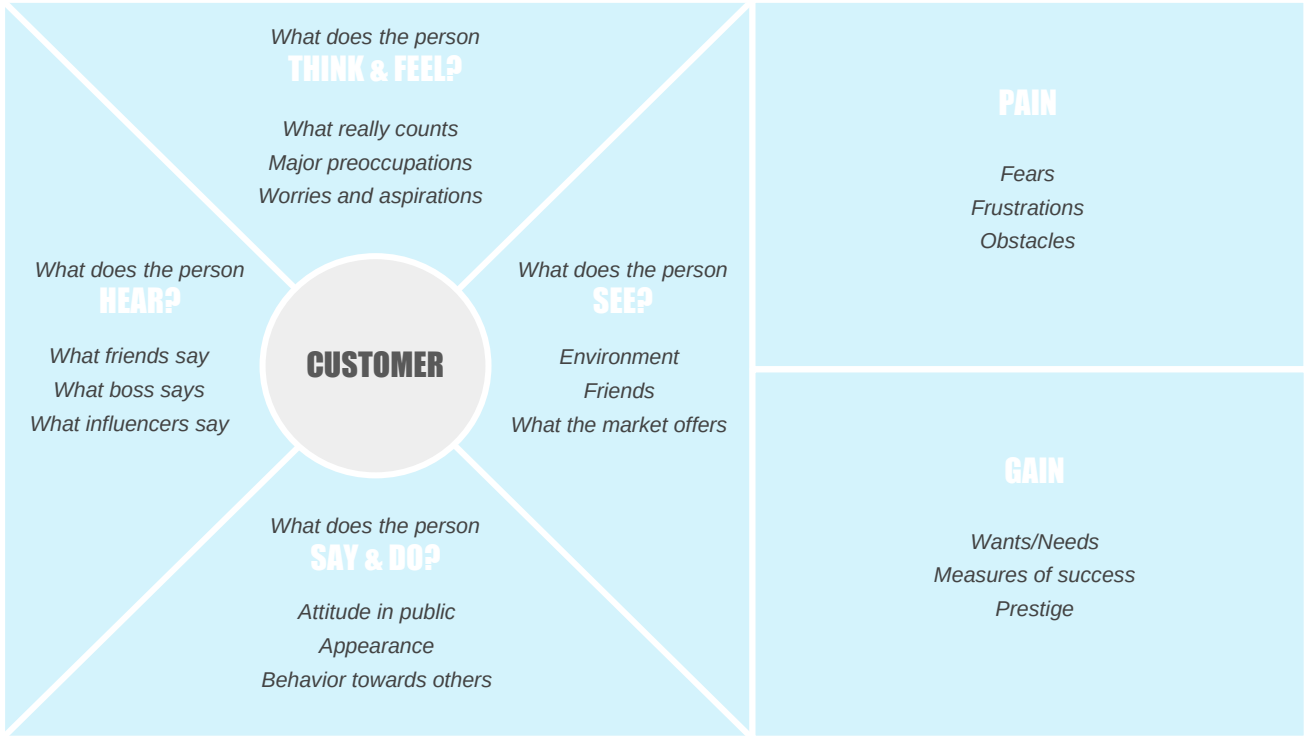
# EMPATHY MAP – EXAMPLE

***A Holiday Maker's Concern***

ILLUSTRATIVE



# EMPATHY MAP TEMPLATE




Source: Adapted from Xplane

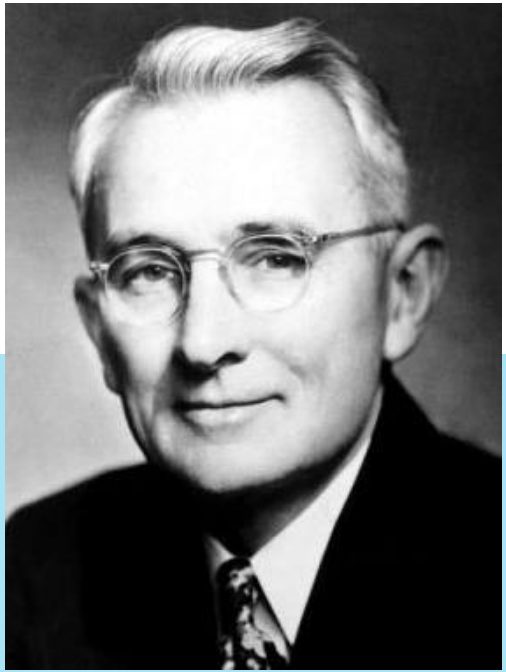
# EMPATHIZE

| Activities | Tools to use | Deliverables |
|---|---|---|
| ▪ User interview<br>▪ Informal chats<br>▪ Observation<br>▪ Shadowing<br>▪ Mystery shopping<br>▪ Picture-taking<br>▪ Immersion | ▪ Interview checklist<br>▪ Observation checklist<br>▪ Writing tools<br>▪ Flipcharts and paper<br>▪ Camera | ▪ Personas<br>▪ Empathy map<br>▪ List of user feedback<br>▪ Problems identified |

When dealing with people, remember you are not dealing with creatures of logic, but creatures of emotion.”

**DALE CARNEGIE**

AUTHOR



# PROJECT ACTIVITY: EMPATHIZE

Design a **WALLET** that is useful and meaningful for **YOUR PARTNER**.

1. What questions would you ask your partner? Write it down.

2. Take down notes of your partner's response. Remember to observe, listen and empathize what he/she says.


**Time allowed:**
**15 mins**

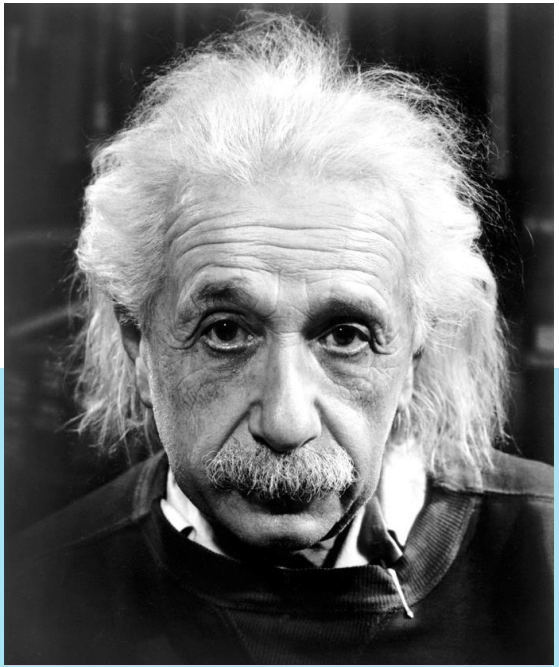
Define

# DESIGN THINKING

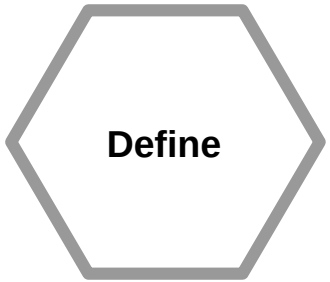
Operational
Excellence Consulting
Empowering Sustainable Change

If I had an hour to solve a problem, I'd spend 55 minutes thinking about the problem and 5 minutes thinking about solutions."

**ALBERT EINSTEIN**



# DEFINE PHASE




**Objective:** To process and synthesize the findings in order to form a user Point of View (POV) that you will address

- **User:** Develop an understanding of the type of person (persona) you are designing for
- **Needs:** Synthesize and select a limited set of needs that you think are important to fulfill. Remember that needs should be verbs.
- **Insights:** Express insights you developed and define principles

# POINT OF VIEW

- A **point of view (POV)** is your reframing of a design challenge into an actionable problem statement that will launch you into generative ideation

- A good POV will allow you to ideate in a directed manner, by creating **“How Might We” (HMW)** questions based on your POV

- Your POV should never contain:
  - any specific solution
  - any indication as to how to fulfill your users’ needs in the service or experience
  - the product you are designing

# CHARACTERISTICS OF A GOOD POINT OF VIEW

1. Provides focus and frames the problem
2. Inspires your team
3. Provides a reference for evaluating competing ideas
4. Empowers your team to make decisions independently in parallel
5. Captures the hearts and minds of people you meet
6. Fuels brainstorms by suggesting “how might we” statements
7. Is something you revisit and reformulate as you learn by doing
8. Guides your innovation efforts

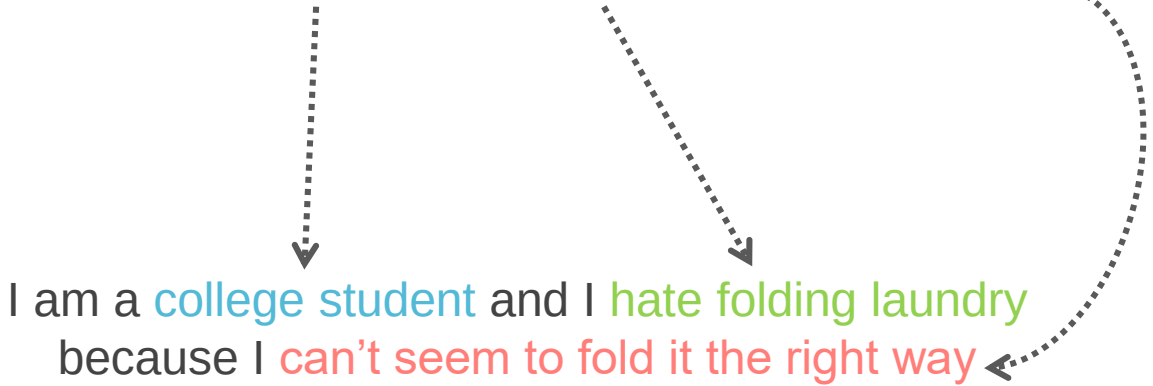
# POINT OF VIEW MADLIB

_____ needs to _____ because _____

[user] [user's need] [insight]

# POINT OF VIEW

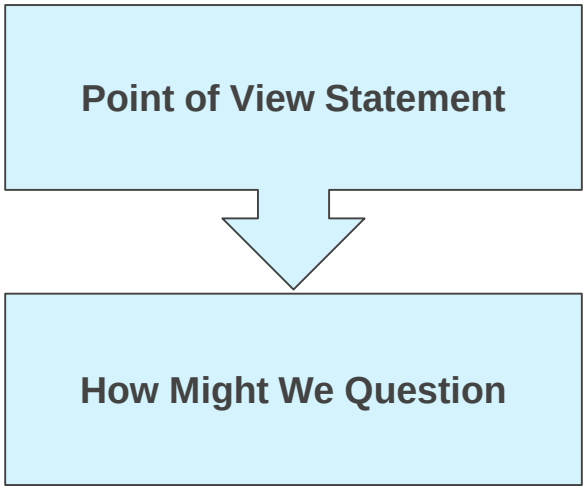
**POV = USER + NEED + INSIGHT**




- ***Developing a strong POV can be challenging***
- ***Getting it right is very important as it will shape the future of the project***

# HOW MIGHT WE

***"How Might We" questions frame and open up your design challenge.***




EXAMPLE

I am a mother of 5-year-old twins and I **need to** get them to eat vegetables **because** I am concern of their nutritional requirements.

***How might we*** help the mother succeed in getting her children to eat vegetables?

# HOW MIGHT WE STATEMENTS

- “How might we” (HMW) questions are short questions that launch brainstorms
- HMWs fall out of your POV statement or design principles as seeds for your ideation
- Create a seed that is broad enough that there are a wide range of solutions but narrow enough that the team has some helpful boundaries
- The proper scope of the seed will vary with the project and how much progress you have made in your project work

# HOW MIGHT WE STATEMENTS


"HMW create a cone to eat ice cream without dripping."


"HMW redesign dessert."


"HMW redesign ice cream to be more portable."

# DESIGN BRIEF

## What is it?

- A statement of intent on behalf of the project team
- Defines the problem statement (Point of View), objective (How Might We) and scope
- Ensures clarity among team members and stakeholders

## Why use it?

- Clarify problem to be solved and design intent
- Allow team to be focused and aligned
- Achieve better result by comparing the design outcome with the original brief

# DESIGN BRIEF – EXAMPLE

ILLUSTRATIVE

| DESIGN BRIEF | |
|---|---|
| **User Perception / Feedback** | |
| ▪ *Darryl needs a fast and efficient way to track his health and fitness* | ▪ *He runs/swims often and does not like to carry a phone while running/swimming* |
| **Problem Statement (Point of View)** | |
| ▪ *User could not track his health and fitness while running/swimming* | |
| **Design Goal / Objective (How Might We)** | |
| ▪ *How might we design a convenient and hands-free health and fitness tracking device for running/swimming?* | |
| **Design Requirements** | |
| *Our product / service should…* | |
| ▪ *Track health and fitness while doing activity* | ▪ *Impact proof* |
| ▪ *Lightweight* | ▪ *Convenient to use / Hands-free* |
| ▪ *Waterproof / Sweat-proof* | |

# DESIGN BRIEF TEMPLATE

| DESIGN BRIEF | |
|---|---|
| **User Perception / Feedback** | |
| | |
| **Problem Statement (Point of View)** | |
| | |
| **Design Goal / Objective (How Might We)** | |
| | |
| **Design Requirements** | |
| | |

# STAKEHOLDER MAP

## What is it?

- Document key stakeholders and their relationship
- Who will gain, who will be adversely affected, who holds power, and who influences the outcomes

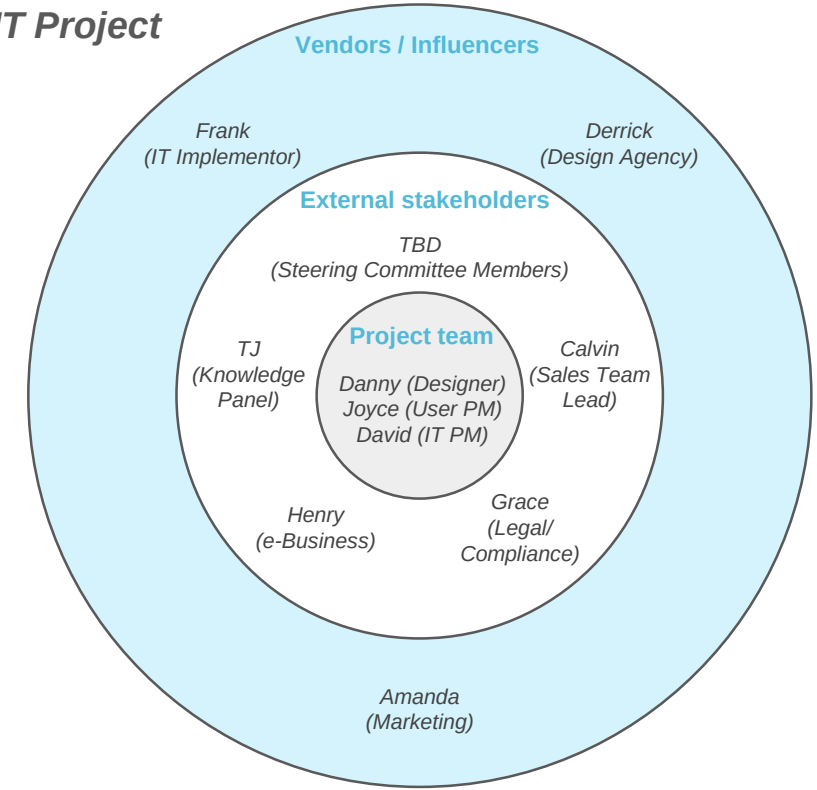
## Why use it?

- Clarify stakeholders and their relationship
- Understand the decision-makers, influencers, executers and even the end-users
- Allow design team to discover risks from negative stakeholders and support from positive ones

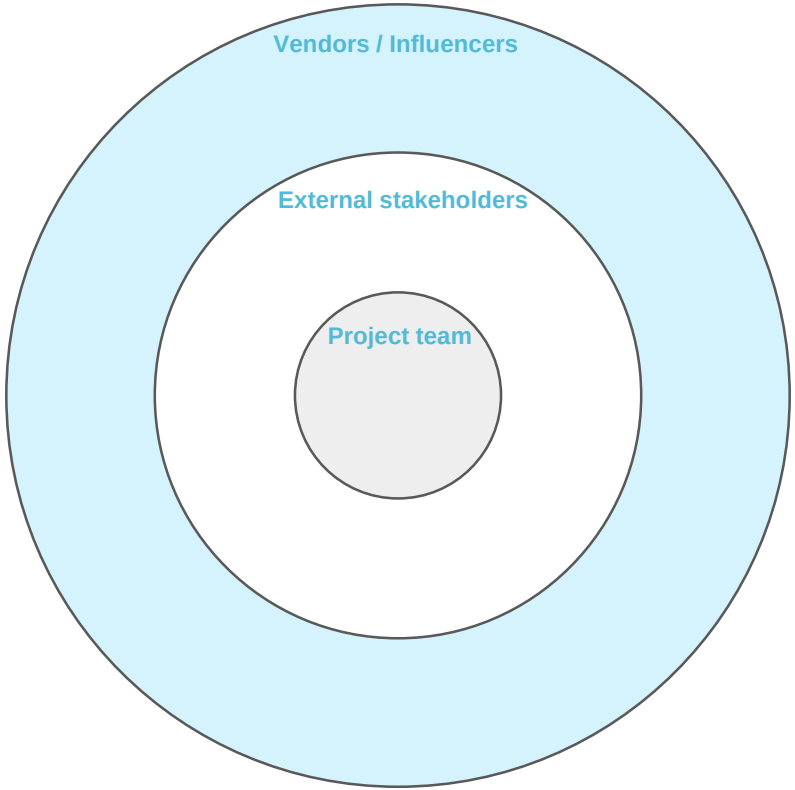
# STAKEHOLDER MAP – EXAMPLE

***Stakeholder Map of an IT Project***

ILLUSTRATIVE

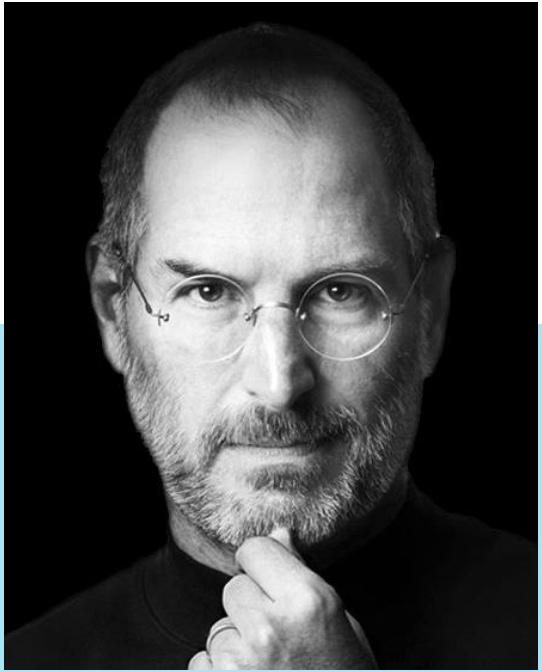


# STAKEHOLDER MAP TEMPLATE



“You’ve got to start with the customer experience and work back toward the technology – not the other way around.”

**STEVE JOBS**



# CUSTOMER JOURNEY

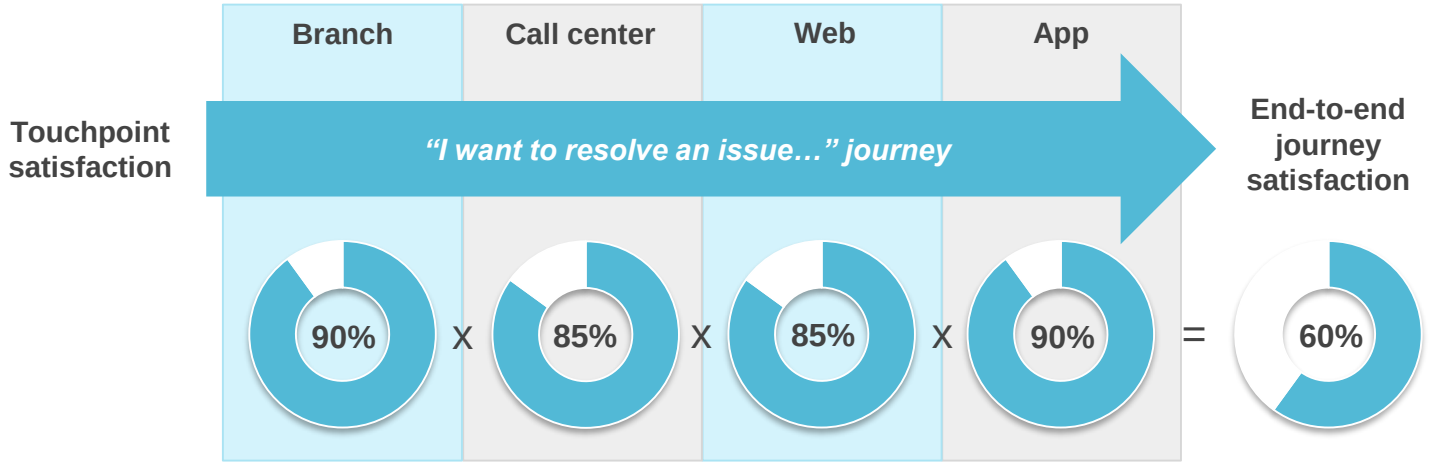
## What is it?

- A method of documenting and visualizing the experiences the customers have with a particular product/service that your team is about to refine or improve
- Includes customers' thoughts, feelings and touch-points at each moment of the experience

## Why use it?

- Align stakeholders an overview of your customer's experience from their point of view
- Identify pain points at specific moment of an experience and improve on those
- Help the team to focus on specific areas rather than revamping the whole service or product experience

# A CUSTOMER JOURNEY CAN SCORE LOW FOR SATISFACTION EVEN WHEN INDIVIDUAL TOUCHPOINTS PERFORM WELL




*Satisfactory touchpoints may not add up to a satisfactory customer journey.*

Source: McKinsey

# TOUCHPOINTS vs. CHANNELS

## TOUCHPOINTS

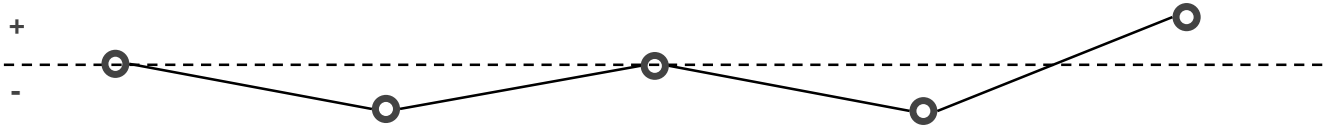
- A point of interaction between a person and any agent or artifact of an organization
- These interactions take place at a certain point in time, in a certain context, and with the intention of meeting a specific customer need

## CHANNELS

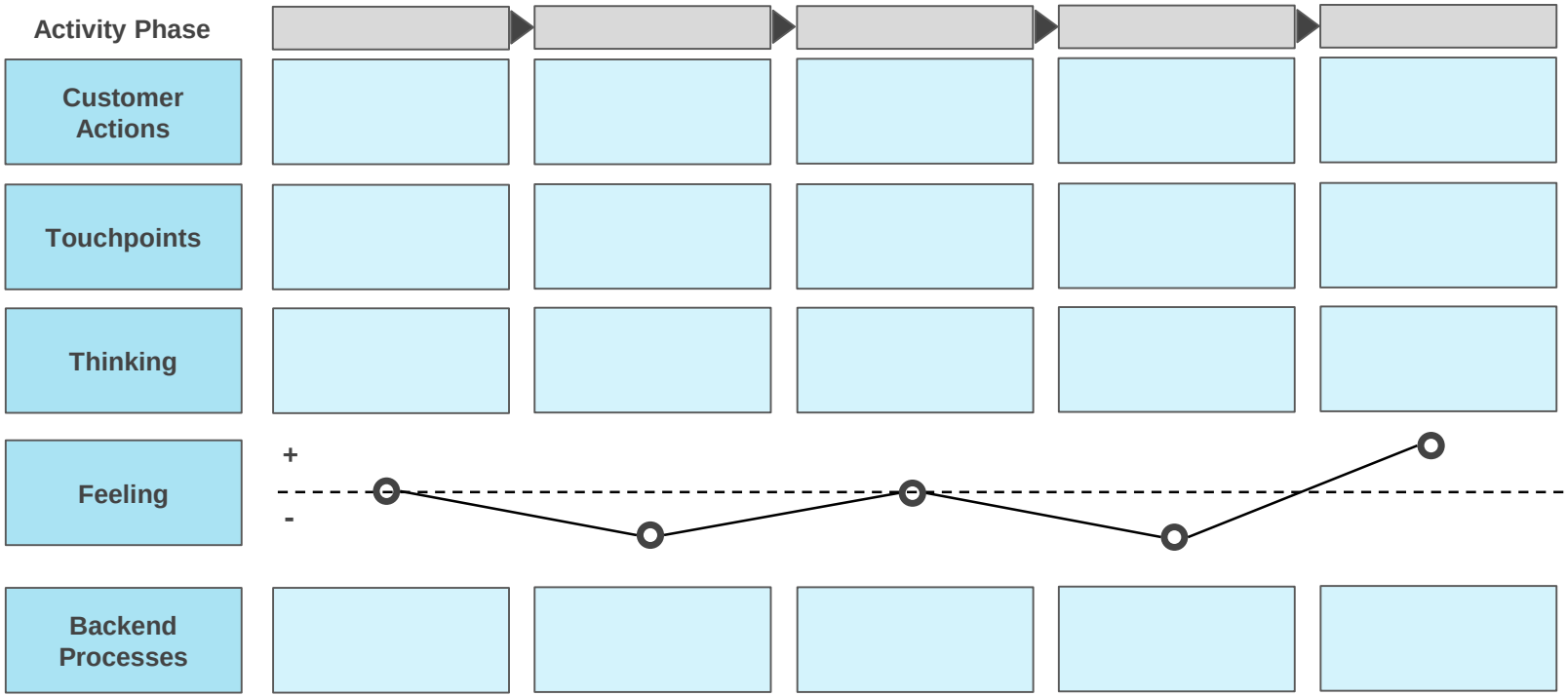
- A medium of interaction with customers or users
- Print, the web, mobile, voice calls, and brick and mortar locations are all common channels for reaching out to and interacting with customers
- A channel defines the opportunities or constraints of a touchpoint

# JOURNEY MAP – EXAMPLE

ILLUSTRATIVE

| Activity Phase | Enter Starbucks | Find Seat | Order Coffee | Wait for Coffee | Drink Coffee |
|---|---|---|---|---|---|
| Customer Actions | Look at café surroundings | Walk towards counter | Queue at the counter to be served | Wait at the counter | Seat at the table |
| Touchpoints | Entrance / Posters / Signages | Café space | Ordering Counter / Wall Menu Display | Collection Counter | Seat |
| Thinking | ▪ Am I entering the right place?<br>▪ Is the air-con cold enough? | ▪ Can I find seats?<br>▪ Is there a long queue? | ▪ Which coffee do I want?<br>▪ How much does it costs? | ▪ How long do I have to wait?<br>▪ Is the coffee order correct? | ▪ Is the seat taken?<br>▪ Coffee done just right. Yummy! ☺ |
| Feeling |  | | | | |
| Backend Processes | | | Payment process (cash / membership card / mobile app) | Brew the coffee | Clearing the tables |

# JOURNEY MAP TEMPLATE



# CONTEXT MAP

## What is it?

- Is a tool and document to represent complex factors affecting the organization or the design of the product or service

## Why use it?

- Create a shared strategic vision with the team
- Document knowledge existing informally within the organization
- Understand the external factors which plays in deciding and planning of the design of the product / service

# CONTEXT MAP – EXAMPLE

ILLUSTRATIVE

| Context Map of Motion Sensor that detects when an elderly falls | | |
|---|---|---|
| **Target users / User needs** | | **Technology factors** |
| ▪ *Elderly, aged 65 and above*<br>▪ *Living alone at home*<br>▪ *Needs immediate attention or help if a fall happens*<br>▪ *Children or elderly wants to be notified immediately* | | ▪ *Existing technology of motion related sensors*<br>▪ *To connect remotely via app related devices* |
| **Business factors** | **Trends** | **Uncertainties** |
| ▪ *No current competitors* | ▪ *Aging society*<br>▪ *Rise in affluent silver generation*<br>▪ *Increase in one-person living household* | ▪ *Adoption rate of the elderly*<br>▪ *Modification of house required?*<br>▪ *Execution of the service* |
| **Other questions?** | | |
| ▪ *Any support from government and social enterprises, e.g. subsidy* | | |

# CONTEXT MAP TEMPLATE

| CONTEXT MAP | | |
|---|---|---|
| **Target users / User needs** | | **Technology factors** |
| | | |
| **Business factors** | **Trends** | **Uncertainties** |
| | | |
| **Other questions?** | | |
| | | |

# OPPORTUNITY MAP

## What is it?

- Allows comparison of any product/service that is in the market which helps to identify saturation of competitors or areas of opportunities
- Allows stakeholders to identify the direction of the product / service to meet the opportunity in the market

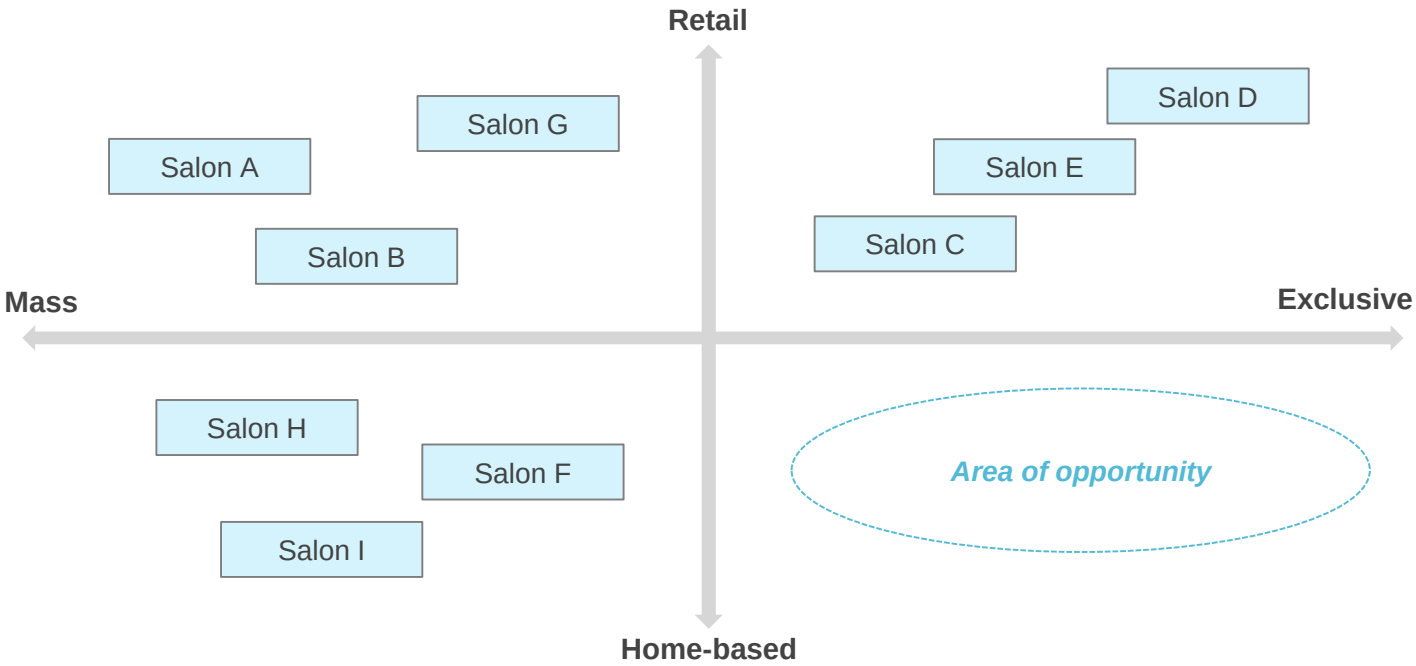
## Why use it?

- Identify area of opportunities
- Identify areas of saturation and competition where the positioning of the new product / idea should be avoided
- Align stakeholders with shared direction and meaning

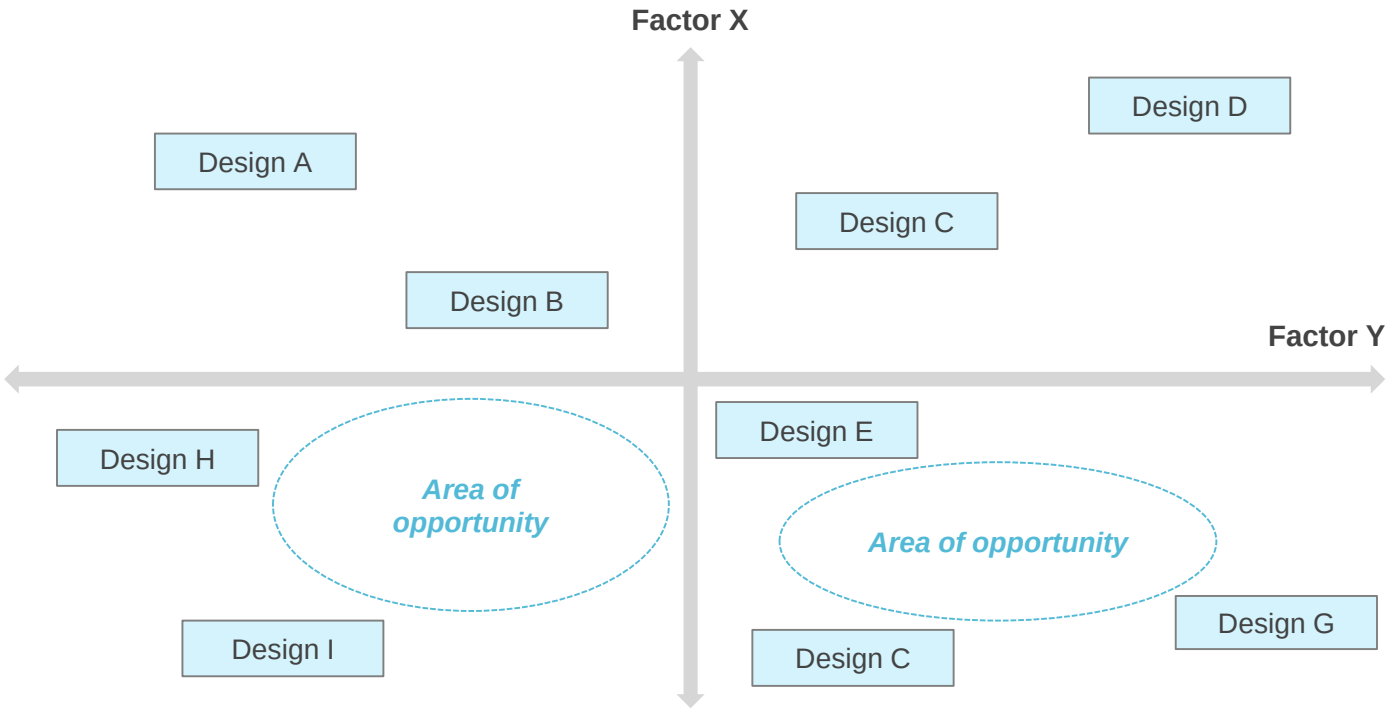
# OPPORTUNITY MAP – EXAMPLE

*Opportunity Map of Nail Salons in LA*

ILLUSTRATIVE



# OPPORTUNITY MAP TEMPLATE



# DEFINE

| Activities | Tools to use | Deliverables |
|---|---|---|
| ▪ Workshops<br>▪ Shareholder meetings | ▪ Drawing and writing tools<br>▪ Post-its<br>▪ Flipchart / Whiteboard<br>▪ User feedback *(from Empathize)* | ▪ Design brief (POV + HMW)<br>▪ Stakeholder map<br>▪ Context map<br>▪ Customer journeys<br>▪ Opportunity map |

# PROJECT ACTIVITY: DEFINE

Define the **WALLET** business case to present to your management.

1. Insights to my partner's lifestyle and needs.

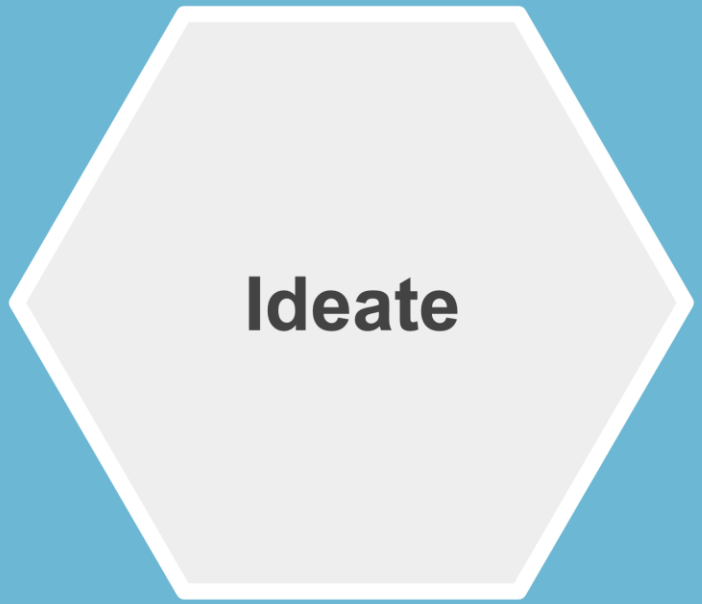
2. Insights to my partner's problems.

3. How do you propose what you should do? Write it down. **[ POV = user + need + insight ]**

4. Discuss with your group on any one of the stakeholder map / context map / customer journey / opportunity map.

5. Build your design brief.


**Time allowed:**
**15 mins**




# DESIGN THINKING

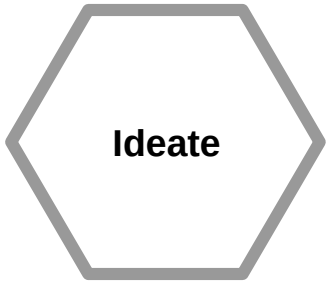
Operational
Excellence Consulting
Empowering Sustainable Change

If you can dream it, you can do it.”

**WALT DISNEY**

CREATOR & ENTREPRENEUR

# IDEATE PHASE




**Objective:** To focus on idea generation. You translate problems into solutions. Explore a wide variety and large quantity of ideas to go beyond the obvious solutions to a problem.

- **Creativity:** Combine the un/ conscious with rational thoughts and imagination
- **Group synergy:** Leverage the group to reach out new ideas and build upon other's ideas
- **Divergent and convergent thinking:** Separate the generation and evaluation of ideas to give imagination a voice

# WHY DO WE IDEATE?

1. Step beyond obvious solutions and thus increase the innovation potential of your solution set
2. Harness the collective perspectives and strengths of your teams
3. Uncover unexpected areas of exploration
4. Create fluency (volume) and flexibility (variety) in your innovation options
5. Get obvious solutions out of your heads, and drive your team beyond them

# HOW TO FACILITATE AN IDEATION SESSION?

1. Manage a creative space
2. Set expectation
3. Define the problem
4. Conduct ideation
5. Sort the ideas
6. Evaluate and create action steps

# WHAT ARE THE RULES OF IDEATION?

Defer judgement

Encourage wild ideas

Build on the ideas of others

Stay focused on the topic

Be visual

One conversation at a time

Go for quantity

# IDEATION METHODS

## Divergent Method

1. **Initial Exploration**
   a) Brainwriting
   b) Problem Brainstorming (Nyaka)
   a) Sharing Brainstorming (NHK Method)
2. **Pushing Boundaries**
   a) SCAMPER
   b) What If?

## Convergent Method

1. **Prioritization Map**
2. **Affinity Map**
3. **Idea Evaluation**

# INITIAL EXPLORATION – BRAINWRITING

## What is it?

- Brainwriting is a powerful method in leveraging the building of ideas in a systematic manner.

## Procedure

- Define the problem.
- Each person should brainstorm three ideas in two minutes on a piece of paper.
- Then have them pass the sheet of paper to the person on the left.
- Have the next person to build upon or add to the existing ideas by writing/ drawing their own ideas underneath the existing ideas. Allow 3 minutes.
- Repeat the process around the table with the next person building on existing ideas or add on new ideas, until the paper comes back to the originator.
- Share all the ideas on the table and pick out a couple of outstanding ones.

# INITIAL EXPLORATION – PROCESS PRBLEM BRAINSTORMING (NYAKA)

## What is it?

- Nyaka brainstorming is a method that emphasizes on exploring problems and solutions to problems. It is usually done with a customer journey or a work process that has a breakdown in different multiple problems with the experience.
- It subsequently allows to understand which is the wicked problem and then prioritize a hierarchy of ideas.

## Procedure

- Team to build a customer journey or a work process that they want to identify the problems or issues.
- Facilitator asks the group to define as many things that are wrong with the design of the process / service / experience and write them on the left space of a line.
- Facilitator asks the group to define solutions for as many of the problems defined as possible and write them on the right space of the line.
- Create a hierarchy of problems and hierarchy of solutions for each problem.
- Based on the discussion, the group can decide which solutions to further develop based on certain criteria, and make prototypes.

# INITIAL EXPLORATION – SHARING BRAINSTORMING (NHK METHOD)

## What is it?

- The NHK brainstorming method allows members to build ideas through the sharing of ideas from another member.

## Procedure

- Define the problem.
- Each participant writes down five ideas on five separate cards.
- In groups of 5, while each person shares one idea from his card, the others will create an idea out of his idea.
- The sequence continues around the table until there are many ideas on the table.
- Collect and group the ideas into more meaningful categories.
- Select a couple of outstanding ideas to prototype and test.

# PUSHING BOUNDARIES – SCAMPER

## What is it?

SCAMPER is a brainstorming technique and innovation method that uses seven words as prompts:

1. **S**ubstitute
2. **C**ombine
3. **A**dapt
4. **M**odify
5. **P**ut to another Use
6. **E**liminate
7. **R**everse

## Procedure

1. Select an idea / concept / existing product to apply the SCAMPER method.
2. Facilitator will lead the team to ideate out of the box by asking questions based on SCAMPER.
3. Create as many ideas based on the questions.
4. Analyze and prioritize.
5. Select a couple of ideas to further develop and prototype.

# PUSHING BOUNDARIES – SCAMPER

1. **Substitute**
   - What materials or elements could you substitute or swap to improve the product?
   - What other product or process could you use?

2. **Combine**
   - What would happen if you combined this product with another, to create something new?
   - How to combine purposes or objectives?

3. **Adapt**
   - What other context could you put your product into?
   - What other products or ideas could you use for inspiration?

4. **Modify**
   - How could you change the shape, look, or feel of your product?
   - What could you emphasize or highlight to create more value?

5. **Put to Another Use**
   - Can you use this product some where else, perhaps in another industry?
   - Who else could use this product?

6. **Eliminate**
   - How could you streamline or simplify this product?
   - What would happen if you took away part of this product?

7. **Reverse**
   - How could you reorganize this product?
   - What if you try to do the exact opposite of what you're trying to do now?

# PUSHING BOUNDARIES – WHAT IF?

## What is it?

- What if? is a brainstorming technique that pushes the boundaries of constraints or limitations over a concept / existing product. It follows the principle of asking new questions if you want new answers.

## Procedure

- Select an idea / concept / existing product to apply the “What if” Method.
- Facilitator leads the team to ideate out of the box by asking questions based on “What if?” The rest will chip in with more “what if” questions.
- Create as many ideas based on the questions.
- Analyze and prioritize.
- Select a couple of ideas to further develop and prototype.

# PUSHING BOUNDARIES – WHAT IF QUESTIONS

## Scarcity / Abundance

- What if a car can run without petrol?
- What if you have unlimited budget to change this website?

## Extreme Simplicity

- What if the army fight with no soldiers?
- What if you can apply for a bank loan in one step?

## Opposite

- What if your mobile phone runs to you instead of you running to your mobile phone?
- What if an employee pays the company to work instead of the company paying the employee?

# PRIORITIZATION MAP

## What is it?

- A prioritization map allows you to map your ideas based on the ease of implementation against level of benefit to users.
- This allows you to make informed decision which ideas to start working on and which ideas to park for future implementation.

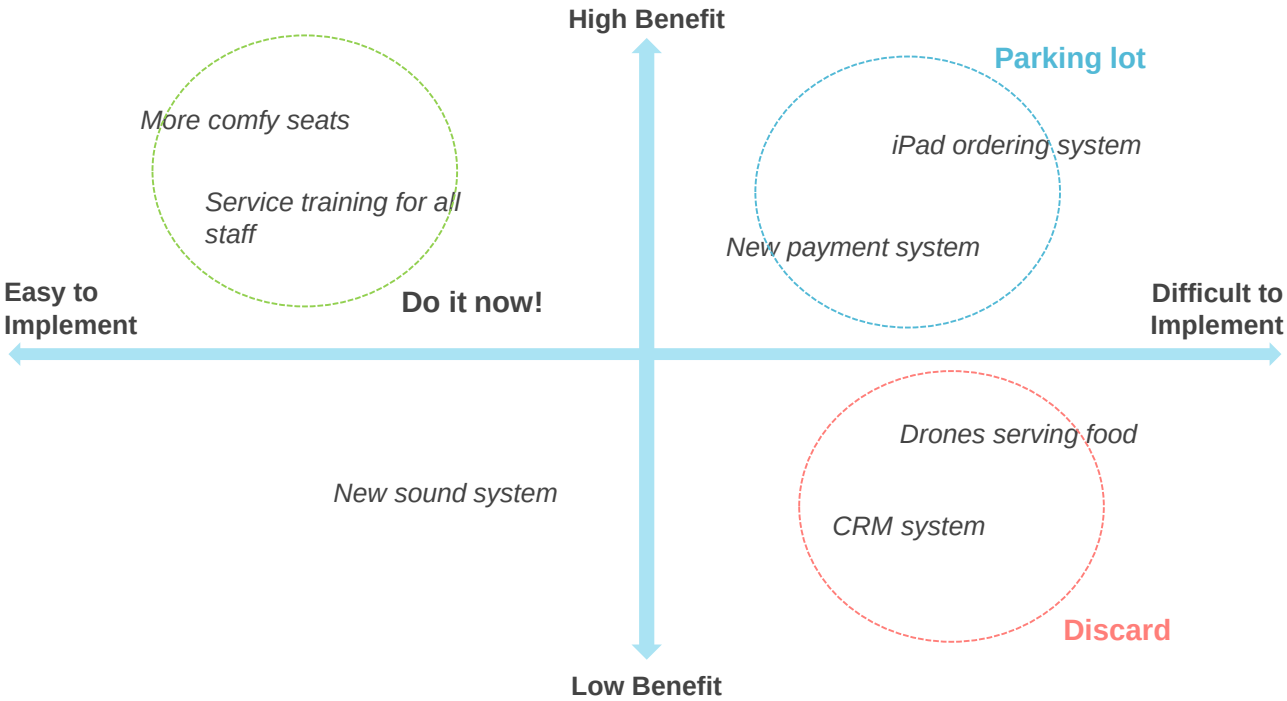
## Procedure

- Map all your ideas onto the prioritization map.
- Decide which ideas would be good to proceed with- usually ideas that are easy to implement and of high benefit value should be done first.
- Decide which other ideas that you intend to implement. Ideas of high benefit value but difficult to implement should be kept in view for future roadmap while you may want to discard some ideas that has low benefit value.

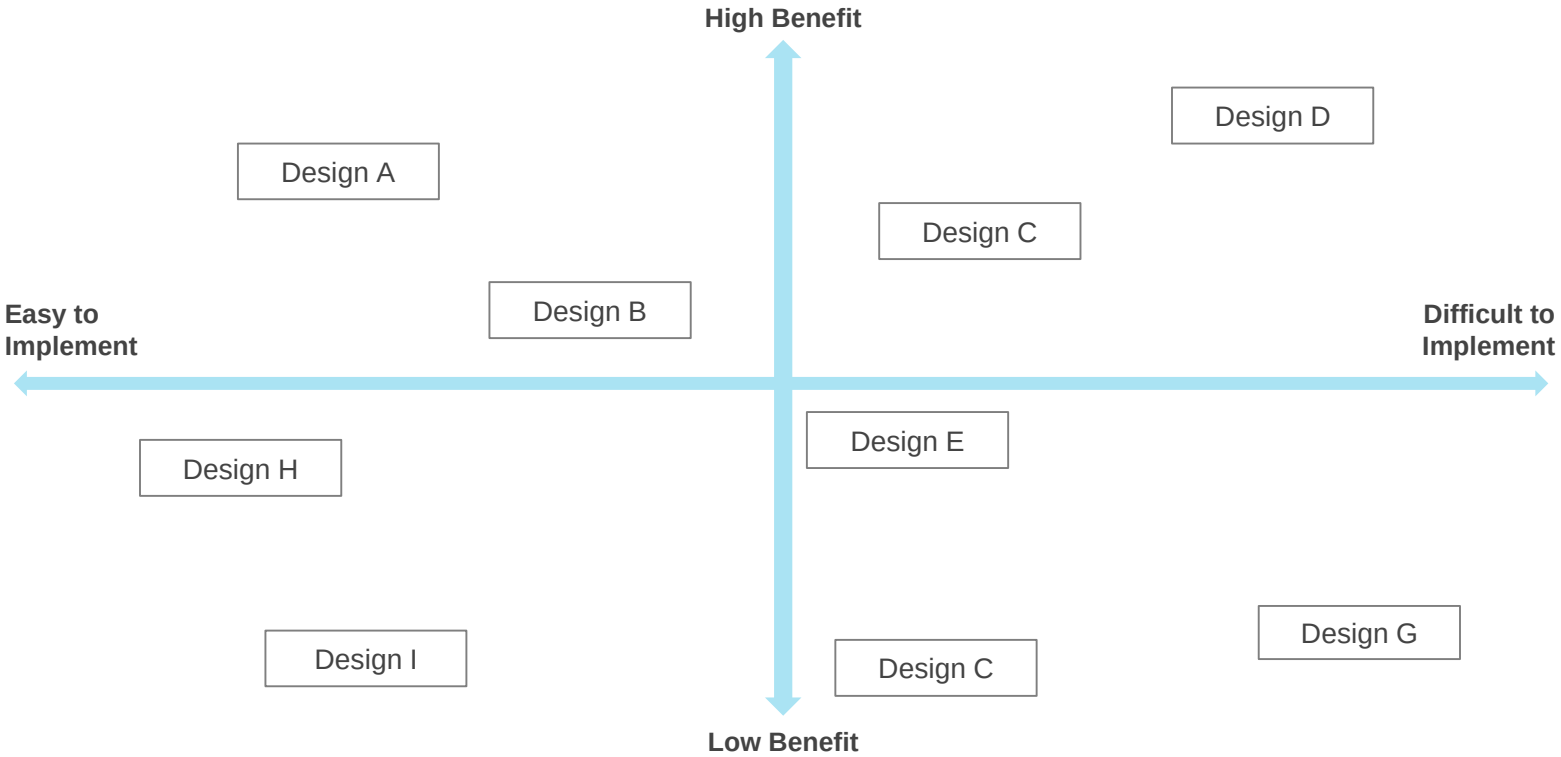
# PRIORITIZATION MAP – EXAMPLE

ILLUSTRATIVE

## *Improve Restaurant's Customer Experience*



# PRIORITIZATION MAP TEMPLATE



# AFFINITY MAP

## What is it?

- An affinity map is a method that allows you to analyze and organize your ideas by discovering relationships to develop a design direction based on affinities among your ideas. This could be done within the team to agree on the ideas in logical categories.

## Procedure

- Map all your ideas onto the affinity map
- Decide which ideas have affinity with each other and group them together and create a name for these group of ideas
- Do the same for all the ideas until you find that there are 3 or 4 very strong affinity groups of ideas. Discard the rest of the ideas that you think don’t belong.
- You may decide with your team which design direction could be the way to proceed

# AFFINITY MAP – EXAMPLE

*Ideas to Facilitate Classroom Learning*

ILLUSTRATIVE

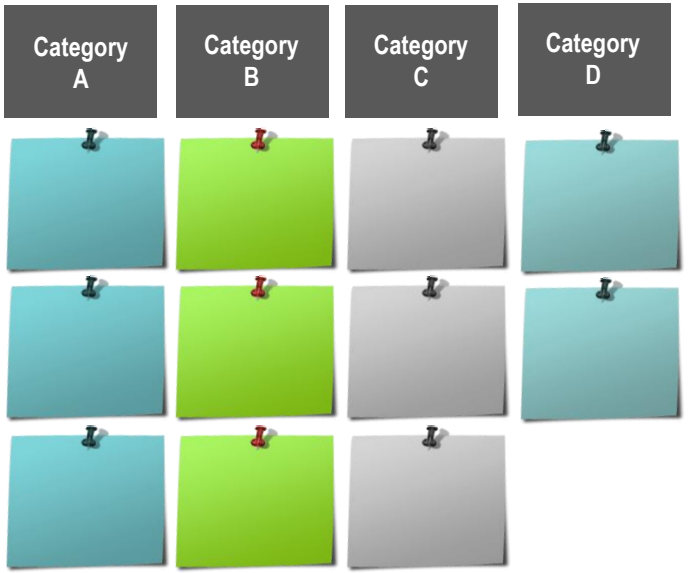

**Random Post-Its of ideas**


**Categorize and group the ideas**

# AFFINITY MAP TEMPLATE

## Random Post-Its of ideas

## Categorize and group the ideas



# IDEA EVALUATION

## What is it?

- Idea evaluation is a table of criteria to compare and understand the difference among your ideas based on the criteria
- This could be done if you or your team wants to evaluate and select the ideas together with the stakeholders

## Procedure

- Map all your ideas onto the idea evaluation table
- Write down key points of each idea based on each criteria
- Evaluate and decide which ideas to go ahead by eliminating ideas which do not fulfill important criteria

# IDEA EVALUATION – EXAMPLE

*How to Evaluate 4 Ideas Based on Customer Impact*

ILLUSTRATIVE

| Evaluation Criteria | Idea A | Idea B | Idea C | Idea D |
|---|---|---|---|---|
| **Customer Impact** | + Generally benefits<br>+ the customers | - May not | + Value for the young | + Will benefit in the future |
| **Business Impact** | | | | |
| **Potential Improvement** | | | | |
| **Feasibility** | | | | |
| **Innovativeness** | | | | |
| **Others** | | | | |

# IDEA EVALUATION TEMPLATE

| Evaluation Criteria | Idea A | Idea B | Idea C | Idea D |
|---|---|---|---|---|
| Customer Impact | | | | |
| Business Impact | | | | |
| Potential Improvement | | | | |
| Feasibility | | | | |
| Innovativeness | | | | |
| Others | | | | |

# IDEATE

| Activities | Tools to use | Deliverables |
|---|---|---|
| ▪ Ideation activities | ▪ Drawing and writing tools | ▪ Ideas / concepts |
| ▪ Brainstorming | ▪ Post-its | ▪ Sketches |
| ▪ Workshops | ▪ Flipchart / Whiteboard | ▪ Prioritization map |
| ▪ Mindmaps | ▪ Personas *(from Empathize)* | ▪ Affinity map |
| ▪ Sketching/drawing | ▪ Design brief *(from Define)* | ▪ Idea evaluation |
| | ▪ Brainstorming tools | |

# PROJECT ACTIVITY: IDEATE

1 Sketch out 5 *radical ideas* of your **WALLET** based on your design brief!

Write your problem statement above

2 Prioritize, categorize or evaluate your ideas using the prioritization map / affinity map / idea evaluation templates.

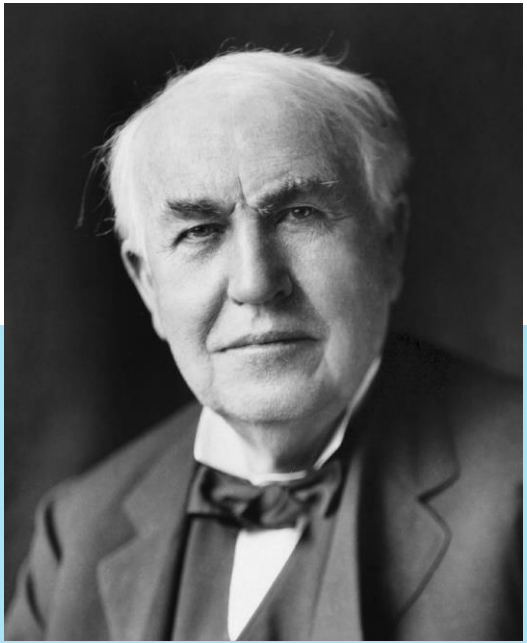

**Time allowed:**
**7 mins**

Prototype

# DESIGN THINKING

Operational
Excellence Consulting
Empowering Sustainable Change

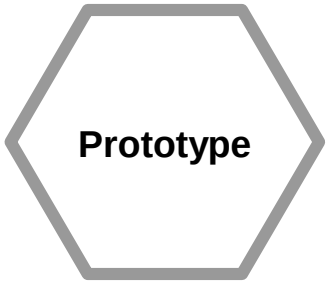
I have not failed. I’ve just found 10,000 ways that won’t work.”



**THOMAS EDISON**

INVENTOR

# PROTOTYPE PHASE




**Objective:** To build to think. A simple, cheap and fast way to shape ideas so you can experience and interact with them.

- A prototype can be any physical form: A wall of post-it notes, role-playing activity, a space, an object, an interface, a storyboard
- **Storyboard:** Create a scenario you can role play in a physical environment and let people experience your solution

# PROTOTYPES

- Prototypes are staged experiences and processes (e.g. rehearsals, walkthroughs, simulations, or pilots) that replicate any chosen part of a product or a service from frontstage to backstage

- They contain or might even zoom in on other forms of more traditional physical or digital prototypes, such as physical mock-ups, scale models, wireframes or click-models

- A prototype needs to create a first or early experiential form of the product or service or the customer experience

# WHY DO WE NEED PROTOTYPES?

1. Find design issues early
2. Iterate more quickly on a design concept
3. Compare design variations quickly
4. Gather design feedback better
5. Good presentational tool
6. Encourage collaboration
7. Fail quickly and cheaply
8. Manage the solution-building process

# PROTOTYPING & STORYTELLING

Prototyping

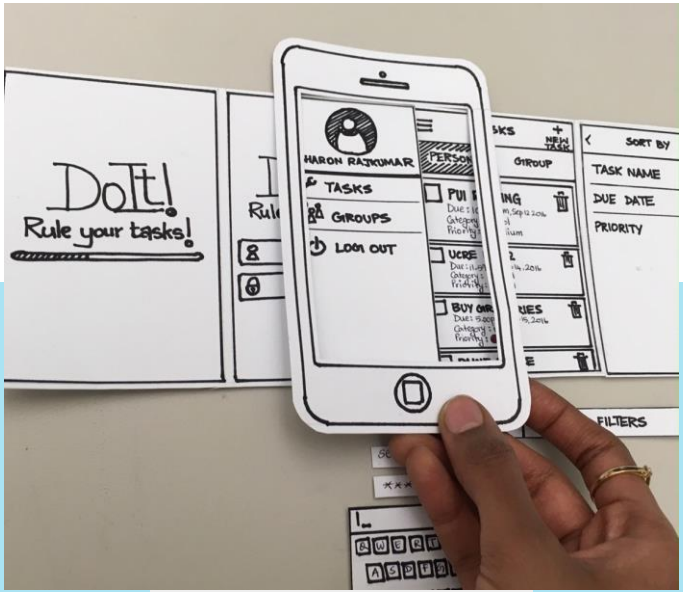
Storytelling

# STORYTELLING – WHAT MAKES A GOOD STORY?


Source: Based on HubSpot

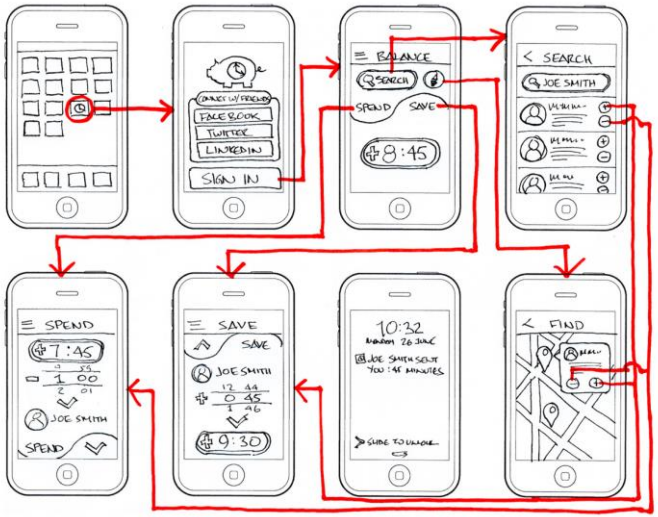
# PHYSICAL & PAPER PROTOTYPES

Physical Prototype

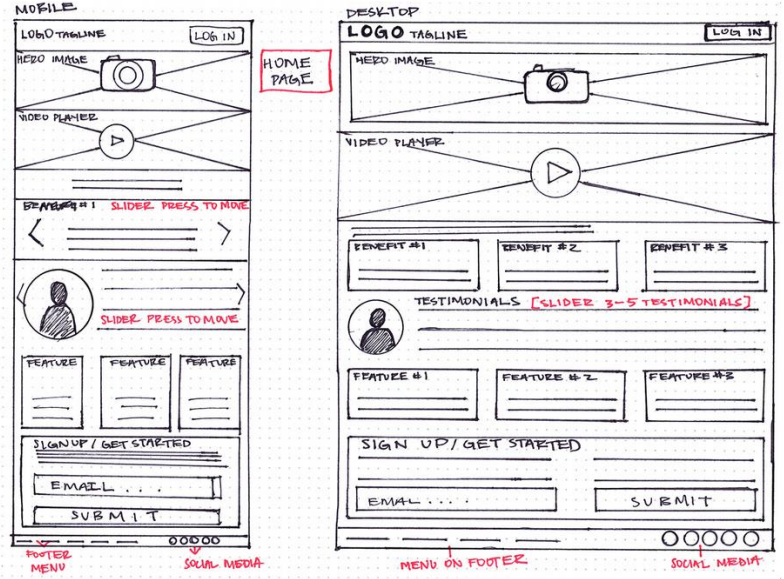



Paper Prototype

# PROTOTYPES OF DIGITAL ARTIFACTS & SOFTWARE




User Interface Flow Sketch




Mobile & Desktop Sketch Interface

# ACTING AS PROTOTYPING

***Role playing explains a product or service idea by acting in order to tell, explain and share it.***

Image Credit: servicedesigntools.org

# MAKE THE PROTOTYPE AS CLOSE TO THE FUTURE CONTEXT OF USE AS POSSIBLE

## CLASSROOM CONTEXT

## FUTURE CONTEXT

# STORYBOARD TEMPLATE

| STORYBOARD | | |
|---|---|---|
| **Scene 1** | **Scene 2** | **Scene 3** |
| *<insert picture here>* | *<insert picture here>* | *<insert picture here>* |
| **Scene 4** | **Scene 5** | **Scene 6** |
| *<insert picture here>* | *<insert picture here>* | *<insert picture here>* |

# PROTOTYPE

| Activities | Tools to use | Deliverables |
|---|---|---|
| ▪ Space prototyping | ▪ Paper | ▪ Physical prototypes |
| ▪ Physical prototyping | ▪ Cardboard | ▪ Wireframes |
| ▪ Paper construction | ▪ Construction materials | ▪ Storyboards |
| ▪ Wireframe building | ▪ Cutting and writing tools | |
| ▪ Storyboards | ▪ Space | |
| ▪ Role-plays | ▪ Props | |

# PROJECT ACTIVITY: PROTOTYPE

Get feedback and prototype your selected idea!

1. Prototype your **WALLET** using anything from scrap paper, straws, cardboards, role-play or post-its. Main idea is to bring your concept to life!
2. Get feedback from your partner / end-user as you build.

| ***Questions to ask:*** | ***Feedback:*** |
| --- | --- |
| | |

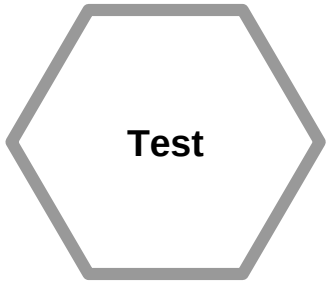

**Time allowed:**
**30 mins**

Test

# DESIGN THINKING

Operational
Excellence Consulting
Empowering Sustainable Change

# TEST PHASE




**Objective:** To ask for feedback on your prototypes. To learn about your user, reframe your POV and refine your prototype.

- **Show:** Let people use your prototype. Give it in their hands and let them use it. Listen to what they say.
- **Create experiences:** Let people talk about how they experience it and how they feel
- **Compare:** Let users test and compare multiple prototypes to reveal latent needs

# WHY DO WE TEST?

## To refine prototypes and solutions

Testing informs the next iterations of prototypes. Sometimes this means going back to the drawing board.

## To learn more about your user

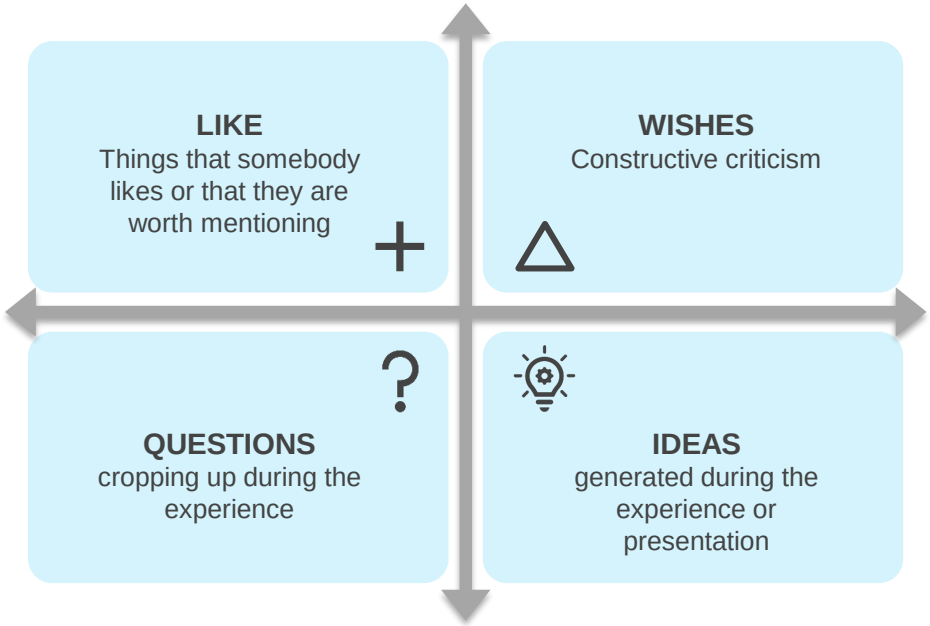
Testing is another opportunity to build empathy through observation and engagement—it often yields unexpected insights.

## To refine your POV

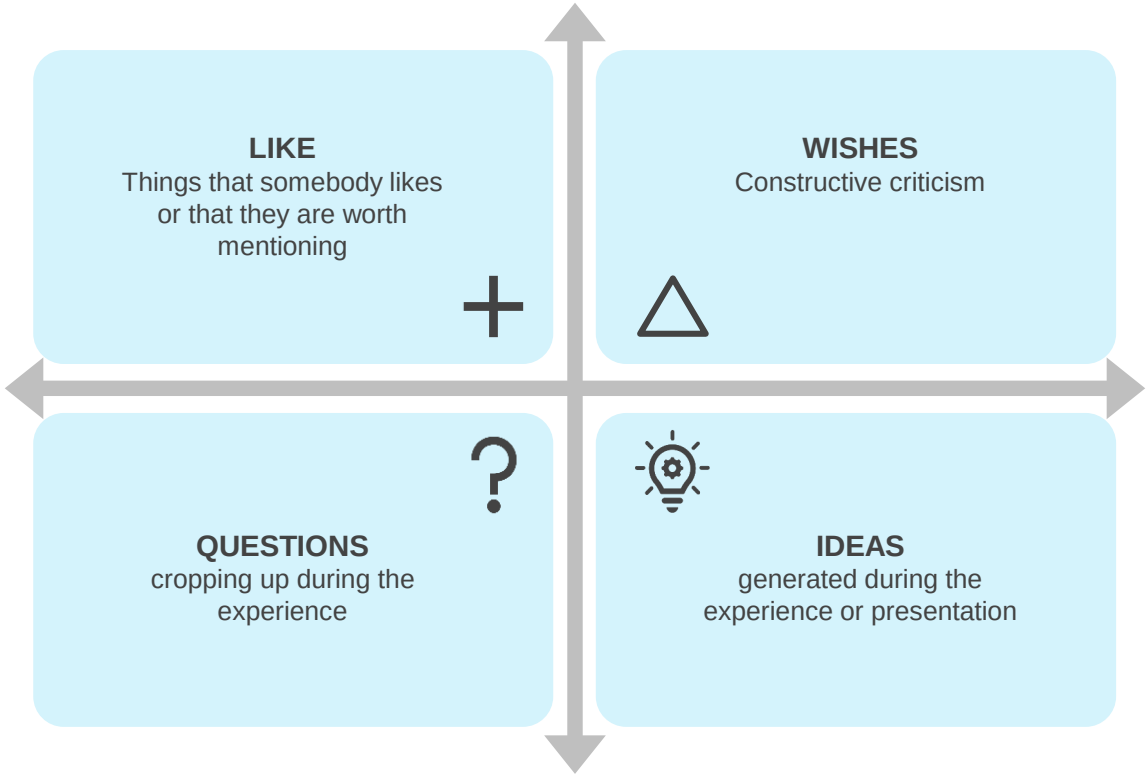
Sometimes testing reveals that not only did you not get the solution right, but also that you failed to frame the problem correctly.

# FEEDBACK CAPTURE GRID CAN BE USED TO CAPTURE USER FEEDBACK

- The matrix itself arranges thoughts and ideas into four categories for easy assessment:
  - **Like:** What do we like?
  - **Wishes:** What wishes do we have?
  - **Questions:** What questions have cropped up?
  - **Ideas:** Which initial ideas and solutions have we found?



# FEEDBACK CAPTURE GRID TEMPLATE



# USER FEEDBACK – EXAMPLE

ILLUSTRATIVE

| Observer's note on feedback of Phone X | |
|---|---|
| **Customer profile / background** | |
| ▪ *Jonathan Leeson, 38*<br>▪ *Lawyer, single* | |
| **Pros of concept / prototype** | **Cons of concept / prototype** |
| ▪ *Could turn on Phone X easily*<br>▪ *Attracted by the colors*<br>▪ *Commented on the ease of the buttons*<br>▪ *Pleased with the features included in Phone X* | ▪ *Confused by the user interface for settings*<br>▪ *Frowned at the price of Phone X*<br>▪ *Commented that the size of Phone X is too big for his pocket* |
| **Any other feedback** | |
| ▪ *Asked if there is any problem if he wants to switch to Phone X from his existing phone* | |

# USER FEEDBACK TEMPLATE

| User Feedback | |
|---|---|
| **Customer profile / background** | |
| | |
| **Pros of concept / prototype** | **Cons of concept / prototype** |
| | |
| **Any other feedback** | |
| | |

# PROTOTYPE EVALUATION – EXAMPLE

ILLUSTRATIVE

| Evaluation Criteria | Prototype A | Prototype B | Prototype C | Prototype D |
|---|---|---|---|---|
| **Functionality** | ← *Achieved product objectives* → | | | |
| **Cost** | | | *Too expensive for all users* | |
| **Aesthetics** | | *Jane is attracted by the colors* | | |
| **Usability** | *All users think it is simple* | *Easy to understand* | | |
| **Maintenance** | | | | *Peter feels this is not durable* |
| **Others** | | | | |

# PROTOTYPE EVALUATION TEMPLATE

| Evaluation Criteria | Prototype A | Prototype B | Prototype C | Prototype D |
|---|---|---|---|---|
| **Functionality** | | | | |
| **Cost** | | | | |
| **Aesthetics** | | | | |
| **Usability** | | | | |
| **Maintenance** | | | | |
| **Others** | | | | |

# TEST

| Activities | Tools to use | Deliverables |
|---|---|---|
| ▪ User testing<br>▪ Observation<br>▪ Picture-taking<br>▪ Evaluation<br>▪ Discussion | ▪ Briefing checklist<br>▪ Interview checklist<br>▪ Observation checklist<br>▪ Prototypes to test *(from Prototype)* | ▪ List of user feedback<br>▪ Observation<br>▪ Evaluation map<br>▪ Proposed refinement |

# PROJECT ACTIVITY: TEST

Test your various prototypes of **WALLET** with users.

1. Show your prototypes and allow your users to understand and perceive your ideas.
2. Think of questions to ask and get feedback from them - do not be afraid of criticism!

***Feedback / refinement of selected concept:***

3. Evaluate your prototype or ideas.


**Time allowed:**
**15 mins**

# SUMMARY OF DESIGN THINKING PROCESS

- The design thinking action plan is a framework that contains a series of action phases that execute the design thinking process

- Design thinking action plan is made of 5 phases:
  - **Empathize**
  - **Define**
  - **Ideate**
  - **Prototype**
  - **Test**

- Each action phase has a specific objective, activities, tools and deliverables in order to proceed

# CRITICAL SUCCESS FACTORS

| | |
|---|---|
| 1 | Top down approach |
| 2 | Customer experience council meetings chaired by the CEO |
| 3 | The mindset is more important than the methodology |
| 4 | Start from the customers you want to serve, not your products and services |
| 5 | Spend time doing deep customer immersion |
| 6 | The customer experience is more important than the digital technology |
| 7 | Be open to iterative, collaborative engagement with team members and stakeholders |
| 8 | Be able to do rapid prototypes and iterating with prototypes |
| 9 | Assign dedicated resources |
| 10 | Incorporate design thinking in your organizational culture |

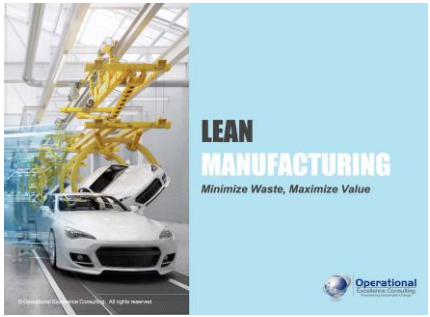
# ACTIVITY: GROUP DISCUSSION

1. How did engaging and testing the prototype with the real person change the direction that the prototype took?
2. What was it like showing unfinished work to another human being?
3. How did the pace – the quick iterative cycle – feel relative to how you normally work?
4. If you have to do it over again, what step(s) would you want to improve?
5. What is one thing (e.g. step or tool) that you want to try tomorrow?

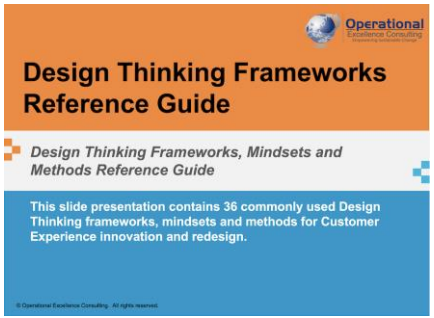

**Time allowed:**
**5 mins**

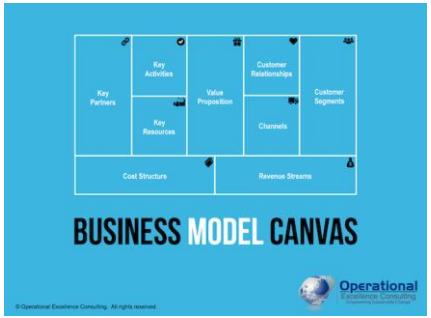
# Thank you

# OTHER PRESENATATIONS YOU MIGHT LIKE

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Excellence Consulting
Empowering Sustainable Change

# TEMPLATES

# USER FEEDBACK TEMPLATE

| USER FEEDBACK | |
|---|---|
| **Customer profile:** | |
| | |
| **Questions to ask:** | |
| *List of questions* | *Why do we ask those questions?* |
| **User feedback:** | |
| *Observations and feedback* | *Insights / Actions* |

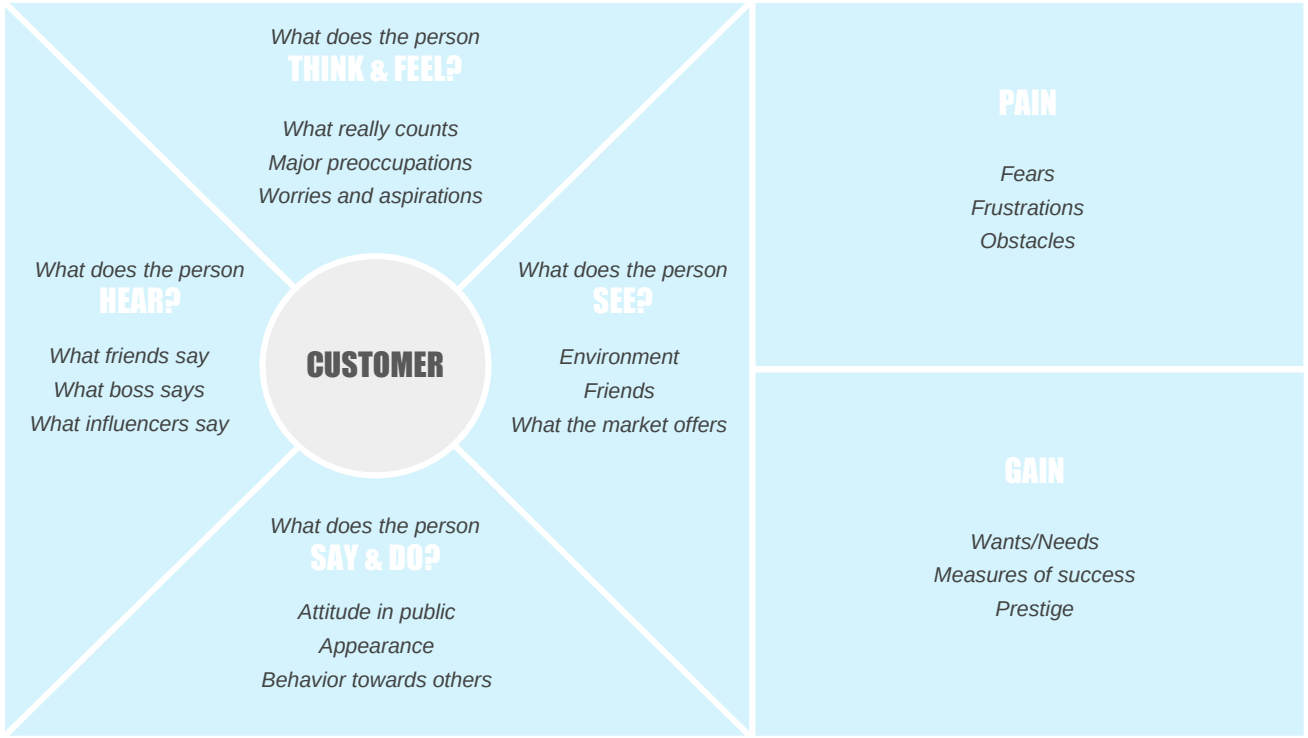
# PERSONA TEMPLATE - 1

| Name: | |
|---|---|
| **Profile / Lifestyle** | **Characteristics** |
| | |
| **Goals / Ambitions** | **Behaviors / Habits** |
| | |
| **Fears / Challenges** | **Influencers & Activities** |
| | |

# PERSONA TEMPLATE - 2

| Name: | |
|---|---|
| **Persona description** | |
| *Age, gender, place of residence, marital status, hobbies, leisure time, education and training, position in the company, social environment, way of thinking, etc.* | |
| **Jobs-to-be-done** | **Gains** |
| ▪ *What task performance is supported by the product?*<br>▪ *What are the goals?*<br>▪ *Why does it makes sense?* | ▪ *To what extent do the current products make the customer happy?* |
| **Use cases** | **Pains** |
| ▪ *How is the product used, and by whom is it used? What happens before and after use?*<br>▪ *How does the customer obtain information?*<br>▪ *What does the purchase process look like?*<br>▪ *Who influences the decision?* | ▪ *What causes a bad feeling in the customer with the current products?*<br>▪ *What are the worries of the user?* |

# EMPATHY MAP TEMPLATE

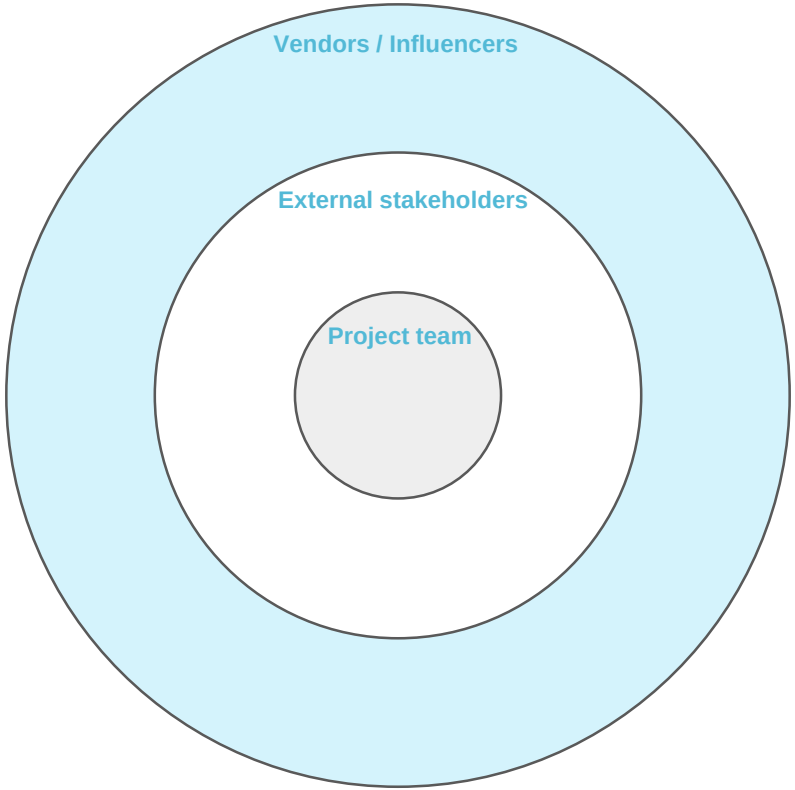



Source: Adapted from Xplane

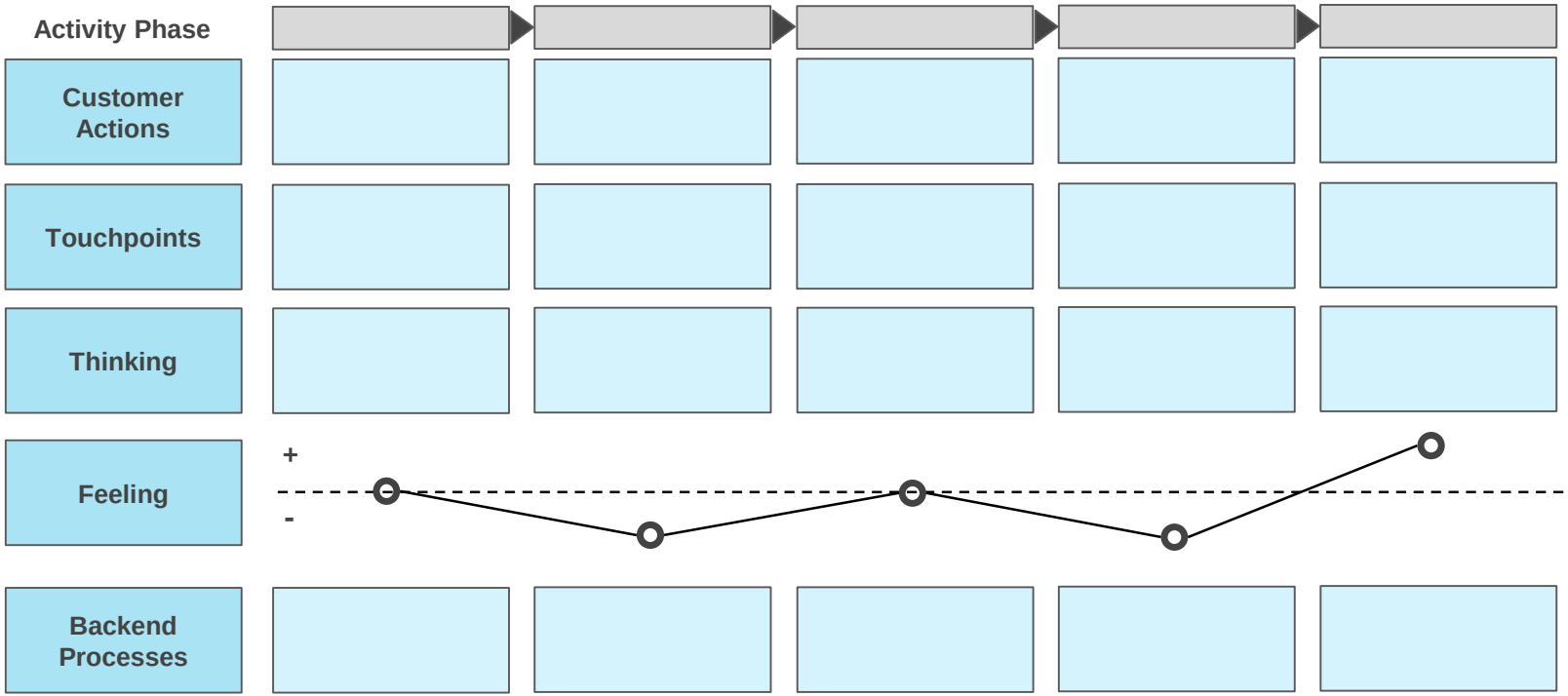
# DESIGN BRIEF TEMPLATE

| DESIGN BRIEF | |
|---|---|
| **User Perception / Feedback** | |
| | |
| **Problem Statement (Point of View)** | |
| | |
| **Design Goal / Objective (How Might We)** | |
| | |
| **Design Requirements** | |
| | |

# STAKEHOLDER MAP TEMPLATE



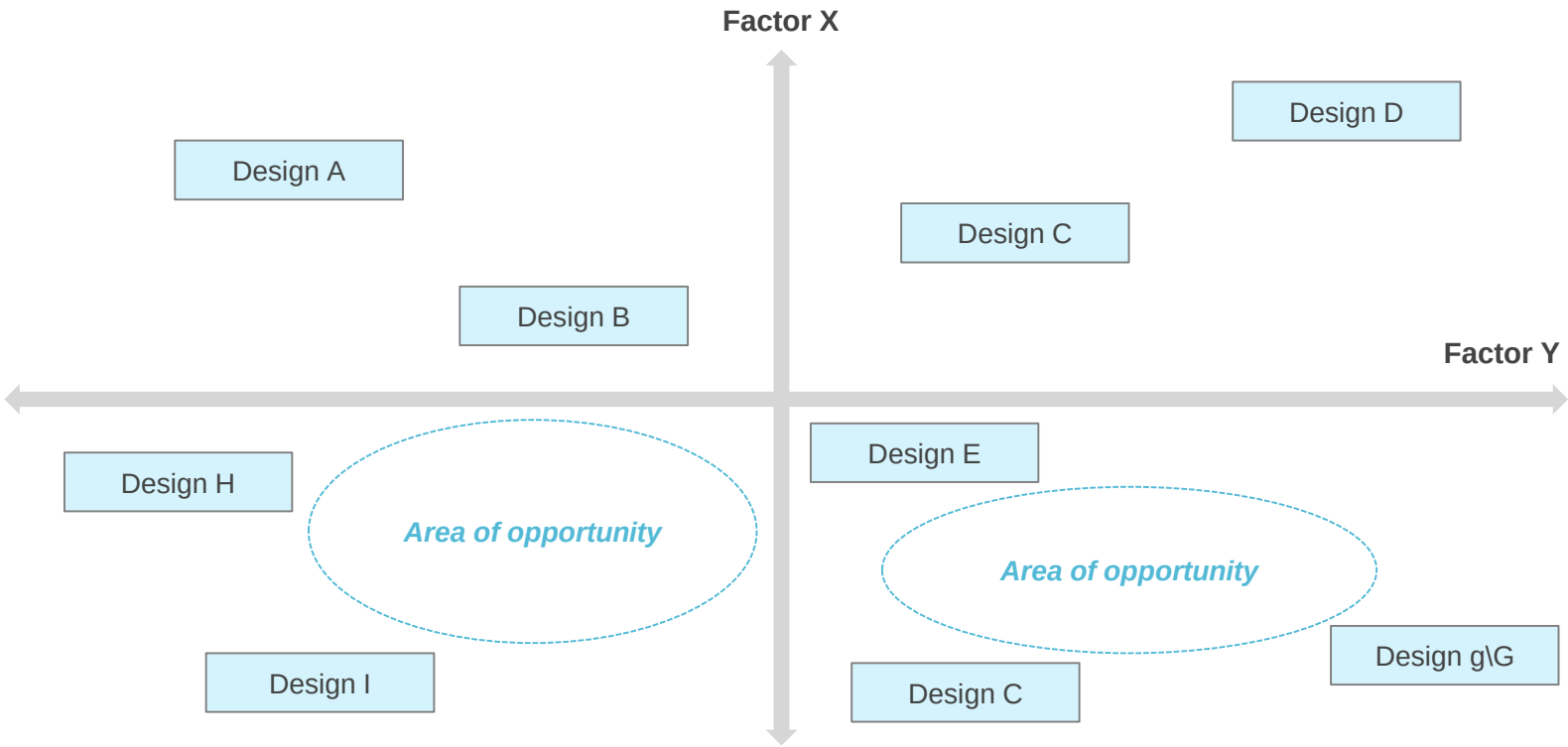
# JOURNEY MAP TEMPLATE



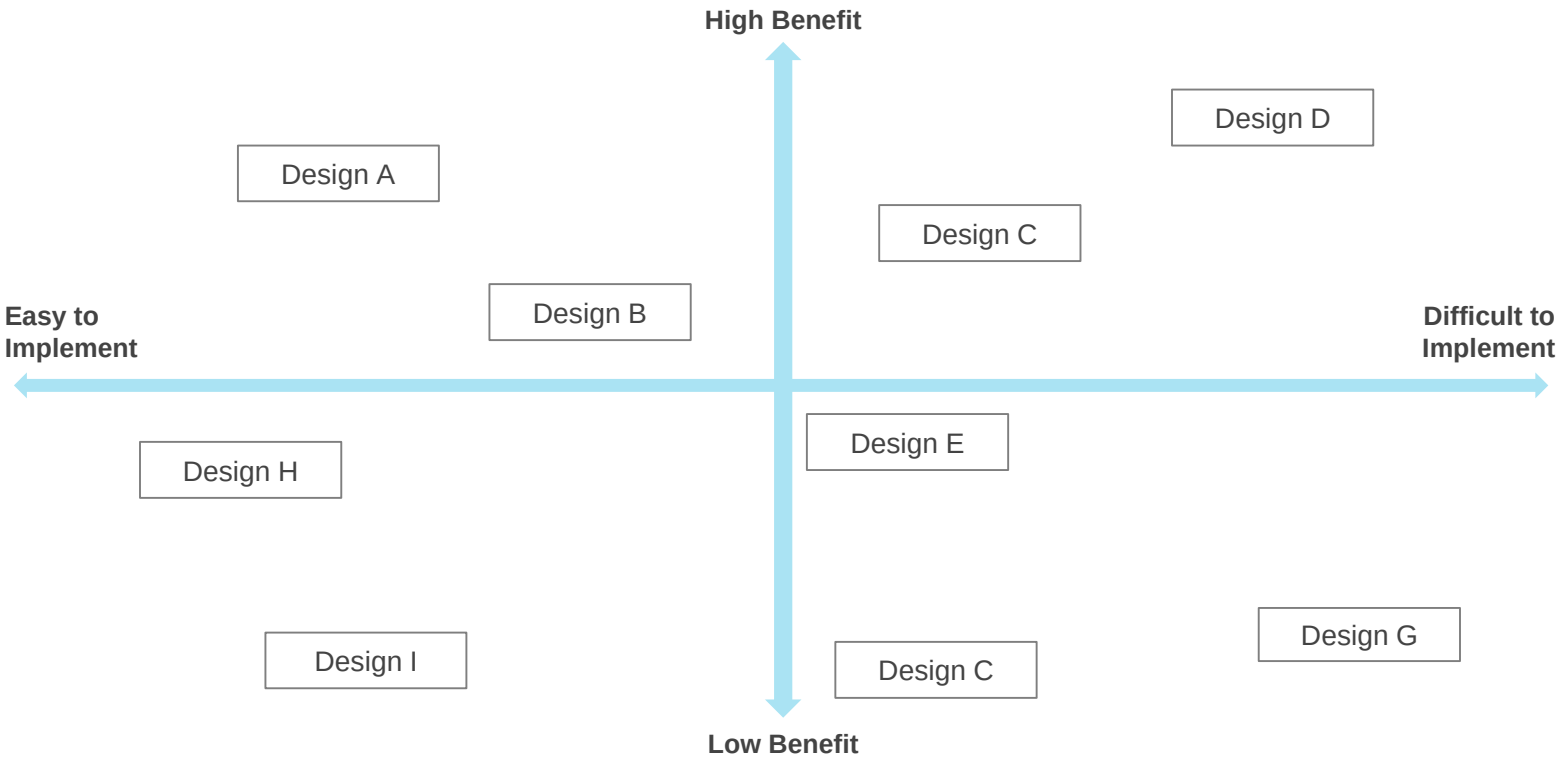
# CONTEXT MAP TEMPLATE

| CONTEXT MAP | | |
|---|---|---|
| **Target users / User needs** | | **Technology factors** |
| | | |
| **Business factors** | **Trends** | **Uncertainties** |
| | | |
| **Other questions?** | | |
| | | |

# OPPORTUNITY MAP TEMPLATE



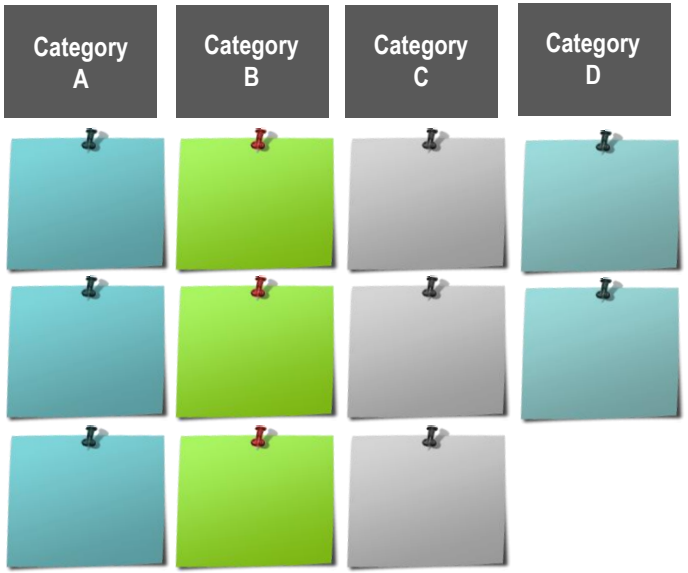
# PRIORITIZATION MAP TEMPLATE



# AFFINITY MAP TEMPLATE

## Random Post-Its of ideas

## Categorize and group the ideas



# IDEA EVALUATION TEMPLATE

| Evaluation Criteria | Idea A | Idea B | Idea C | Idea D |
|---|---|---|---|---|
| Customer Impact | | | | |
| Business Impact | | | | |
| Potential Improvement | | | | |
| Feasibility | | | | |
| Innovativeness | | | | |
| Others | | | | |

# STORYBOARD TEMPLATE – 1

| STORYBOARD | | |
|---|---|---|
| **Scene 1** | **Scene 2** | **Scene 3** |
| *<insert picture here>* | *<insert picture here>* | *<insert picture here>* |
| **Scene 4** | **Scene 5** | **Scene 6** |
| *<insert picture here>* | *<insert picture here>* | *<insert picture here>* |

# STORYBOARD TEMPLATE – 2

| STORYBOARD | | |
|---|---|---|
| **Scene 1** | **Scene 2** | **Scene 3** |
| *<insert picture here>* | *<insert picture here>* | *<insert picture here>* |
| **Dialog** | **Dialog** | **Dialog** |
| | | |
| **Action** | **Action** | **Action** |
| | | |

# USER FEEDBACK TEMPLATE

| User Feedback | |
|---|---|
| **Customer profile / background** | |
| | |
| **Pros of concept / prototype** | **Cons of concept / prototype** |
| | |
| **Any other feedback** | |
| | |

# PROTOTYPE EVALUATION TEMPLATE

| Evaluation Criteria | Prototype A | Prototype B | Prototype C | Prototype D |
|---|---|---|---|---|
| **Functionality** | | | | |
| **Cost** | | | | |
| **Aesthetics** | | | | |
| **Usability** | | | | |
| **Maintenance** | | | | |
| **Others** | | | | |

# WORKSHOP PLANNING CANVAS

**Workshop Planning Canvas:**

| Planning | Implementation | | | | | Follow-up |
|---|---|---|---|---|---|---|
| Design Challenge | Agenda | | | | | Result |
| | Day 1 | Day 2 | Day 3 | Day 4 | Day 5 | |
| | | | | | | |
| Participants | | | | | | Follow-up |
| | | | | | | |
| | | | | | | |
| Administrative issues | | | | | | Next steps |
| | | | | | | |
| | | | | | | |
| Feedback | | | | | | What needs to be improved? |

# WALLET DESIGN
# PROJECT WORKSHEETS

# PROJECT ACTIVITY: EMPATHIZE

Design a **WALLET** that is useful and meaningful for your partner.

1. What questions would you ask your partner? Write it down.

2. Take down notes of your partner's response. Remember to observe, listen and empathize what he/she says.


**Time allowed:**
**15 mins**

# PROJECT ACTIVITY: DEFINE

Define the **WALLET** business case to present to your management.

1. Insights to my partner's lifestyle and needs.

2. Insights to my partner's problems.

3. How do you propose what you should do? Write it down. **[ POV = user + need + insight ]**

4. Discuss with your group on any one of the stakeholder map / context map / customer journeys / opportunity map.

5. Build your design brief.


**Time allowed:**
**15 mins**

# PROJECT ACTIVITY: IDEATE

1 Sketch out 5 *radical ideas* of your **WALLET** based on your design brief!

Write your problem statement above

2 Prioritize, categorize or evaluate your ideas using the prioritization map / affinity map / idea evaluation templates.


**Time allowed:**
**7 mins**

# PROJECT ACTIVITY: PROTOTYPE

Get feedback and prototype your selected idea!

1. Prototype your **WALLET** using anything from scrap paper, straws, cardboards, role-play or post-its. Main idea is to bring your concept to life!
2. Get feedback from your partner / end-user as you build.

| ***Questions to ask:*** | ***Feedback:*** |
| --- | --- |
| | |


**Time allowed:**
**30 mins**

# PROJECT ACTIVITY: TEST

Test your various prototypes of **WALLET** with users.

1. Show your prototypes and allow your users to understand and perceive your ideas.
2. Think of questions to ask and get feedback from them - do not be afraid of criticism!

***Feedback / refinement of selected concept:***

3. Evaluate your prototype or ideas.


**Time allowed:**
**15 mins**