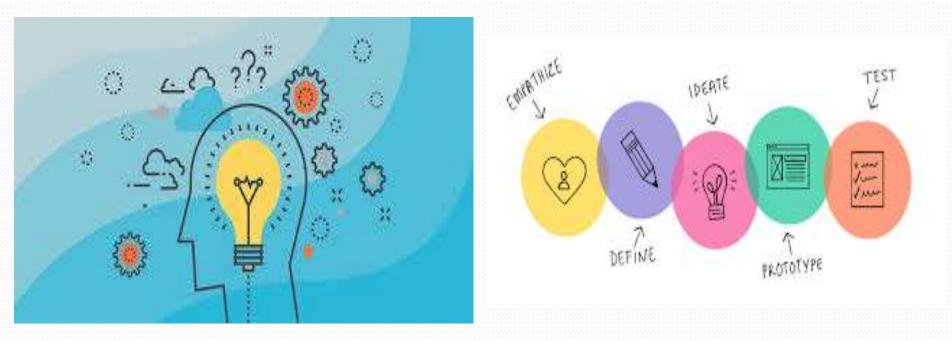
# **Design Thinking**



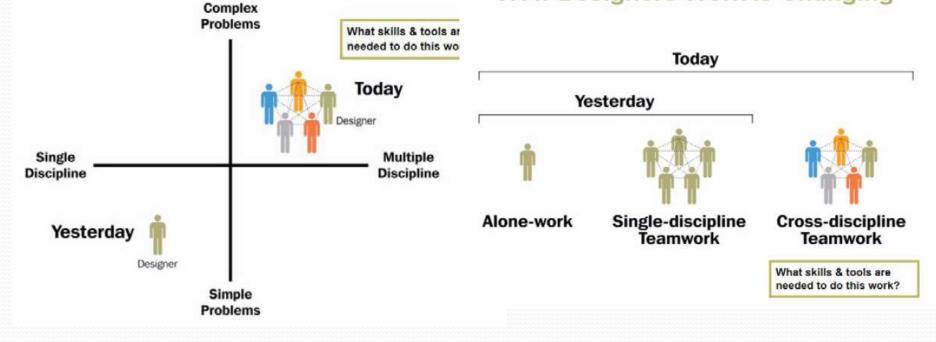
### Contents:

- Design Thinking Vs Human Centred Design
- \* Fundamental concepts integral to DT
- \* DT Vs Scientific method
- \* Divergent Thinking-Case study
- \* Convergent Thinking- Case study
- \* DT-Attributes
- \* HCD process

#### Design thinking Vs Human centered design

#### What Designers Face is Changing

#### How Designers Work is Changing



#### Which Problems Can Design Thinking help to solve

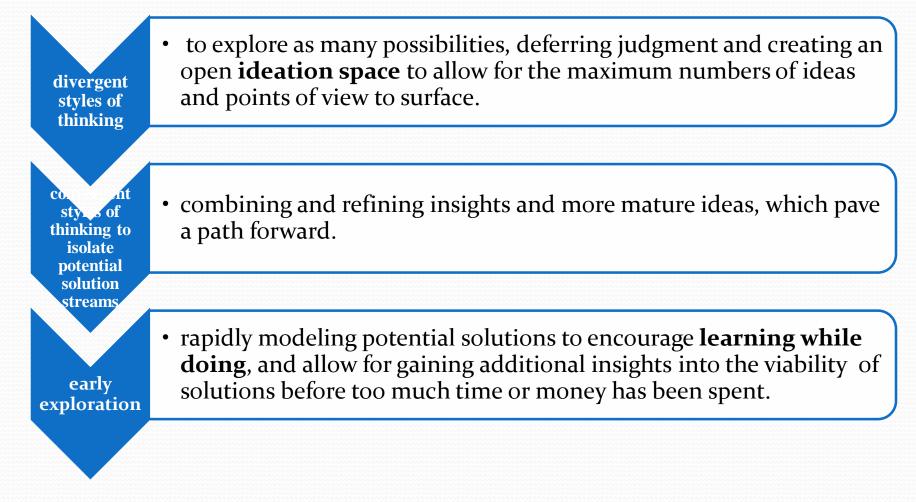
- Redefining Value
- Human-centered Innovation
- Quality of life
- Problems affecting diverse groups of people
- Involving multiple systems
- Shifting markets and Behaviors
- Coping with Rapid social or market changes
- Issues relating to corporate culture
- Issues relating to new technology

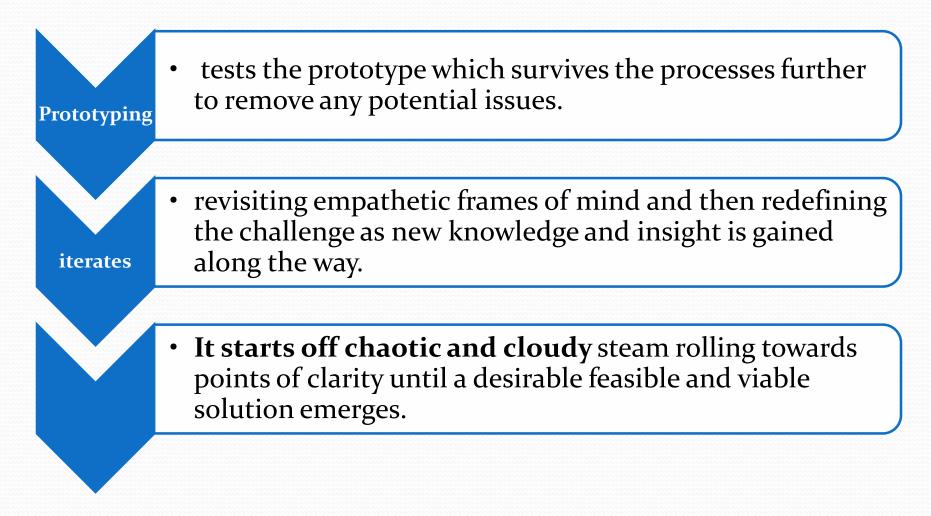
- Re-Inventing Business models
- Addressing rapid changes in Society
- Complex unsolved societal challenges
- Scenario's involving multi disciplinary teams
- Entrepreneurial initiatives
- Education advances
- Medical Breakthroughs
- Problems that data can't solve

 Design thinking is best suited to addressing problems where multiple spheres collide, at the intersection of business and society, logical and Emotion ,rational and creative, human needs and economic demands and between systems and individuals.

# **Design Thinking**

starts with Empathy	<ul> <li>a deep human focus to gain insights which may reveal new and unexplored ways of seeing.</li> <li>courses of action to follow in bringing about preferred situations for business and society.</li> </ul>
refiging the perceived problem or challenge	• gaining perspectives, which allows a more holistic look at the path towards these preferred situations.
collaborative , multi- disciplinary team work	• to leverage the skills, personalities and thinking styles of many in order to solve multifaceted problems.





#### Fundamental concepts which are integral to DT approach

Empathy	"the ability to understand and share the feelings of another"
Ethnography	Ethnography is a research discipline interested in studying the behavior of people in specific situations and eliciting from the people and their interpretation of their behavior.
Divergent Thinking	Divergent thinking is an expansive mode of thinking
Convergent Thinking	Convergent thinking is converse of divergent thinking
Visual Thinking	In the context of design thinking visual thinking relates to communicating ideas through what is seen or experienced. By using mental images or representations, design thinkers can understand an idea and think beyond the visible literal forms and color to achieve an understanding.

#### **Design thinking Vs Scientific Method:**

#### **Scientific Method**

The scientific method begins with rigorously defining all the parameters of the problem , so as to arrive at a solution

#### Design Thinking

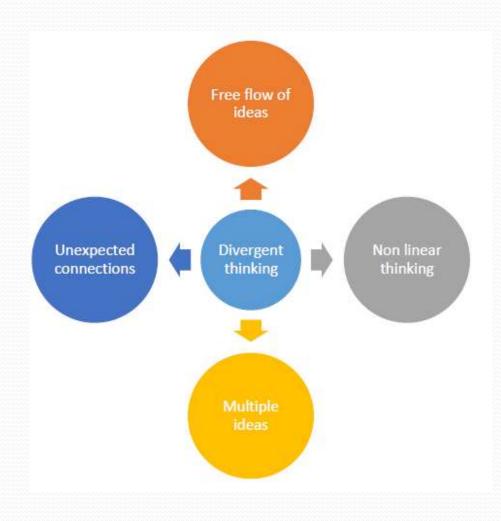
In Design thinking it is supposed to identify both the known and the ambiguous facets of the problem statement along with the current situation.

Design Thinking helps to unearth hidden parameters and open alternate paths to reach the solution

Design Thinking is an iterative approach; intermediate solutions in the process of developing the larger solution to achieve the goal can also act as prospective starting points for chalking out alternative paths.

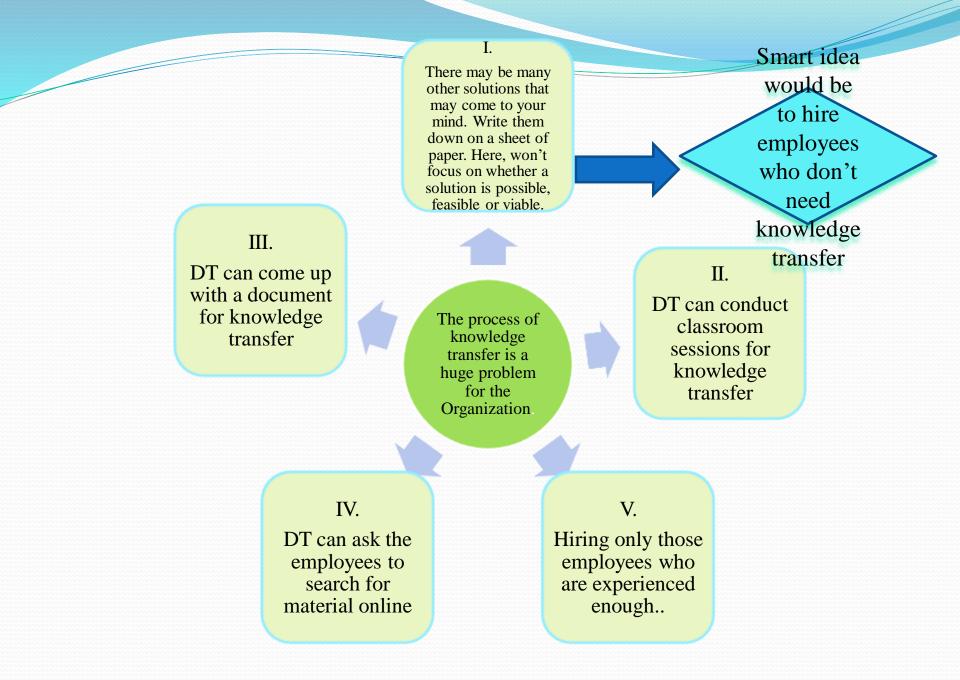
This can, at times also lead to redefined of the problem statement

#### **Design Thinking ---Divergent Thinking**



Case Study on Divergent Thinking:

• **Problem Statement**: The process of knowledge transfer is a huge problem for the Organization.



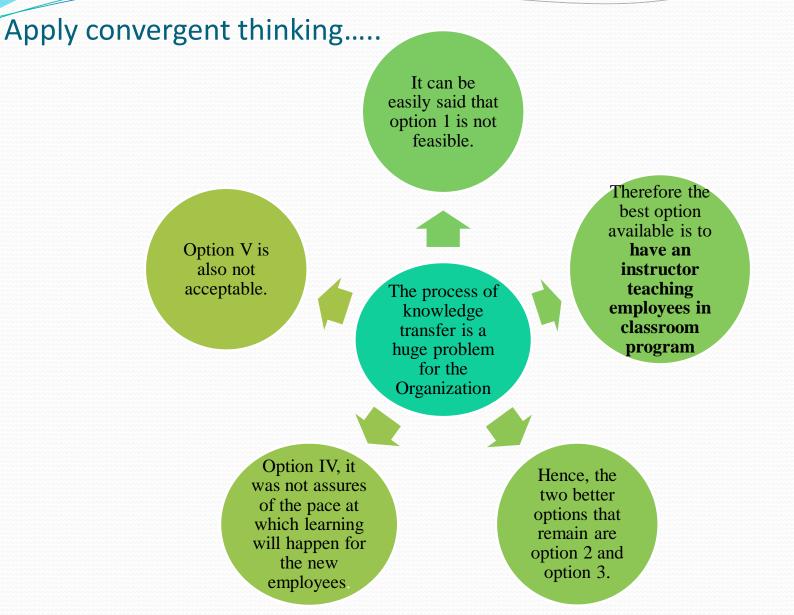
Design Thinking- Convergent Thinking:

Aspects of convergent Thinking:

- ✓ The principle aspect of convergent thinking is that it should help to arrive at a single best answer without any room for ambiguity.
- Another important aspect of convergent thinking is that Judgment is an important part of this process.
- Divergent thinking requires thinkers to suspend judgment .but in convergent thinking encourages thinkers to apply the power of judgment.

Case Study on convergent thinking

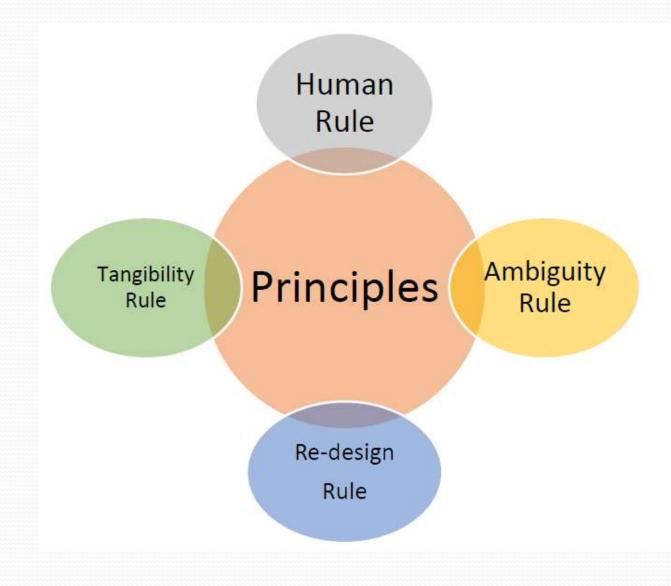
• The problem statement at hand is "Knowledge transfer adds to the cost of the company".



**Design Thinking – Attributes** 

• Design thinking is an extensive study of various attributes, like principles, methods and processes, challenges etc.

#### **The principles of Design Thinking:**



#### **Design Thinking processes - Analysis Vs Synthesis**

- analysis is the process of breaking down a big single entity into multiple fragments.
- The different smaller components of the problem statement are to be solved one-byone, if possible.
- Later, a feasibility check is done to include the feasible and viable solutions.
- Design thinkers are, then, encouraged to connect with the diverse ideas and examine the way each idea was composed.

- Synthesis refers to the process of combining the fragmented parts into an aggregated whole.
- This process leads to creation of a coherent bigger entity, which is something new and fresh.
- Once the design thinkers have excluded the non-feasible and non-viable solutions and have zeroed-in on the set of feasible and viable solutions, it is time for the thinkers to put together their solutions.
- The design thinker's start from a big entity called the problem statement and then end up with another bigger entity, i.e. the solution.

#### Case Study:

- Problem Statement:
- Suppose the problem statement at hand is to contain the attrition that happens in companies worldwide. High quality employees leave the organization, mainly after the appraisal cycle. As a result, an average company loses its valuable human resources and suffers from an overhead of transferring the knowledge to a new employee. This takes time and additional human resource in the form of a trainer, which adds to the company's costs. Devise a plan to contain attrition in the company.

#### Analysis:

- The employees are not motivated anymore to work in the company.
- Appraisal cycle has something to do with attrition.
- Knowledge transfer is necessary for new employees
- Knowledge transfer adds to the cost of the company.

#### Synthesis:

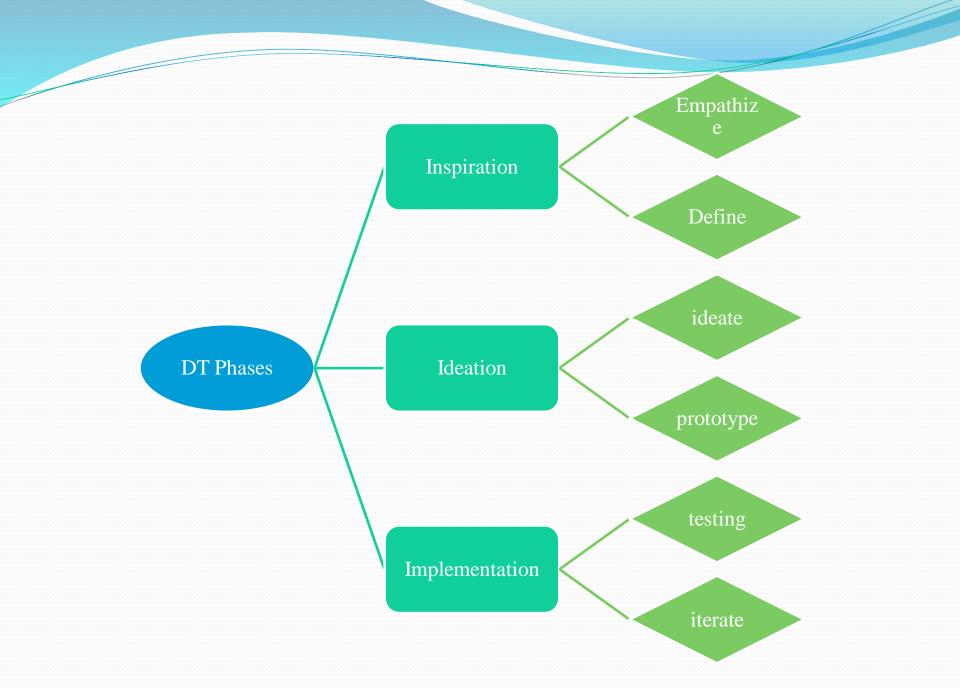
- To solve the problem of lack of motivation, the management can plan some sort of incentives that can be given on a regular basis.
- To solve the issue of occurrence of attrition during appraisal cycle, the management can conduct a meeting with the employee leaving the organization, and take their insight as to what led them to leave the company.
- For knowledge transfer, the management can hire only those people who are experts in a domain.
- Regarding concerns for budget of knowledge transfer, the management can have a document prepared by experts in a domain and this document can be uploaded on intranet

Popular Design thinking Frame works:

- Heart, Head and Hand
- Design School's 5 stage process
- Deep-Dive process( IDEO's First Expression)
- Design Council of the UK: 4D's(Discover, Define, Develop, Deliver)
- Frog Design( Discover, design , deliver)
- HCD-Human-Centered Design

Human-Centered Design (HCD) process

- Human-centered is a philosophy that empowers an individual or team to designing products, services, systems and experiences that address the needs and insights of the user who experience the problems
- For general understanding
- Human-centered design consists of three phases.
- Inspiration Phase
- Ideation phase
- Implementation Phase



#### Examples of human centred design:

#### 1. Pull/Push Door Human centred design



The Norman Door

# PUSH PULL

# 2. Kids ToothbrushTooth brush for adult

#### **Designed by IDEO for Oral-B**



3. Portable Music player –I pod Shuffle





#### 4.Ketchup bottle



#### 5.Lays stack packaging





Kellogg's Corn Flakes:

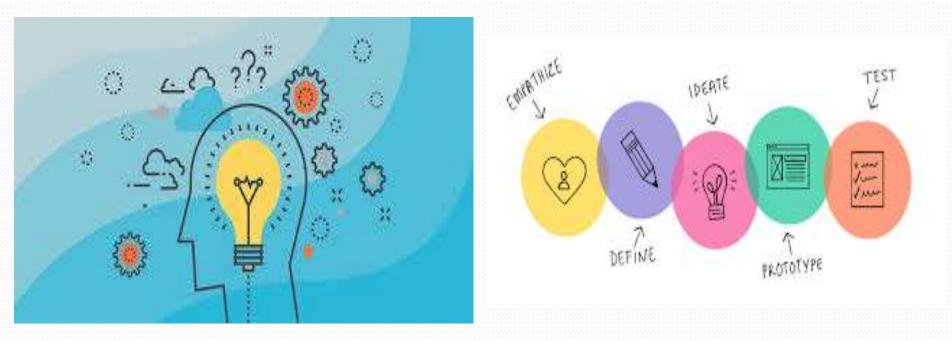




#### Colgate (Electrical Toothbrushes):



# **Design Thinking**



#### Contents:

- Role of Empathy in design thinking
- > Why Empathy is so important
- Methods and tools of empathy
- How to become more Empathic Designer

#### Methods and tools of empathy:

Know The people:

- Various Mindsets:
- Observing Everything
- Building Empathy
- Immersing in daily life
- Listening openly
- Looking for problems and needs

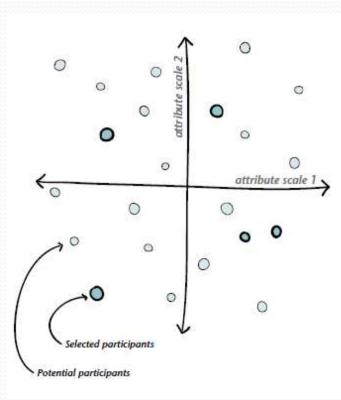
#### **Know People Methods**

- Research Participant Map
- Research Planning Survey
- ✓ User Research Plan
- ✓ Five Human Factors
- ✓ POEMS
- ✓ Field Visit
- ✓ Video Ethnography
- Ethnographic Interview

- ✓ User Pictures Interview
- Cultural Artifacts
- Image Sorting
- Experience Simulation
- Field Activity
- ✓ Remote Research
- ✓ User Observations

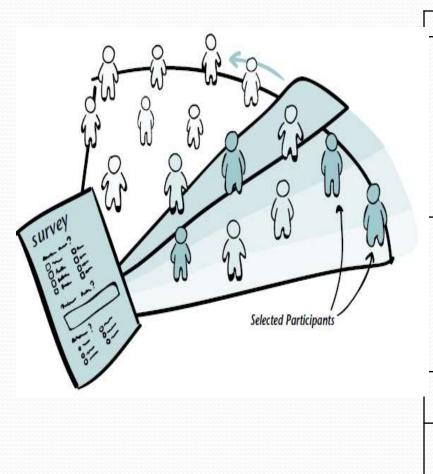
Database

#### **Research Participant Map:**



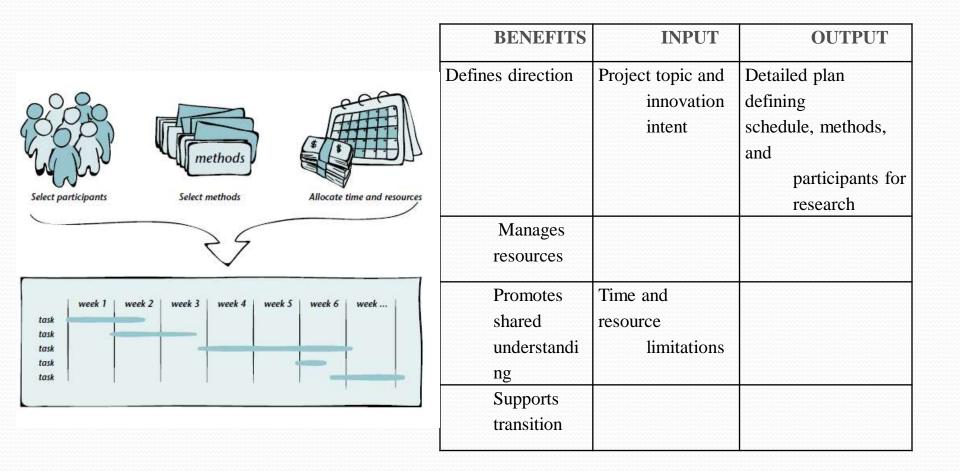
BENEFITS	INPUT	OUTPUT
Encourages	Project's area	Selection of
comprehensiv	of study	participants
eness		that covers the full
		range
		of the project
		space
Facilitates	List of people as	
comparison	possible	
	participants	
	in the project	
Facilitates		
discussion		
Helps select		
options		
Structures		
existing		
knowledge		

#### Research Planning Survey:

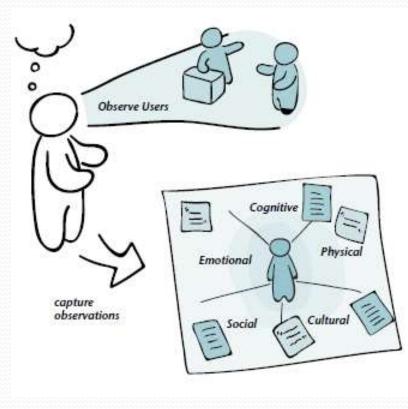


INPUT	OUTPUT
Project's topic	Understanding of
area and	participants'
the	behaviors and
innovation	interesting patterns
intent	to guide
	further
	research
	Identified
	participants that can
	be
	contacted for
	further
	research
	Project's topic area and the innovation

#### User Research Plan:

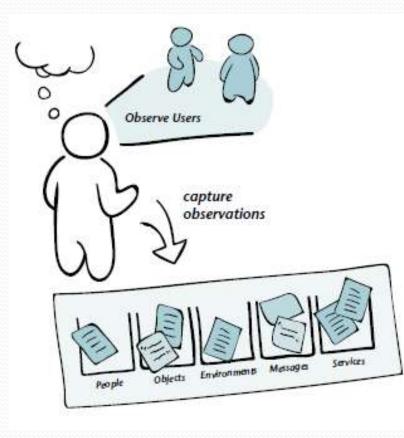


#### Five Human Factors:



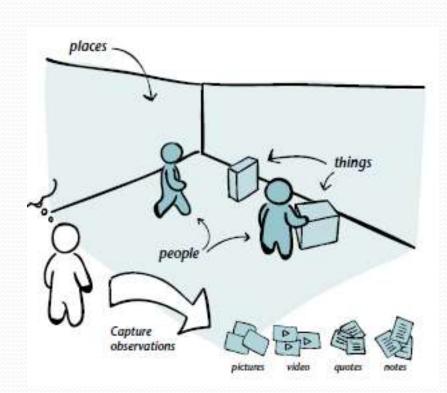
BENEFIT	INPUT	OUTPUT
S		
Broadens mindset	Project's	Organized
	area of	observations
	study	about each of the
		five factors
		that drive user
		behavior
Encourages	Identified	
comprehens	situations forUser	
iveness	observation	
Focuses on		
details		
Focuses on		
experience		
Gives focus		
to the		
process		

POEMS:



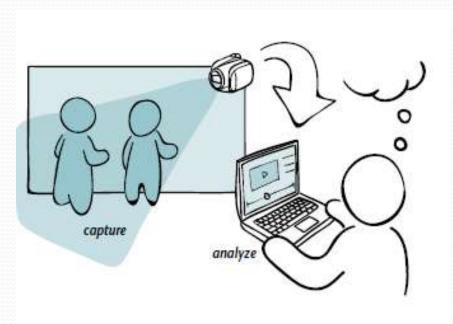
BENEFITS	INPUT	OUTPUT
Broadens mindset	Project's	Organized
	topic	observations
		about aspects
		of a context
Encourages	Identified	
comprehens	situations for user	
iveness	observation	
Gives focus		
to the		
process		
Helps		
understand		
context		
Focuses on		
details		

#### FIELD VISIT:



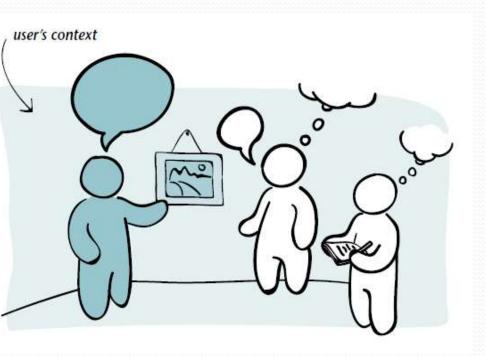
BENEFI	INPUT	OUTPUT
TS		
Focuses on	Project's	Rich observations
details	topic	about
		users' activities and
		behavior
		in context
Focuses	List of	
on	important/releva	
experience	nt	
	locations for	
	understanding	
	the topic	
Provides		
evidence		
Promotes		
learning in		
context		
Focuses		
on details		

### VIDEO ETHNOGRAPHY:



BENEFITS	INPUT	OUTPUT
Captures information	Project's	Video footage showing
over time	topic	user
		processes and behavior
		over time
Facilitates	List of locations for	Observations about user
storytelling	Video	processes and
	Ethnography	behavior
Focuses on		
experience		
Provides		
evidence		
Reveals the		
unexpected		

# Ethnographic Interview:



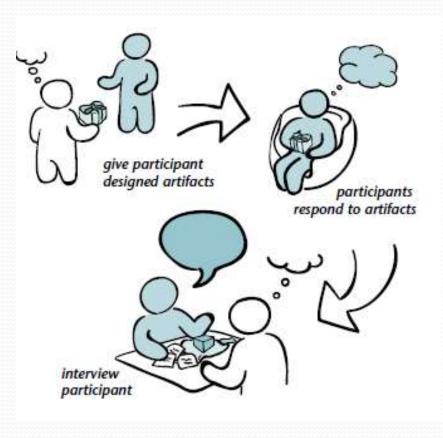
BENEFIT	INPUT	OUTPUT
S		
Builds empathy	Project's	Observations about
	topic	users'
		experience told from
		their
		point of view
Focuses on	List of possible	
experience	questions to	
	initiate the	
	conversation with	
	the	
	participant	
	S	
Promotes		
learning in		
context		

#### **User Picture Interviews:**



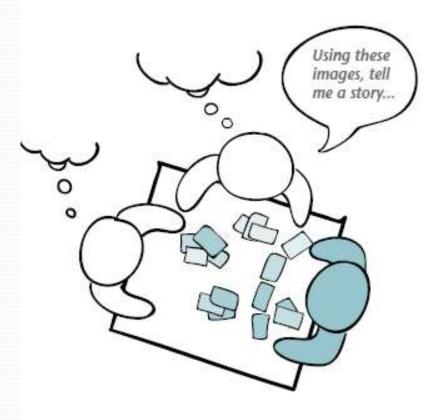
BENEFITS	INPUT	OUTPUT
Builds empathy Focuses on	Project's topic List of possible	Observations about users' experience told from their point of view
experience	questions to initiate the conversation with the participants	
Promotes learning in context		

### **Cultural Artifacts:**



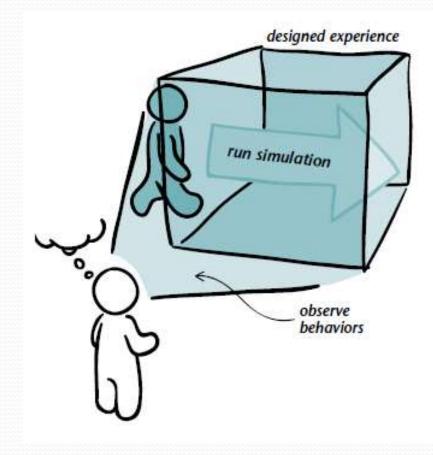
BENEFITS	INPUT	OUTPUT
Builds empathy	Project's	In-depth knowledge
	topic	of users' activities and
		thought
		processes
Captures	A relevant artifact	Kits and activities
users' points	significant to the	completed by
of view	group	users
	of users	
	being	
	studied	
Grounds		
conversation		
with		
artifacts		
Promotes		
playfulness		
Reveals the		
unexpected		

# Image Sorting:



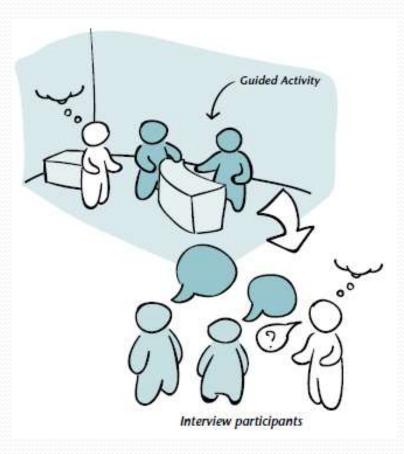
BENEFITS	INPUT	OUTPUT
Captures users'	Project's	Observations about
points of view	topic	users' values and
		attitudes
		toward a topic
Grounds	A comprehensive	
conversatio	set of	
n with	images to help	
	users	
	communicate	
	abstract	
	ideas	
artifacts		
Provides		
evidence		
J Reveals		
relationship		
S		

#### **Experience Simulation:**



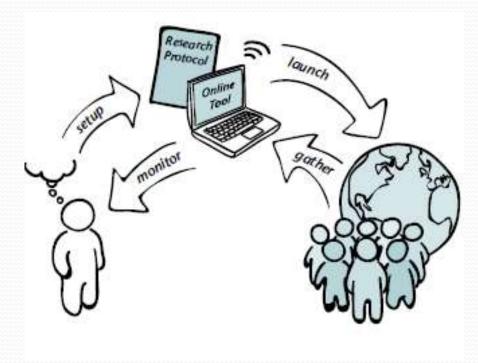
BENEFITS	INPUT	OUTPUT
Captures	Research questions	Observations of how
information over	about	users
time	behaviors	might behave or
	or activities	interact
		in a situation
Facilitates	Selected	
comparison	experiences to	
	simulate	
Focuses on		
experience		
Grounds		
conversation		
with		
artifacts		

#### Field Activity:



BENEFITS	INPUT	OUTPUT
Builds empathy	Behaviors and activities to be studied	Observations of how users engage in existing situations
Focuses on experience		
Grounds conversation with artifacts		
Promotes learning in context		
Builds empathy		

#### Remote Research:



BENEFITS	INPUT	OUTPUT
Accesses hard-to-	Topic that would	Users' documentation
reach user groups	benefit	of
	from reflective	attitudes, motivations,
	responses	thought processes, and
	from	contextual stories
	participants	around
		a topic
Builds		
empathy		
Captures		
information		
over time		
Captures		
users' points		
of view		
Organizes		
information		
for easy		
access		

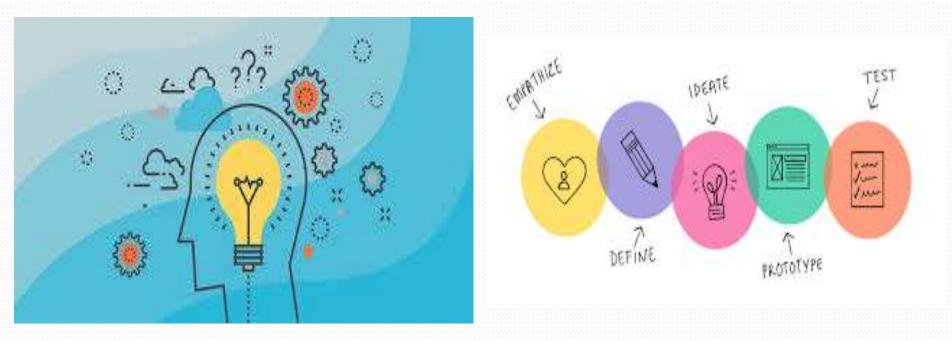
#### Users Observation Database:

$\sim$	BENEFITS	INPUT	OUTPUT
Photos, videos,	Builds knowledge	All previously	Organized and
audio recordings,	base	generated	searchable archive
transcripts, quotes, and field notes		user research data	of user
-LA PARTEE		(observations,	observations
		photos,	
12 Julie		videos, etc.)	
	Enables		
	systematic		
11	analysis		
Raw data Observation Quotes Mode Activity Tags	Handles large		
	sets of data		
	Organizes		
	information		
= = = = = = = = = = = = = = = = = = =	for easy		
	access		
	Reveals		
	patterns		
	Supports		
	transition		

# How to become more Empathic Designer:

- Practice Empathy in Everyday life.
- The power of Facial Expressions.
- Assume a Beginner's Mindset (Listen, do not Judge).
- Pay Attention to Body Language

# **Design Thinking**



# Contents

- Methods &tools
- Empathy Map
- Customer Journey Map

# Methods & tools:

- ✓Constant Curiosity: Ask What-how-why
- $\checkmark$  Ask the 5 whys
- ✓Conduct interviews with Empathy
- ✓Build Empathy withAnalogies
- ✓Use photo and video userbased studies
- ✓Use personal photo and video journals

- Engage with extreme users
- ✓ Story share-and -capture
- ✓ Journey maps
- Empathy Maps
- Golden Circle Design
- Mind Mapping
- Body storm
- Immersion and observation
- ✓ Survey forms

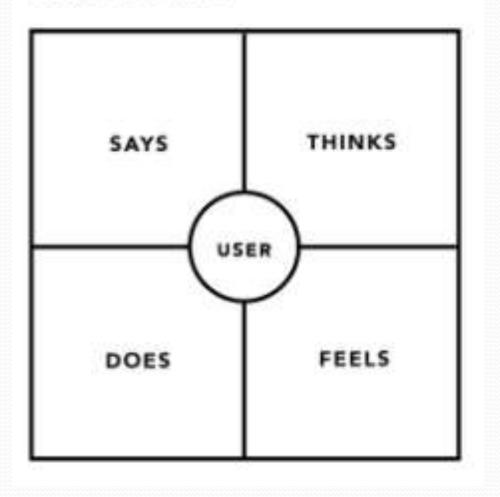
Understanding Empathy tools:

#### **1. Empathy Maps:**

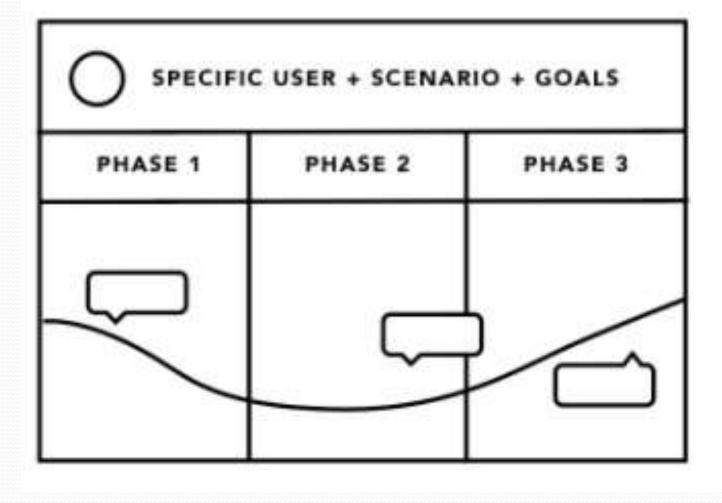
Designing and developing a product or service often involves a large team of people with different background and experiences who must be on same platform regarding the project (user's needs, behaviors, and objectives) and even the processes involved. Four Types of Mapping:

- \*Empathy Mapping
- \*Customer journey Mapping
- \*Experience Mapping
- \* Service Blueprint

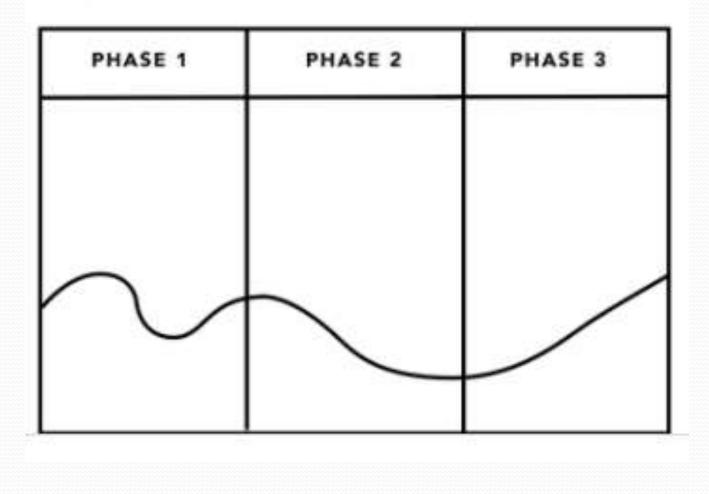
#### EMPATHY MAP



#### CUSTOMER JOURNEY MAP



#### EXPERIENCE MAP



### SERVICE BLUEPRINT

EVIDENCE	
CUSTOMER ACTIONS	
FRONTSTAGE	
BACKSTAGE	
SUPPORT PROCESSES	

Empathy Map	Empathy Maps help team members understand the user's Mindset
Customer Journey map	Customer journey maps Focus on a specific customer's interaction with a product or service
Experience Map	Experience Maps generalize the concept of customer-journey maps across user types and
	products.
	Service blueprints are counterparts to customer
Service Map	journey maps, focuses on the employees.

Three -step Decision Framework:

- Before beginning any mapping effort (regardless of the type), 3 decisions must be made.
- 1. Current Vs Future
- 2. Hypothesis Vs Research
- 3. Low-fidelity Vs high-fidelity

#### Current Vs Future

This decision involves the actions and states depicted in the visualization: do they reflect the current state of the world or a desired state of the world? Hypothesis Vs Research

This decision depends on the type of input that it will use to build the map Hypothesis mappings are based on an accumulation of existing understanding within a team or organization. Research mapping is based on data gathered specifically for building the map.

#### Low-fidelity Vs high-fidelity

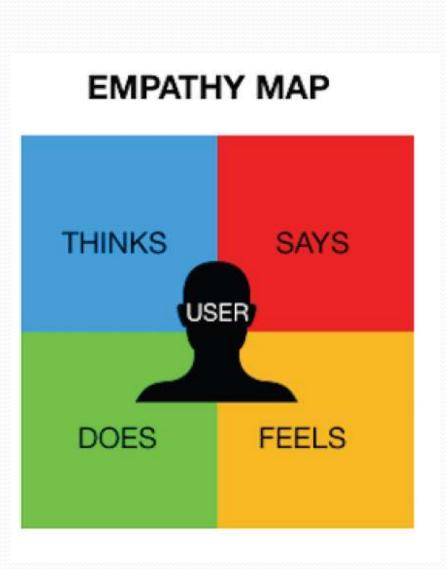
This decision pertains to the quality of the final map visualization. Low-fidelity maps are unpolished and often created with Sticky Notes in a flexible, unrefined manner. High-fidelity maps are polished, created digitally, and look final.

**Definition of Empathy Map:** 

- An **Empathy Map** is a collaborative Visualization used to articulate what is known about a particular user.
- It externalizes user knowledge in order to
- 1. Create a shared understanding and
- 2. Aid in decision making.

### Format:

- Traditional empathy maps are spilt into **four** quadrants.
- The four quadrants are say, Thinks, Does and Feels with the user or persona in the middle.
- Empathy Maps provide a glance into who a user is as a whole and are not chronological or sequential



#### Thinks:

#### Says:

 $\checkmark$  This is what an end user is thinking when using product or going through process.

 $\checkmark$  What types of thoughts that end-user is having?

 $\checkmark$  The *Thinks* quadrant captures what the user is thinking throughout the experience.

 $\checkmark$  Ask yourself (from the qualitative research gathered):

✓ what occupies the user's thoughts? What matters to the user?

 $\checkmark$  It is possible to have the same content in both *Says* and *Thinks*.

#### This is what a consumer says in an interview, research study or focus group about products or processes.

What is the consumer saying about the packaging?
The *Says* quadrant contains what the user says out loud in an interview or some other usability study.
Ideally, it contains verbatim and direct quotes from research

#### Feels:

This includes the emotions a consumer is having while dealing with your product or processes.

Observe a consumer's body language and facial expressions to gauge feelings.

≻What emotions do you see?

The Feels quadrant is the user's emotional state, often represented as an adjective plus a short sentence for context.

Ask yourself: what worries the user? What does the user get excited about?

> How does the user feel about the experience?

#### Does:

•This is the action a user can takes physically in response to product or processes. What behaviors or actions did you notice?

• The Does quadrant encloses the actions the user takes.

•From the research, what does the user physically do? How does the user go about doing it?

#### Why use Empathy Maps:

1. Categorize and make sense of qualitative research (research notes, survey answers, user-interview transcripts)

•Discover gaps in your current knowledge and identify the types of research needed to address it. A sparse empathy map indicates that more research needs to be done

•Create personas by aligning and grouping empathy maps covering individual users

#### 2. Communicate a user or persona to others

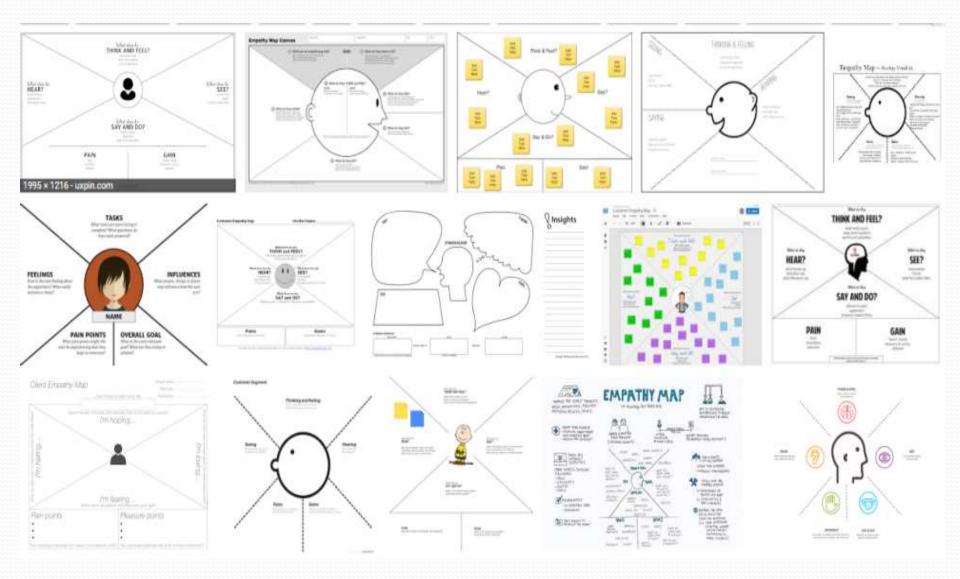
An empathy map is a quick, digestible way to illustrate user attitudes and behaviors. Once created, it should act as a source of truth throughout a project and protect it from bias or unfounded assumptions. How to build an Empathy Map

Go through the following steps to create a valid and useful empathy map:

Define scope and goals:

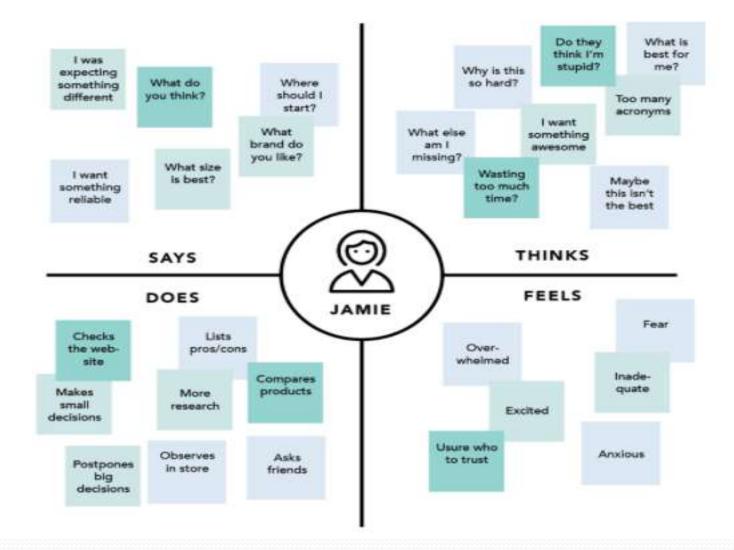
- 1) Gather materials
- 2) Collect research
- 3) Individually generate sticky notes for each quadrant
- 4) Converge to cluster and synthesize
- 5) Polish and plan

Various Formats:

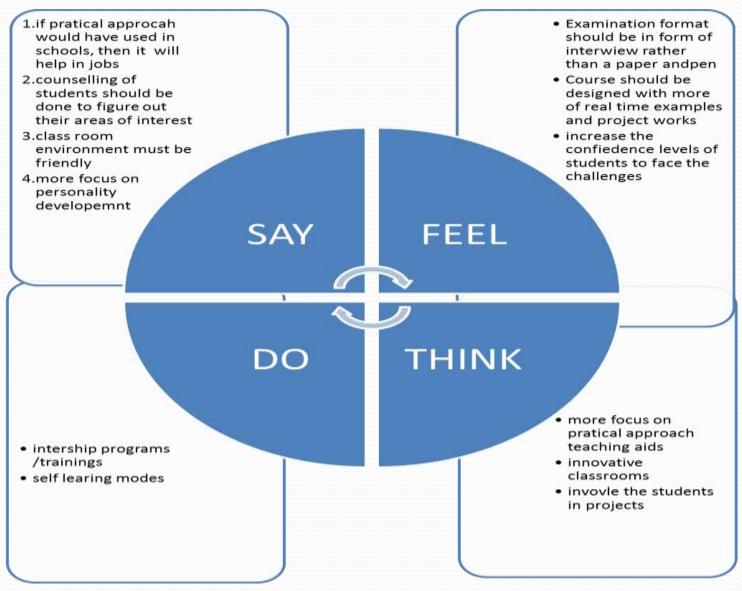


Examples of Empathy Map-1:

#### EMPATHY MAP Example (Buying a TV)



# Example of Empathy Map-2:



**One User Vs Multiple-users Empathy Maps:** 

 $\checkmark$ Empathy maps can capture one user or can reflect an aggregation of multiple users.

✓ One-user(individual) empathy maps are usually based on a user interview or a user's log from a diary study

Aggregated empathy maps represent a user segment, rather than one user.
 They are usually created by combining multiple individual empathy maps from users who exhibit similar behaviors and can be grouped into one segment.

 $\checkmark$  The aggregated empathy map synthesizes themes seen throughout that user group and can be a first step in the creation of personas.

✓ Aggregated empathy maps can also become ways to summarize other qualitative data like surveys and field studies.

### Conclusion:

**Empathy** Maps simply help to build empathy with end users. When based on real data and when combined with other mapping methods it can

\*Remove bias from designs and align the team on a single, shared understanding of the user

**\*Discover weakness in the research** 

\*Uncover user needs that the user themselves may not even be aware of

- **\*Understand what drives user's behaviors**
- **\*Guides towards meaningful innovation.**

A customer or user journey map is detailed record of how a customer experience a specific task, product, or service.

### (Or)

A Customer Journey Map is a visualization of the process that a person goes through accomplish a goal tied to a specific business or product or service.

### (Or)

A Customer journey map is research-based tool. It examines the story of how a customer relates to the business, brand, or product over a time

# **Characteristics:**

- \* The map is tied to a specific product or service.
- It is split into 4 swim lanes: Phases, actions, thoughts, mindsets/emotions
- **\*** It reflects the user's perspectives:
- \*Including mindset, thoughts, and emotions
- \*Leaving out most process details
- **\*** It is chronological
- \*There is one map per persona/user type (1:1 mapping)

# • Why Use it:

- To pinpoint specific customer journey touch points that cause pain or delight
- To break down into parts that shared, organization-wide understanding of the customer journey
- To assign ownership of key touch points in the journey to internal departments

# • When to use it:

• At any point in the design process, as a reference point amongst a team throughout a design cycle.

#### CUSTOMER JOURNEY MAP Example (Switching Mobile Plans)



#### JAMIE

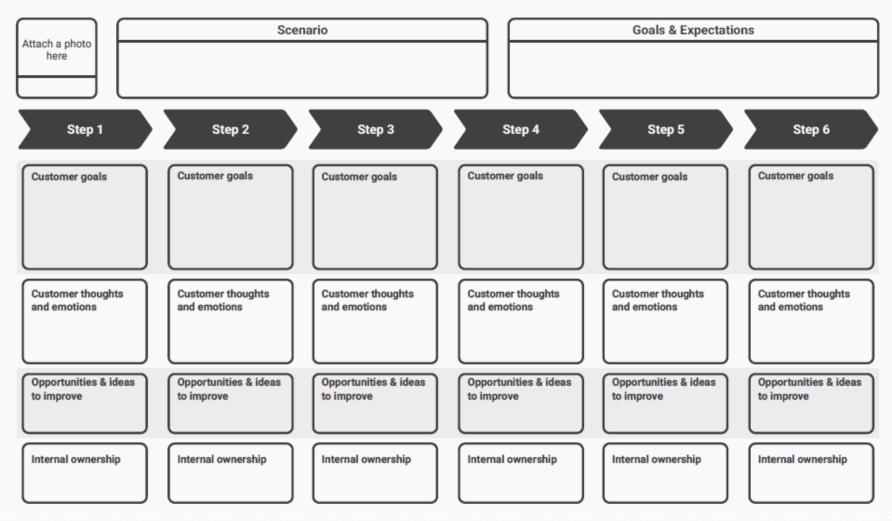
Scenario: Jamie needs to switch her current mobile plan. She wants a plan that can save her money without having to sacrifice usage limits.

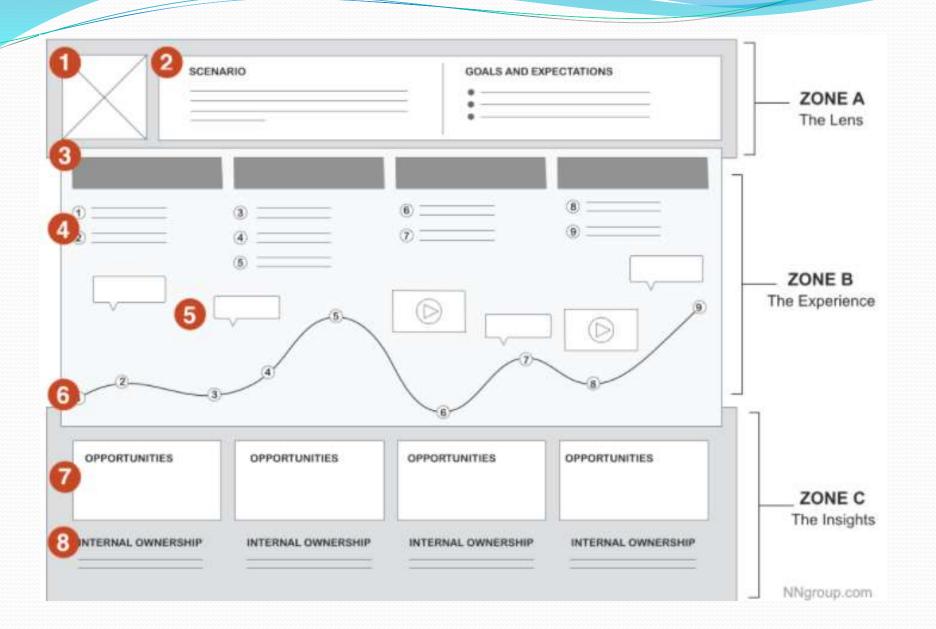
#### EXPECTATIONS

- Clear online information
- · Ability to compare plan breakdowns
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DEFINE	COMPARE	NEGOTIATE	SELECT
1. Review current plan 2. Define parameters for new plan	<ol> <li>Watches commercial on TV</li> <li>Researches companies and offers on consumer reports website</li> </ol>	<ol> <li>6. Calls current carrier to tell them she is shopping around</li> <li>7. Calls competitors to see what they can offer</li> </ol>	8. Decides on a new plan and calls customer service to switch service
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# **Customer Journey Map Template**





Zone A:	The lens provides constraints for the map by assigning (1) a persona ("who") and (2) the scenario to be examined ("what").
Zone B:	The heart of the map is the visualized experience, usually aligned across (3) chunkable phases of the journey. The (4) actions, (5) thoughts, and (6) emotional experience of the user has throughout the journey can be supplemented with quotes or videos from research
Zone C	The output should vary based on the business goal the map supports, but it could describe the insights and pain points discovered, and the (7) opportunities to focus on going forward, as well as (8) internal ownership.

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# Key Elements of Customer Journey Maps:

Point of view	First and foremost, choose the "actor" of the story. Who is this journey map about?
	<ul> <li>"Actors" usually aligns with personas if they exist</li> </ul>
	For example, a university might choose either students or faculty members, both of which would result in very different journeys
Scenario	Determine the specific experience to map
	➤ This could be an existing journey, where mapping will uncover positive and negative moments within that current experience, or a "to-be" experience, where the mapper is designing a journey for a product or service that does not exist yet

Actions, mindsets, andAt the heart of a journey map's narrative is what the user is<br/>doing, thinking, and feeling during the journey.

• These data points should be based on qualitative research, such as field studies, contextual inquiry, and diary studies

Touchpoints an	id 🗣	The map should align touch points (times when the actor in
channels		the map interacts with the company) and channels (methods
		of communication or service delivery, such as the website or
		physical store) with user goals and actions
	4	These elements deserve a special emphasis because they are
		often where brand inconsistencies and disconnected
		experiences are uncovered.

# Insights and ownership.

- ✓ The entire point of the journey-mapping process is to uncover gaps in the user experience (which are particularly common in omni channel journeys), and then take action to optimize the experience. Insights and ownership are critical elements that are often overlooked
- ✓ Any insights that emerge from journey mapping should be explicitly listed. If politically possible, also assign ownership for different parts of the journey map, so that it's clear who's in charge of what aspect of the customer journey

Rules for Creating Successful Journey Maps:

Establish the "why" and the "what."

Base it on truth

Don't jump to visualization

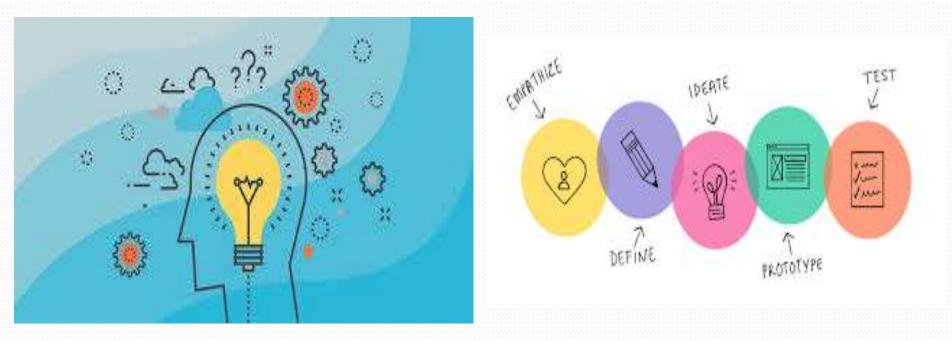
Collaborate with others

Engage others with the end product.

### Summary:

Journey maps combine two powerful instruments storytelling and visualization—in order to help teams, understand and address customer needs. While maps take a wide variety of forms depending on context and business goals, certain elements are generally included.

# **Design Thinking**



# Contents

# Methods &tools

# Understanding Empathy tools

# Methods & tools:

- ✓Constant Curiosity: Ask What-how-why
- $\checkmark$  Ask the 5 whys
- ✓Conduct interviews with Empathy
- ✓Build Empathy withAnalogies
- ✓Use photo and video userbased studies
- ✓Use personal photo and video journals

- Engage with extreme users
- ✓ Story share-and -capture
- ✓ Journey maps
- Empathy Maps
- Golden Circle Design
- Mind Mapping
- Body storm
- Immersion and observation
- ✓ Survey forms

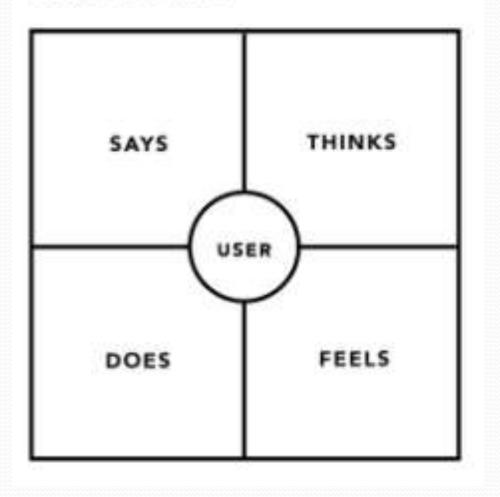
Understanding Empathy tools:

### **1. Empathy Maps:**

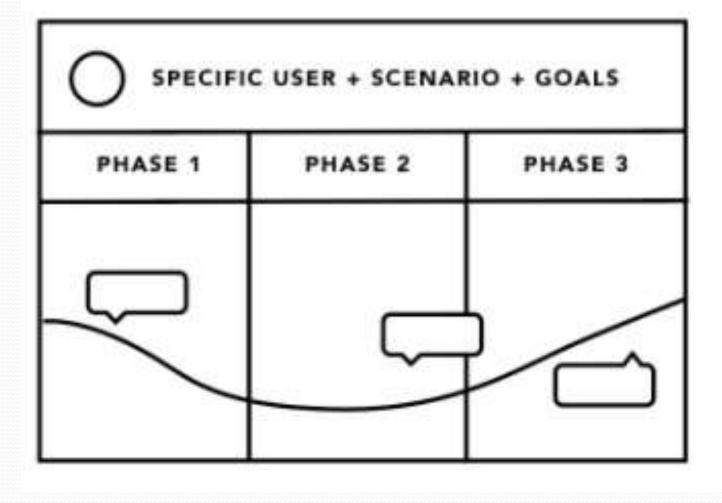
Designing and developing a product or service often involves a large team of people with different background and experiences who must be on same platform regarding the project (user's needs, behaviors, and objectives) and even the processes involved. Four Types of Mapping:

- \*Empathy Mapping
- \*Customer journey Mapping
- \*Experience Mapping
- \* Service Blueprint

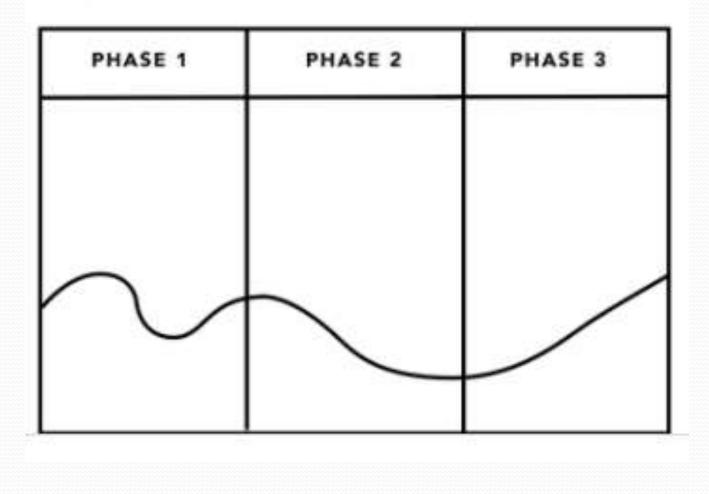
# EMPATHY MAP



### CUSTOMER JOURNEY MAP



### EXPERIENCE MAP



# SERVICE BLUEPRINT

EVIDENCE	
CUSTOMER ACTIONS	
FRONTSTAGE	
BACKSTAGE	
SUPPORT PROCESSES	

Empathy Map	Empathy Maps help team members understand the user's Mindset
Customer Journey map	Customer journey maps Focus on a specific customer's interaction with a product or service
Experience Map	Experience Maps generalize the concept of customer-journey maps across user types and
	products.
	Service blueprints are counterparts to customer
Service Map	journey maps, focuses on the employees.

Three -step Decision Framework:

- Before beginning any mapping effort (regardless of the type), 3 decisions must be made.
- 1. Current Vs Future
- 2. Hypothesis Vs Research
- 3. Low-fidelity Vs high-fidelity

#### Current Vs Future

This decision involves the actions and states depicted in the visualization: do they reflect the current state of the world or a desired state of the world? Hypothesis Vs Research

This decision depends on the type of input that it will use to build the map Hypothesis mappings are based on an accumulation of existing understanding within a team or organization. Research mapping is based on data gathered specifically for building the map.

# Low-fidelity Vs high-fidelity

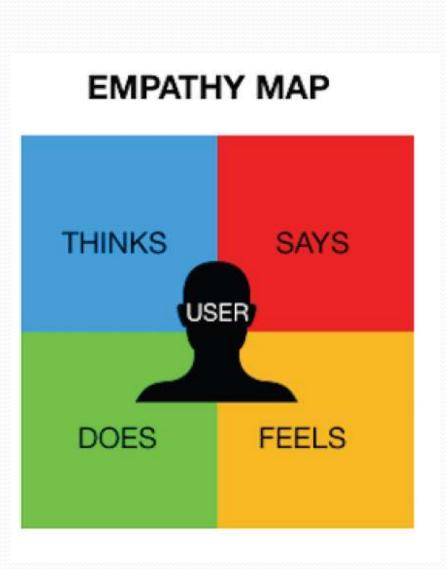
This decision pertains to the quality of the final map visualization. Low-fidelity maps are unpolished and often created with Sticky Notes in a flexible, unrefined manner. High-fidelity maps are polished, created digitally, and look final.

**Definition of Empathy Map:** 

- An **Empathy Map** is a collaborative Visualization used to articulate what is known about a particular user.
- It externalizes user knowledge in order to
- 1. Create a shared understanding and
- 2. Aid in decision making.

# Format:

- Traditional empathy maps are spilt into **four** quadrants.
- The four quadrants are say, Thinks, Does and Feels with the user or persona in the middle.
- Empathy Maps provide a glance into who a user is as a whole and are not chronological or sequential



#### Thinks:

#### Says:

 $\checkmark$  This is what an end user is thinking when using product or going through process.

 $\checkmark$  What types of thoughts that end-user is having?

 $\checkmark$  The *Thinks* quadrant captures what the user is thinking throughout the experience.

 $\checkmark$  Ask yourself (from the qualitative research gathered):

✓ what occupies the user's thoughts? What matters to the user?

 $\checkmark$  It is possible to have the same content in both *Says* and *Thinks*.

#### This is what a consumer says in an interview, research study or focus group about products or processes.

What is the consumer saying about the packaging?
The *Says* quadrant contains what the user says out loud in an interview or some other usability study.
Ideally, it contains verbatim and direct quotes from research

#### Feels:

This includes the emotions a consumer is having while dealing with your product or processes.

Observe a consumer's body language and facial expressions to gauge feelings.

≻What emotions do you see?

The Feels quadrant is the user's emotional state, often represented as an adjective plus a short sentence for context.

Ask yourself: what worries the user? What does the user get excited about?

> How does the user feel about the experience?

#### Does:

•This is the action a user can takes physically in response to product or processes. What behaviors or actions did you notice?

• The Does quadrant encloses the actions the user takes.

•From the research, what does the user physically do? How does the user go about doing it?

### Why use Empathy Maps:

1. Categorize and make sense of qualitative research (research notes, survey answers, user-interview transcripts)

•Discover gaps in your current knowledge and identify the types of research needed to address it. A sparse empathy map indicates that more research needs to be done

•Create personas by aligning and grouping empathy maps covering individual users

#### 2. Communicate a user or persona to others

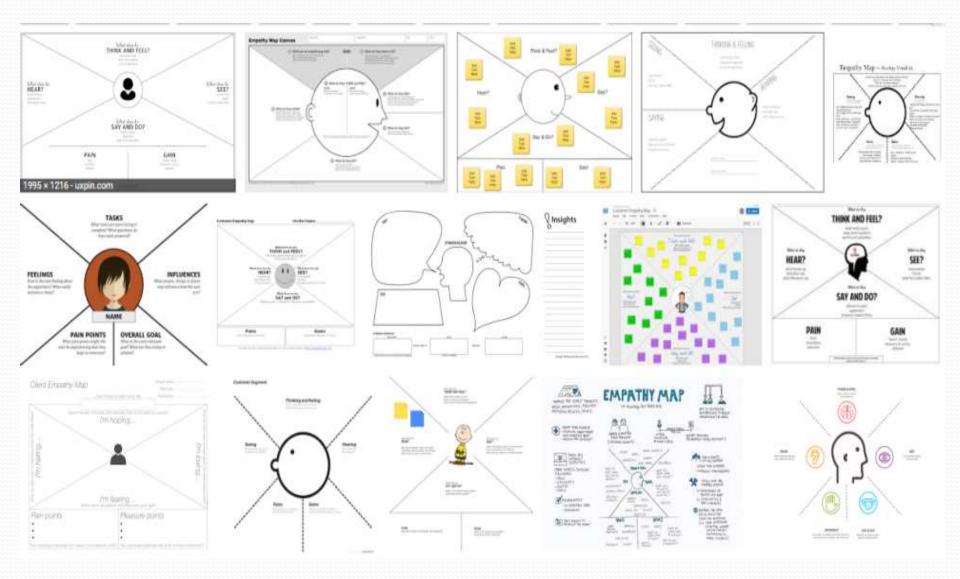
An empathy map is a quick, digestible way to illustrate user attitudes and behaviors. Once created, it should act as a source of truth throughout a project and protect it from bias or unfounded assumptions. How to build an Empathy Map

Go through the following steps to create a valid and useful empathy map:

Define scope and goals:

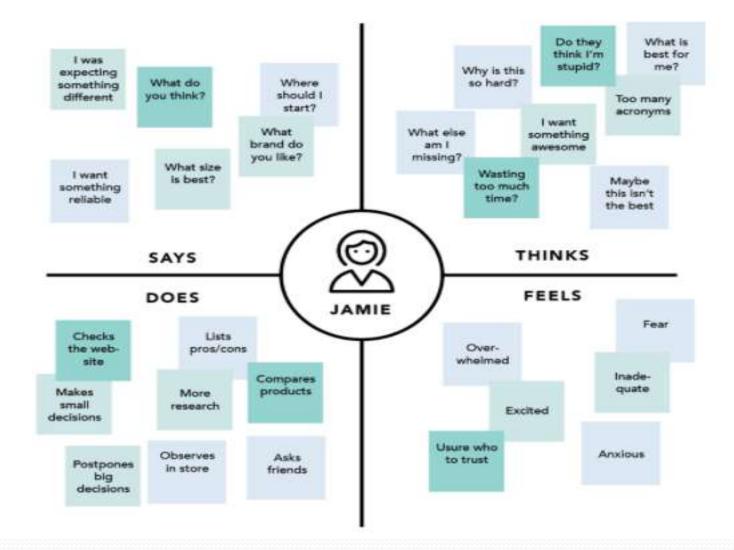
- 1) Gather materials
- 2) Collect research
- 3) Individually generate sticky notes for each quadrant
- 4) Converge to cluster and synthesize
- 5) Polish and plan

Various Formats:

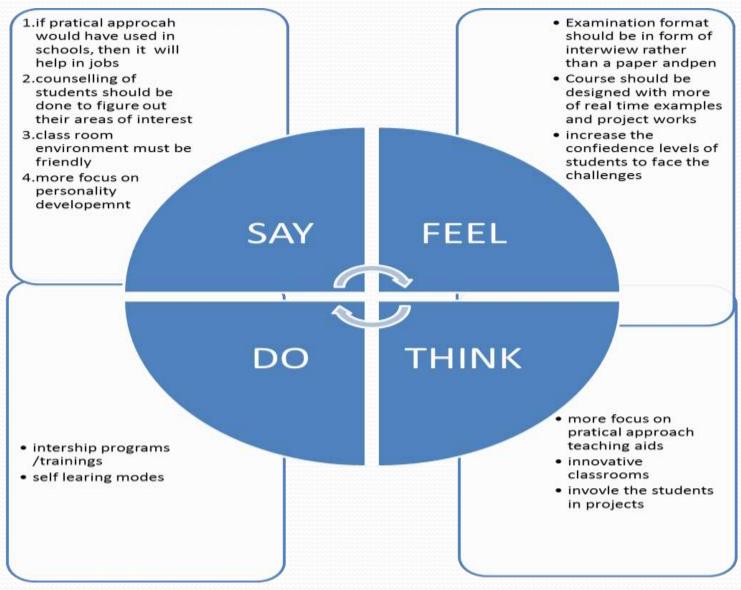


Examples of Empathy Map-1:

#### EMPATHY MAP Example (Buying a TV)



# Example of Empathy Map-2:



**One User Vs Multiple-users Empathy Maps:** 

 $\checkmark$ Empathy maps can capture one user or can reflect an aggregation of multiple users.

✓ One-user(individual) empathy maps are usually based on a user interview or a user's log from a diary study

Aggregated empathy maps represent a user segment, rather than one user.
 They are usually created by combining multiple individual empathy maps from users who exhibit similar behaviors and can be grouped into one segment.

 $\checkmark$  The aggregated empathy map synthesizes themes seen throughout that user group and can be a first step in the creation of personas.

✓ Aggregated empathy maps can also become ways to summarize other qualitative data like surveys and field studies.

### Conclusion:

**Empathy** Maps simply help to build empathy with end users. When based on real data and when combined with other mapping methods it can

\*Remove bias from designs and align the team on a single, shared understanding of the user

**\*Discover weakness in the research** 

\*Uncover user needs that the user themselves may not even be aware of

- **\*Understand what drives user's behaviors**
- **\*Guides towards meaningful innovation.**

A customer or user journey map is detailed record of how a customer experience a specific task, product, or service.

## (Or)

A Customer Journey Map is a visualization of the process that a person goes through accomplish a goal tied to a specific business or product or service.

# (Or)

A Customer journey map is research-based tool. It examines the story of how a customer relates to the business, brand, or product over a time

# **Characteristics:**

- \* The map is tied to a specific product or service.
- It is split into 4 swim lanes: Phases, actions, thoughts, mindsets/emotions
- **\*** It reflects the user's perspectives:
- \*Including mindset, thoughts, and emotions
- \*Leaving out most process details
- **\*** It is chronological
- \*There is one map per persona/user type (1:1 mapping)

# • Why Use it:

- To pinpoint specific customer journey touch points that cause pain or delight
- To break down into parts that shared, organization-wide understanding of the customer journey
- To assign ownership of key touch points in the journey to internal departments

# • When to use it:

• At any point in the design process, as a reference point amongst a team throughout a design cycle.

#### CUSTOMER JOURNEY MAP Example (Switching Mobile Plans)



#### JAMIE

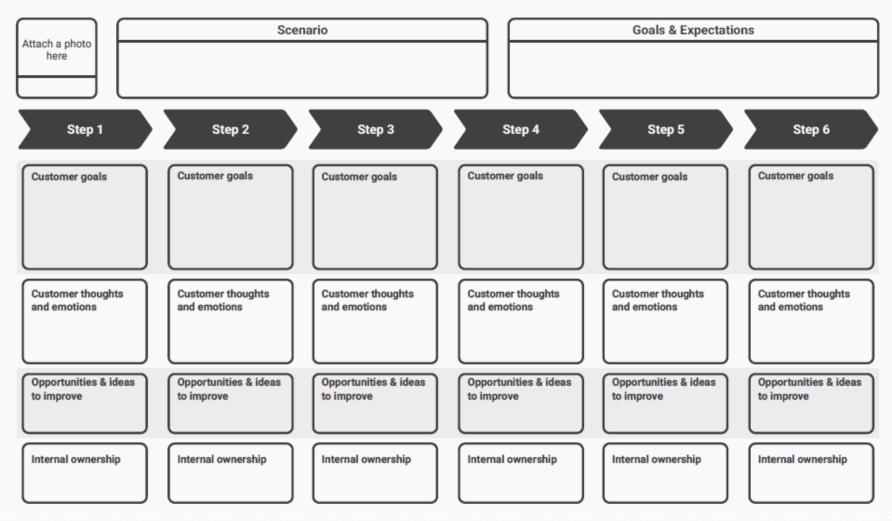
Scenario: Jamie needs to switch her current mobile plan. She wants a plan that can save her money without having to sacrifice usage limits.

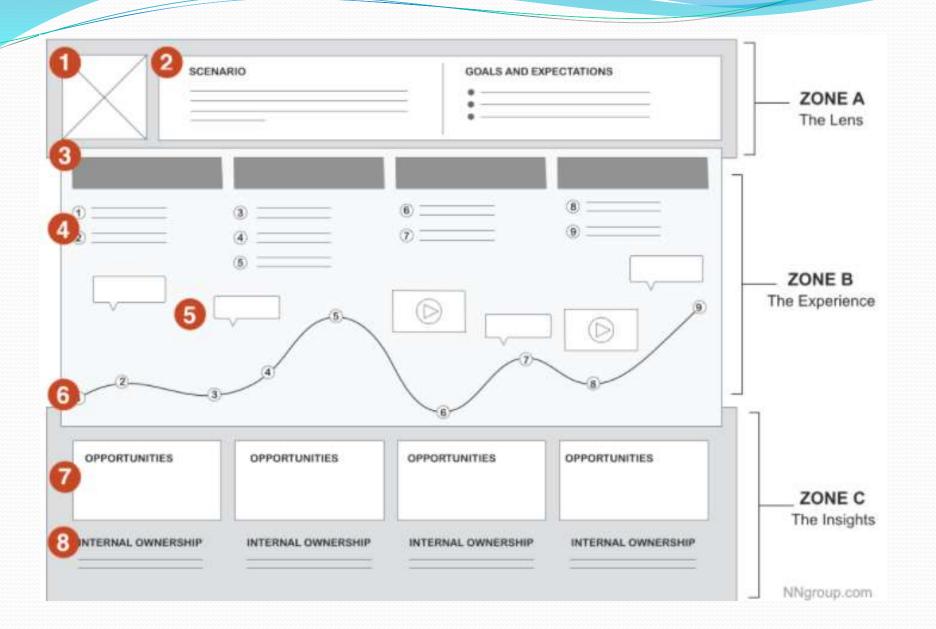
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# 3. Mind Maps:

★A Mind Map is a powerful Graphic technique which harnesses the full range of cortical (brain power) skills in a single powerful manner.

★A mind map is an easy way to get information into and out of the brain
★A mind map is the best way of coming up with new ideas and planning projects

★A mind Map is made up of words, colours, lines, pictures, numbers, logic, rhythm and spatial awareness.

★The Mind Map can be applied to every aspect of life where improved learning and clear thinking which enhances human performance.

★ Mind maps provides an overview of large subject/area.

 $\star$  It enables to plan routes/ make choices and know where to go and where have been

 $\star$  It allows together and represent large amounts of data.

★It encourages problem solving by showing new pathways

 $\star$  It is attractive, easy to read and remember

 $\star$ It is tool, not a solution

 $\star$  It shows whole picture and details at the same time

## **Advantages of Mind Maps:**

# It is quick and record more information in the same amount of time# It can easily add ideas or links later.

# It helps to concentrate on information structure and relationships between ideas rather than disconnected facts

# With mind maps easy to visualize connections and similarities between various information

# Add sketches to make mind maps more memorable than conventional notes

# Mind maps can incorporate mass of material

# Mind mapping can help revision, even material is conventional. It condenses material into a concise, memorable format.

#### **Disadvantages of Mind Maps:**

! Maps of person personal view. It could be difficult for others to understand

! Mind maps are of great help when preparing essays and presentations, but they may be inappropriate as the final piece of work

# A Mind map Enables:

 $\checkmark$  To clear the mind of paradigms, this providing space for new creative thought

 $\checkmark$  To capture and develop 'flashes' of insight when they occur

 $\checkmark$  To explore all the creative possibilities of a given subject

 $\checkmark$  To encourage more consistent creative thinking

 $\checkmark$  To create new conceptual frameworks within which previous

ideas can be reorganized

✓ To plan creatively

# Why Mind Map?

Mind Maps are more convenient than traditional linear notes because

Traditional notes writing is an activity of time waste and energy waste.

Other information may be missed while noting down one idea

✤It takes longer to read and review

Associations and connections between key words and ideas not readily apparent.

✤It lacks color and other visual qualities

# **Principles:**

• Start in the centre of the page with a clear title

♦ Main ideas are written on the lines branching off the subject.Other ideas branch off these as twigs would grow from the bought of a tree

♦ Write only keywords, not sentence and draw pictures where possible

♦ Write keywords on the lines so text is always connected to the lines showing the whole idea structure. draw additional lines connecting ideas wherever necessary

♦ Print words. Mix lower- and upper-case letters so the text is varied, clear and easily readable.

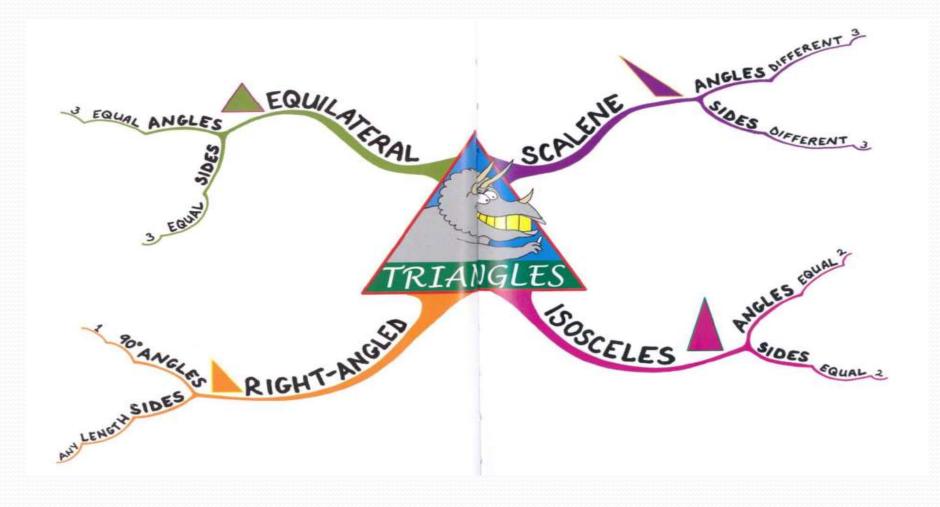
#### Simple Mind Map:



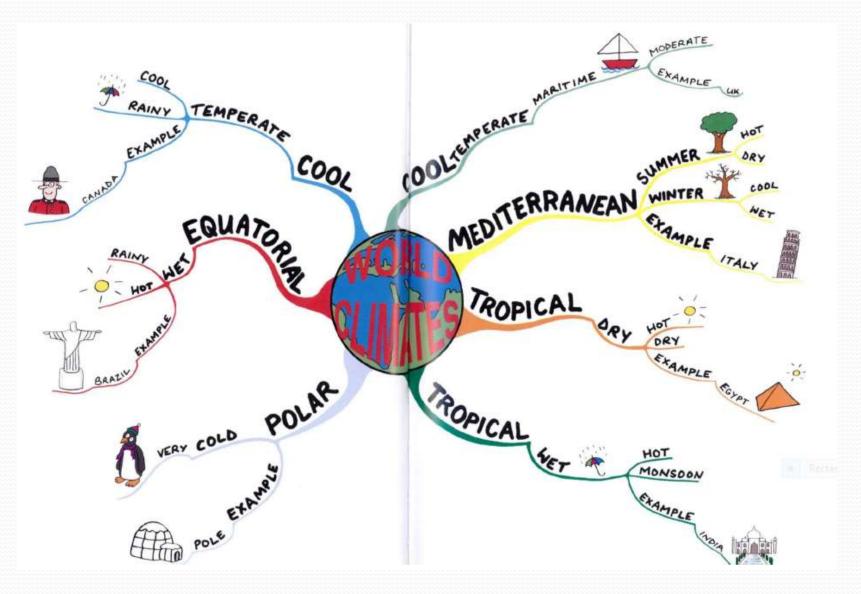
#### **Complex Mind Map**



#### **Example: 1** Triangles



#### **Example 3:** world climate



**Example 4:** party planning

• Complete it.....

#### Summary:

Mind Maps keeps focused on the main idea and all the additional ideas.

✤It helps to use both sides of the brain

Mind maps helps to

✓ Remembering Things

✓ Making better notes

 $\checkmark$  Coming up with ideas

✓ Saving time

✓Concentrating

✓ Effective time utilization

✤It is a graphical, learning and creating aid

Mind Mapping links the left side of the brain that focuses on numbers, words, lists and logic to the right creative side.

✤Using Images, keywords and colour in mind maps are maximizing brain power which enhances learning and creativity.

