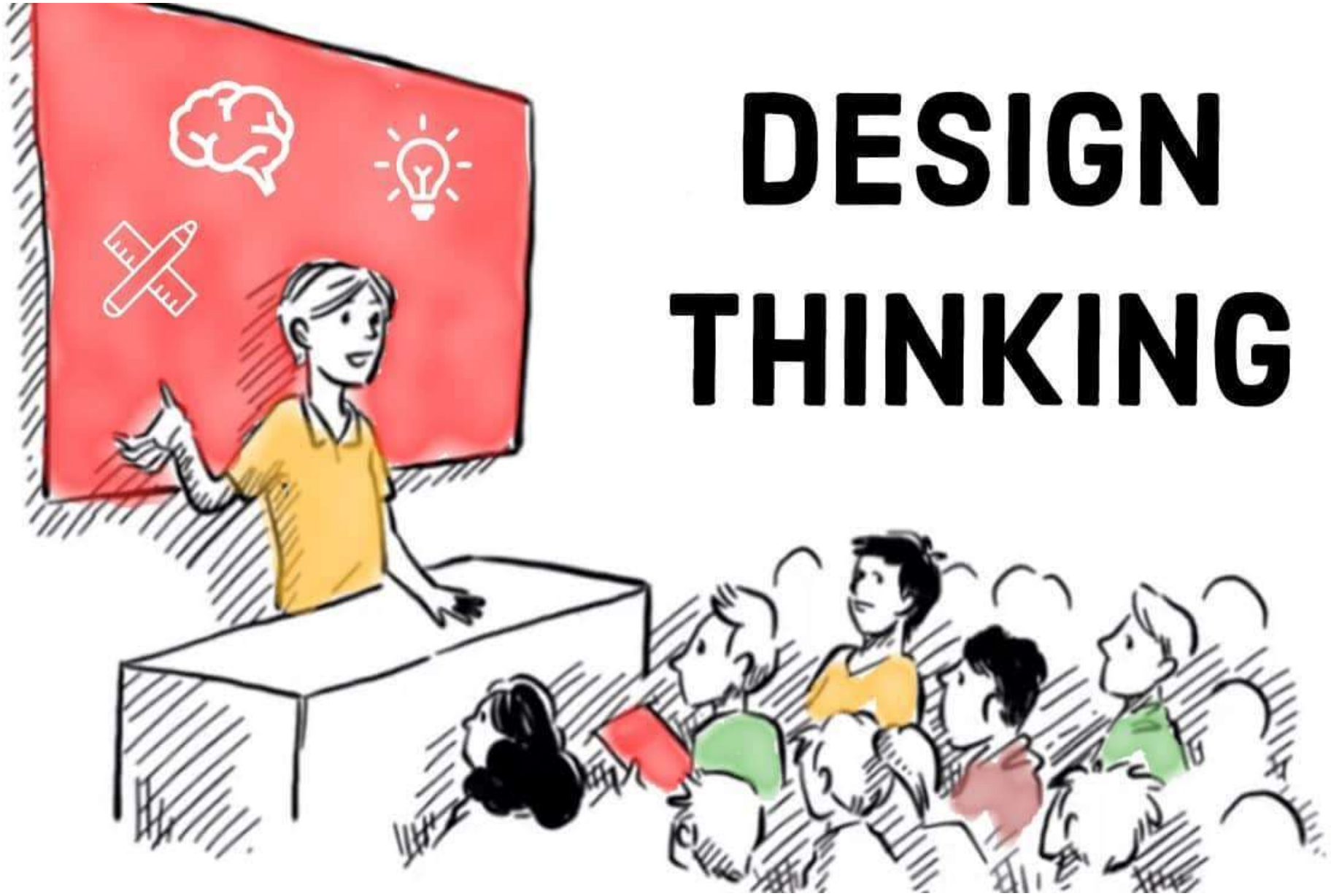
DESIGN THINKING



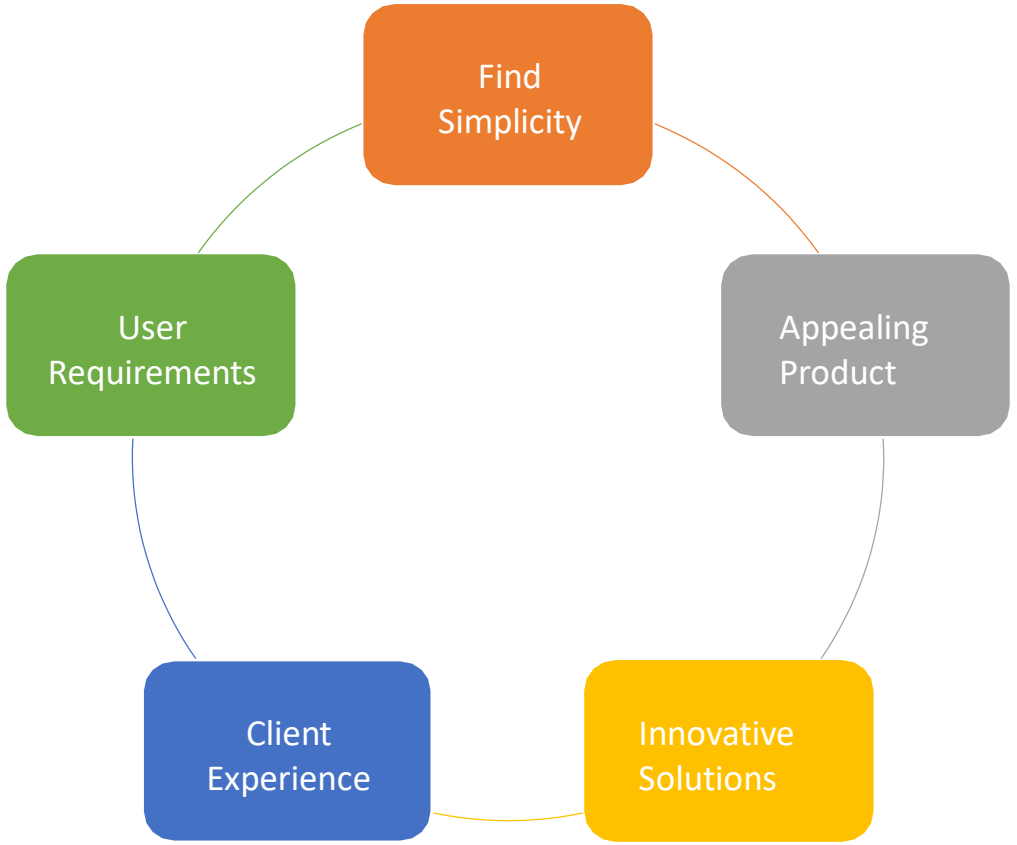
WHAT IS DESIGN THINKING ?

It is a process in which we seek to understand the user, challenge the assumptions & redefine problems to identify strategies and solutions to problem.

It is simply a solution based approach to solve the problem.

The designer need to go to Client shoes & understand the problem, analyze the issue, and provide solution with backup plans if needed.

Design Thinking – Features:



- Following are the benefits conferred by design thinking. These are incidentally also the distinguishing features of design thinking.

🕐 Finding simplicity in complexities.

🕐 Having a beautiful and aesthetically appealing product.

🕐 Improving clients' and end user's quality of experience.

🕐 Creating innovative, feasible, and viable solutions to real world problems.

🕐 Addressing the actual requirements of the end users.

Design Thinking – Applications

1. Business

- Design thinking helps in business by optimizing the process of product creation, marketing, and renewal of contracts. All these processes require a companywide focus on the customer and hence, design thinking helps in these processes immensely. Design thinking helps the design thinkers to develop deep empathy for their customers and to create solutions that match their needs exactly. The solutions are not delivered just for the sake of technology.

2. Information Technology

- The IT industry makes a lot of products that require trials and proof of concepts. It needs to empathize with its users and not simply deploy technologies. IT is not only about technology or products, but also its processes. The developers, analysts, consultants, and managers have to brainstorm on possible ideas for solving the problems of the clients. This is where design thinking helps a lot.

3. Education

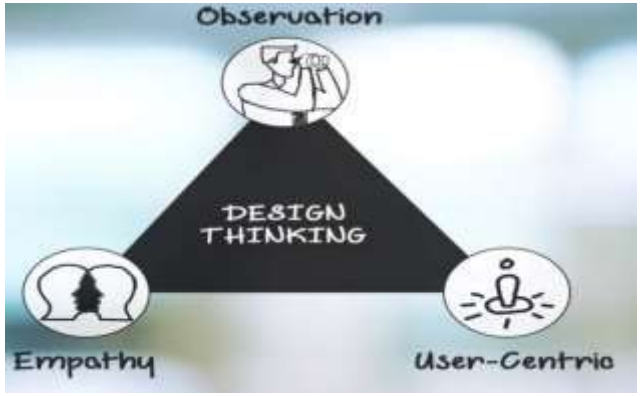
- In the education sector, the best use of design thinking is done by taking feedback from students on their requirements, goals and challenges they are facing in the classroom. By working on their feedback, the instructors can come up with solutions to address their challenges.
- For example, a Instructor from New York, realized that his students would be more comfortable with bulletin boards lowered. He also found the idea of creating comfortable semi-private space for working students as it provided them space to study. As a result, his students became more engaged and felt free to move.

4. Health Care

- The expenditure on healthcare by the government and the cost of healthcare facilities is growing by the day. Experts worldwide are concerned about how to bring quality healthcare to people at low cost.
- A Family Clinic in Venice, California has come up with innovative solutions to the challenge of opening a low-cost children's clinic to serve the low-income families. Problems of finance, transportation, and language barriers had to be solved. And all this had to be done at low cost for the poor kids. Fostering good health along with profits was a challenge, as it does not sound sustainable. Using design thinking, the inefficiencies in the system and the perennial crises were addressed. This was followed by mind-blowing innovations to serve the children.

Design Thinking – Principles

- **Empathy :** Empathy means Understanding the Person and the pain, what he/she is going through and offering them solution after analyzing the issue.
- For Example suppose you are in a bus and seated comfortably and suddenly an elderly lady gets into bus and stands beside you, in all probability you get up and offer her your seat. By doing so, you are displaying empathy you understand that it is difficult for the lady to stand.

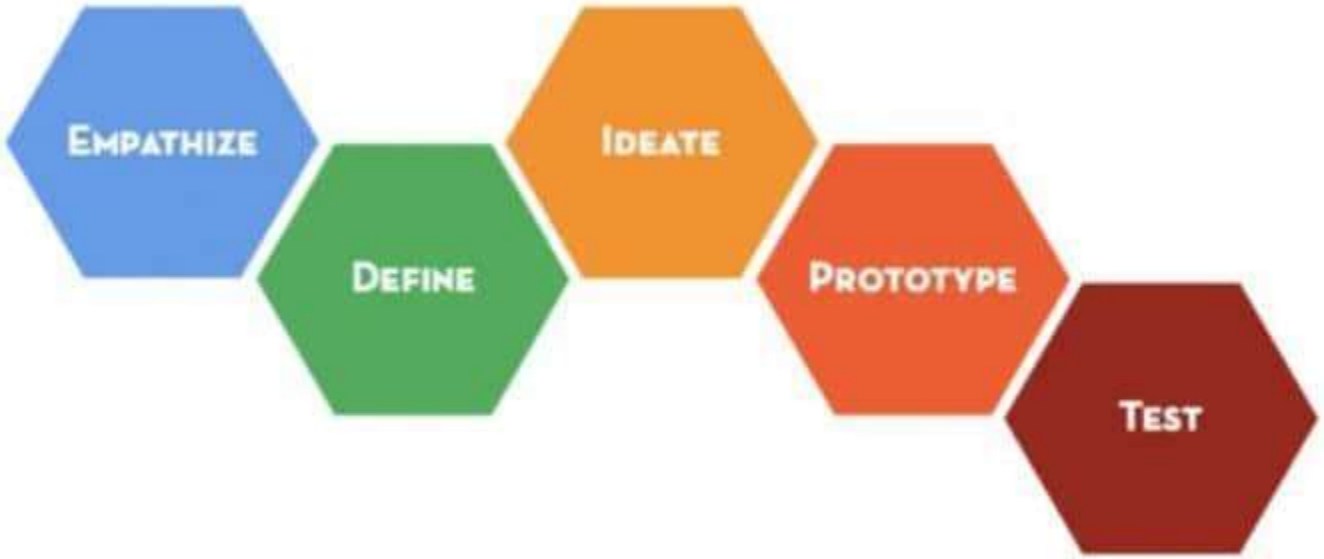


User Centric :

- User Centric means thinking in User point of view by empathizing the user. Lets discuss a story about this.
- I think you all know that in October 2001 a new product was launched into the market. A product that fits into everyone’s pocket and it set to change the way the people store and play music which is IPOD. This was the most happy news for the music lovers and this happened because the APPLE Company empathized the users and understood what they want. When you create a product by keeping user in mind, It becomes user-centric.

- **Observation :** This Phase is interlinked with Empathizing and User centric ness. If you observe what the user the going through then you can understand what the user wants. Lets discuss a story regarding observation
- In Bangalore on a rainy day RATAN TATA is travelling on the road, he saw a family of four were going on a scooter and suddenly fell down thankfully nothing happened and because of this observation the low budget car “NANO” was born.
- **Creativity :** If you understand the user problem by observing the user and thinking from user point of view you can provide a solution by using creative ideas.

Design Thinking – A 5 Step Process :



1.Empathize :

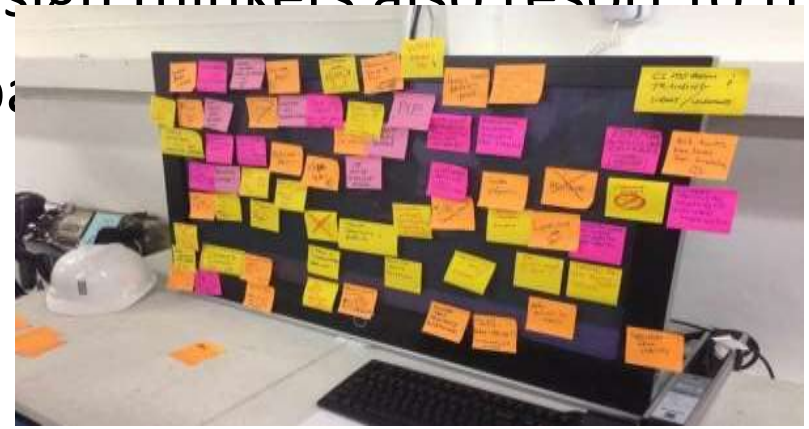
- This step involves putting oneself into the shoes of the customer or the end-user of our solution. We need to understand the problems faced by the customer and we, as design thinkers, need to empathize with the customer. This step is carried out in the form of requirement gathering, which involves interviews and sometimes, even field visits.

2.Define :

- Now, we have learnt the problems of our customers and the context as well. It is time to define our problem and arrive at a problem statement. This statement will give us the necessary direction to proceed towards the issue faced by the customer.

3.Ideate :

- The third component of design thinking process is the most interesting and perhaps, the most rigorous as well. In this section, called Ideate, a design thinker is supposed to bring to the table as many ideas as possible. While brainstorming for ideas, it is not checked whether the idea is possible, feasible, and viable or not. The only task of thinkers is to think of as many ideas as possible for them. In this process, design thinkers also resort to the use of boards, sticky notes, sketching, chart pa



4. Prototype :

- This step deals with building the ideas and checking for their feasibility to arrive at the final solution. The step of prototyping is the one in which the end user comes into picture. The end user is actively involved in this component of design thinking. All the feedback is taken from the customer, and based on the criticisms, suggestions, and appreciations received, the design thinkers create a better solution after iterating the process of design thinking's first three steps, viz. Empathize, Define, and Ideate.

5. <u>Test</u> :

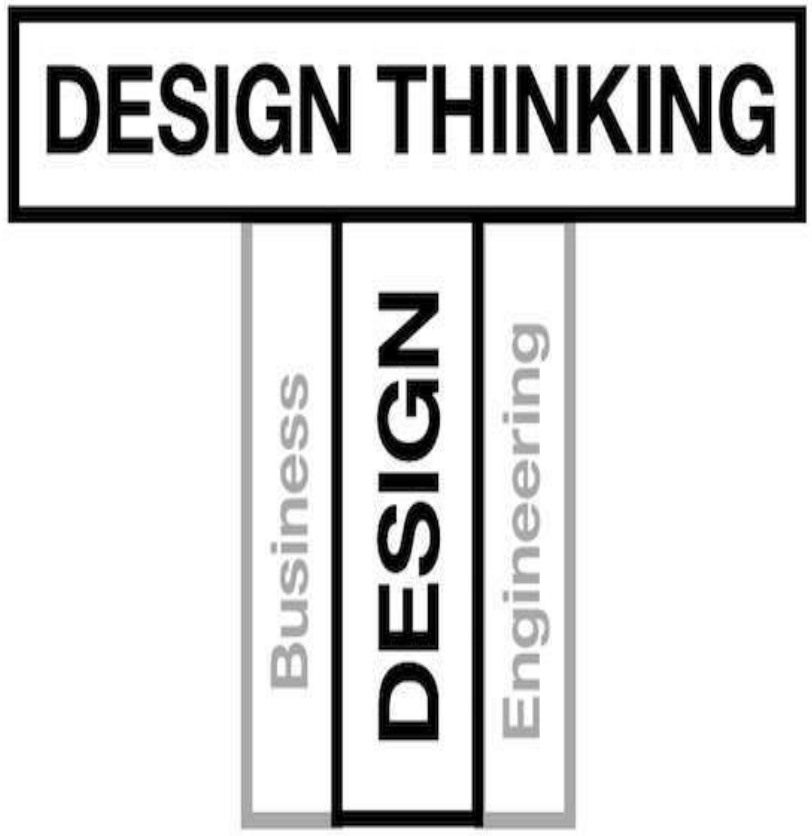
- This phase is also called as 'Execute’. This is the phase where the final solution is tested on a full scale basis.
- Testing will help to understand what actually works and what does not. This step can be the most rewarding, if the prototypes succeed to give positive results, or can be the most annoying, if the prototype fails. After testing, the entire process of design thinking may have to be repeated. If the end user approves the solution, then the process of design thinking stops here.

Distinctions Between Design and Design Thinking

- Design Thinking is a methodology that is used to innovate and solve business problems.

VS

- Design is about applying design thinking and design methodologies into im-material products.



How is a Mindset Different From a Process ?

- **A mindset is based on experience and teaching.**
- **Vs**
- **A process is purely based on teaching.**

- Design Mindsets are the lenses that we wear to be more creative, user-centered, and agile.
- Design mindsets are about how we can work, and how we can tackle problems.
- These three principles can be your lodestars as you navigate the design process to create something new, innovative, and successful.

- **Be user-centered.** Do things and provide things that your intended audience can use, that are useful to them, and that they want to use.

- **Be experimental**. Open yourself to new ways of doing things, and trying them in quick and thoughtful ways to see if they work.
- **Be intentional** in how you operate. Be conscious of what kind of process you are using, what space you're in, what might be going wrong, and what might be made better. Be ready to change and adapt to make for better outcomes.

Qualities You Need To Get Design Thinking Mindset:

- 1. Be curious and observe
- 2. Create and harbor empathy
- 3. Don’t just optimize- challenge to innovate
- 4. Consider the big picture.

Human-Centered Design Mindsets

Empathy

Optimism

Embrace Ambiguity

Make It

Learn From Failure

Iterate, ITERATE

Creative Confidence

Empathy

"I can't come up with any new ideas if all I do is exist in my own life."

Empathy is not only a wonderful skill for understanding your customers better, it can also help you solve problems from their perspective and gain insight into the design process. Ultimately, your product or service should be built to help improve other people's lives and experiences, so never losing sight of an empathetic view of the world is key.

Optimism

"Optimism is the thing that drives you forward."

IDEO describes design thinking as inherently optimistic. In order to take on a design challenge, you need to believe that progress is an option. Optimism is this embracement of possibility and knowledge that there is a better solution to the problem out there.

Embrace Ambiguity

"We may not know what that answer is, but we know that we have to give ourselves permission to explore."

Design thinking designers start from not knowing the answer to the problem. This ambiguity may feel uncomfortable at first, but by embracing it, you will be able to open yourself up to creative ideas and arrive at unexpected solutions.

Make it

"You're taking risk out of the process by making something simple first. And you always learn lessons from it."

Design thinking is about experimenting with prototypes. Make an idea real in order to better understand it and think through the problem. Only through building and testing will you be able to know if a product or service is doing what it should do. Whether it's a simple cardboard and scissors model, or a sophisticated digital mockup, creating a prototype will allow you to share your idea and gain feedback early and often.

Learn from failure

“Don't think of it as failure, think of it as designing experiments through which you’re going to learn.”

This mindset is all about the ability to learn from failure and use failure as a tool to improve your practices. As Tim Brown, CEO of IDEO explains, “Don’t think of it as failure, think of it as designing experiments through which you’re going to learn.” Design begins with not knowing the solution to a challenge. Instead of being scared of failure, use every opportunity to experiment and grow from your mistakes.

Creative Confidence

“Creative confidence is the notion that you have big ideas, and that you have the ability to act on them.”

This mindset is about approaching the world like a designer. It’s understanding that you have creative ideas and the power to turn those ideas into a reality. Creative confidence allows designers to make leaps and trust their instincts about real solutions to business problems.

Iterate iterate iterate

"What an iterative approach affords us is that we gain validation along the way… because we're hearing from the people we're actually designing for."

The final IDEO design thinking mindset is about iteration. In order to reach the right solution, you need to receive feedback from customers early and frequently. By constantly improving and refining your work, you will be able to produce better ideas and arrive more quickly at the right solution.

What is Creative Thinking?

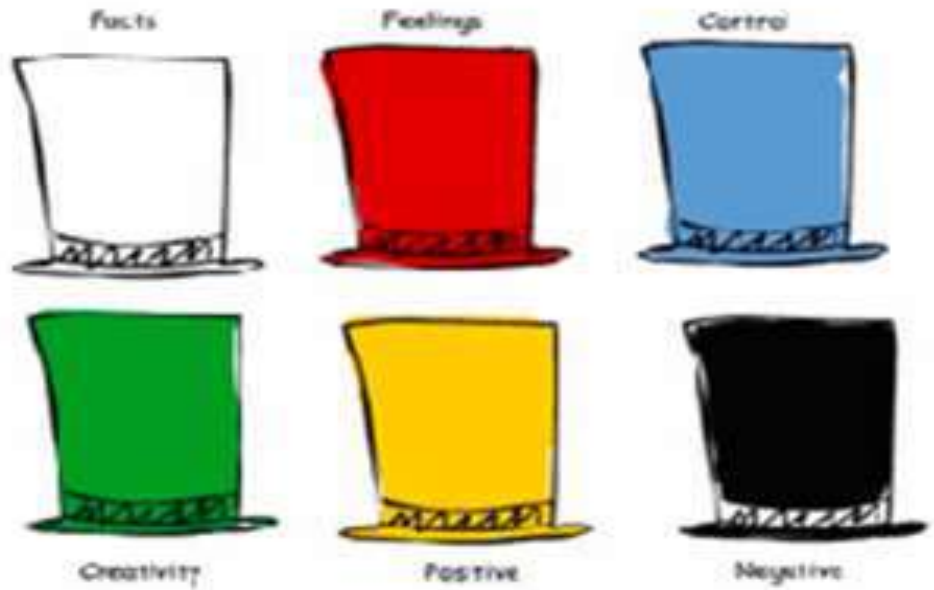
Creative thinking is the ability to look at things differently, and find new ways of solving problems. **Creative thinking** skills are definitely not just for '**creative** types' like artists and musicians. Everyone can benefit from **creative thinking** from time to time.

Examples of creative thinking skills include: problem solving, writing, visual art, communication skills, and open-mindedness.

Let’s Go Through Some Activities Regarding Creative Thinking-

- 6 Thinking Hats
- Problem Finding-How Might We?
- The Round Robin Exercise
- Opposite Thinking

6 thinking hats



- **White Hat:** with this thinking hat, you focus on the available data. Look at the information that you have, analyze past trends, and see what you can learn from it.
- Look for gaps in your knowledge, and try to either fill them or take account of them.
- Set the context that we will be looking at this problem in India.
- Write down all the facts you know or need to know about the problem. For hunger, it could be as simple as “Number of children sleeping hungry at night”, “Number of malnourished children”. Don’t google this information.
- DON’T WRITE DOWN PROBLEMS YET.

- **Red Hat**: "wearing" the Red Hat, you look at problems using your intuition, gut reaction, and emotion. Also, think how others could react emotionally.* Try to understand the responses of people who do not fully know your reasoning.

- How do people feel about the problem that you have picked? How did they feel when they encountered it. How will they feel if they overcome it? For example, for hunger, children feel “weak”, people who throw away food feel “guilty”, etc.

- **Black Hat:** Using Black Hat thinking, look at a decision's potentially negative outcomes. Look at it cautiously and defensively. Try to see why it might not work.* This is important because it highlights the weak points in a plan. It allows you to eliminate them, alter them, or prepare contingency plans to counter them. Play the devil's advocate.
- Now write down all the specific challenges surrounding this problem.
- For example, for hunger, Food is thrown away that could be given to poor. Children go to school for midday meals but don’t get dinner.

- **Yellow Hat:** This hat helps you to think positively. It is the optimistic viewpoint that helps you to see all the benefits of decisions and the value in it.* Yellow Hat thinking helps you to keep going when everything looks gloomy and difficult.

- Think about what happens when you solve this problem and its specific challenges.

- For example, for hunger, less food would need to be wasted, the economy would benefit, etc.

- **Green Hat:** The Green Hat represents creativity. This is where you develop creative solutions to a problem.* It is a freewheeling way of thinking, in which there is little criticism of ideas. (You can explore a range of other tools to help you.)
- Write down your ideas for solving these problems and achieving the yellow hat outcomes

- **Blue Hat:** This Hat controls the Start and End of remaining Hats
- Now Connect this all Hats in the form of Mind Map.
- A mind map is an easy way to brainstorm thoughts organically without worrying about order and structure. It allows you to visually structure your ideas to help with analysis and recall.

How Might We

- How Might We Action What for Whom in order to Change Something

- **“How might we” (HMW) questions are short questions that launch ideation. They’re broad enough to include a wide range of solutions but narrow enough to impose helpful boundaries.**

How Might We

- Challenge: Redesign the ground experience at the local international airport
-
- Picture this: Troubled mother of three, rushing through the airport only to wait hours at the gate, needs to entertain her playful children because “annoying little brats” only irritate already frustrated fellow passengers.

How Might We

- Amp up the good: HMW use the kids' energy to entertain fellow passenger? Remove the bad: HMW separate the kids from fellow passengers?
- Explore the opposite: HMW make the wait the most exciting part of the trip? Question an assumption: HMW entirely remove the wait time at the airport? Go after adjectives: HMW we make the rush refreshing instead of harrying?
- ID unexpected resources: HMW leverage free time of fellow passengers to share the load? Create an analogy from need or context: HMW make the airport like a spa? Like a playground? Play against the challenge: HMW make the airport a place that kids want to go?

How Might We

- Change a status quo: HMW make playful, loud kids less annoying?
- Break POV into pieces: HMW entertain kids? HMW slow a mom down? HMW mollify delayed passengers?

  - How Might We Action What for Whom in order to Change Something

- Problem Finding

- Vote for the top 3 How Might We questions

Round Robin

- Take your HMW and come up with a wild idea that could be an unconventional solution
- Pass the Post to the Person on your Left
- Write down a reason why the proposal will fail
- Write down a way to resolve the critique

Opposite Thinking

- Describe the assumption you have about your concept or domain

For instance, when designing a chair, you can list the assumptions of a chair

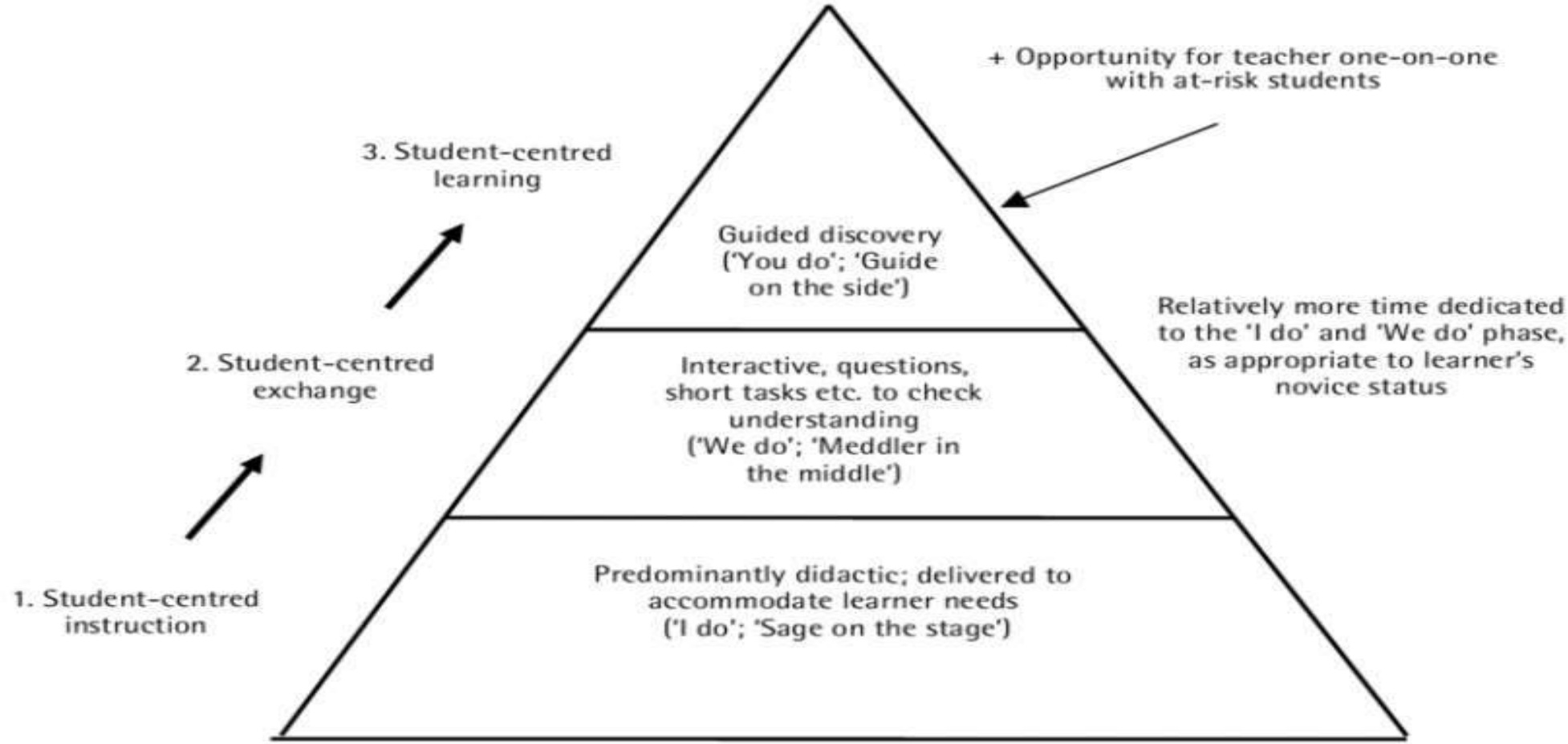
(it needs to have Legs)

- Now think the opposite of the assumption- what would happen if this were no longer true/necessary

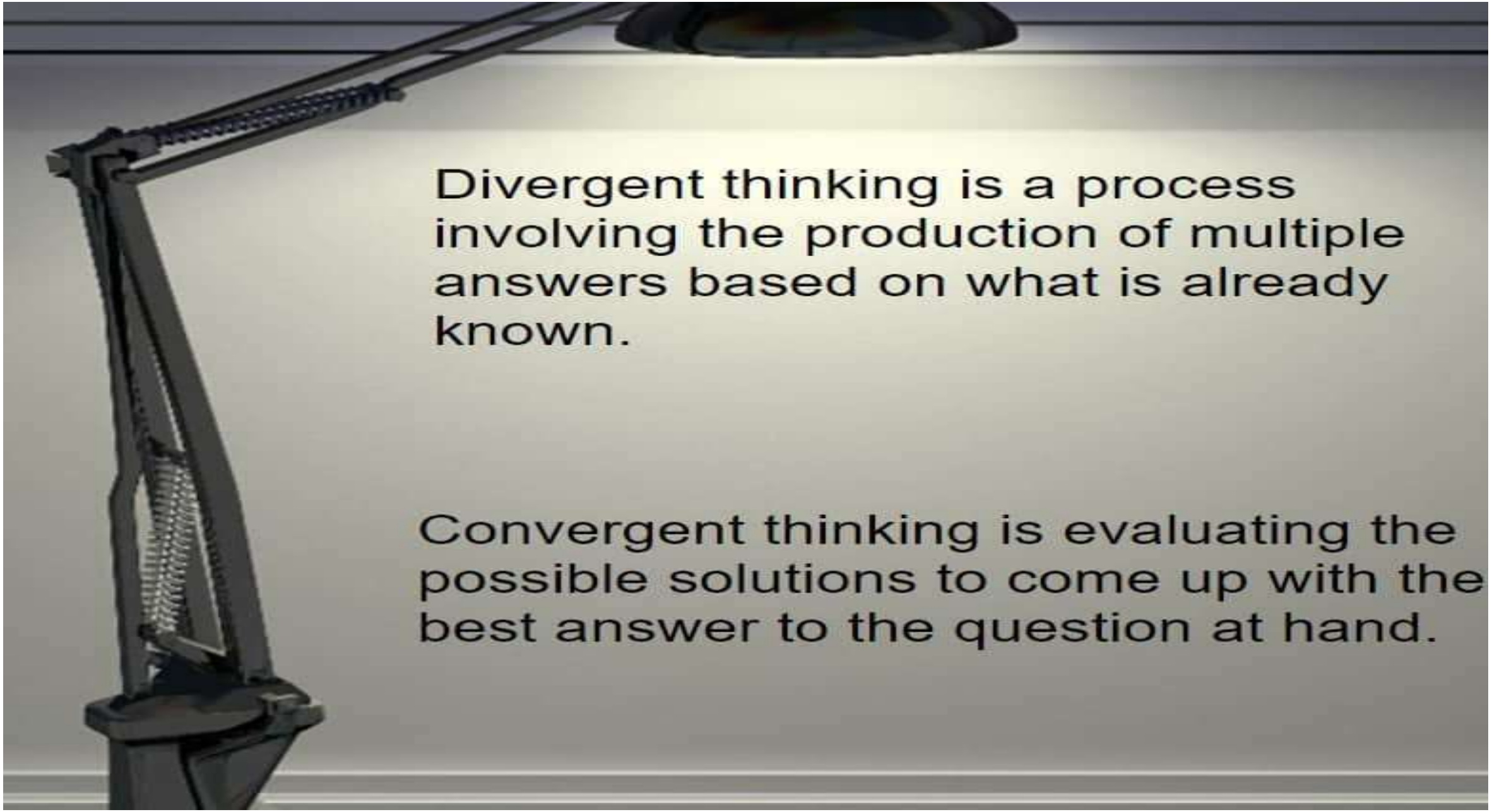
…think of its opposite (no legs?!)…

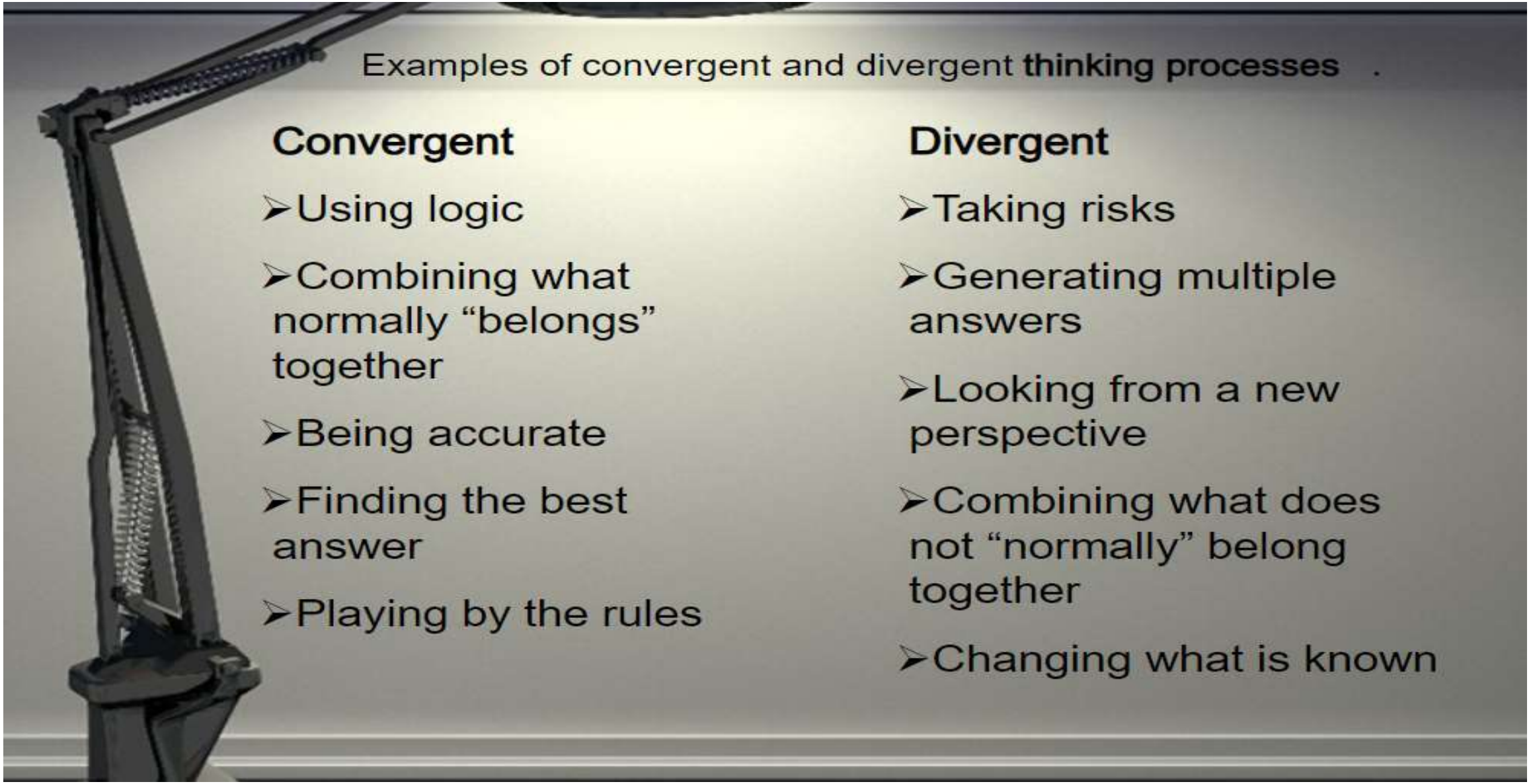
- Describe a new service, offering, improvement out of the opposite

to trigger additional ideas: what if chairs were hangi are from the Ceiling



a: General LRI Model: Student-centred instruction ('I do'; 'Sage on the stage'); Student-centred exchange ('You do'; 'Meddler in the middle'), and Student-centred learning ('We do'; 'Guide on the side').


Divergent thinking is a process involving the production of multiple answers based on what is already known.
Convergent thinking is evaluating the possible solutions to come up with the best answer to the question at hand.


Examples of convergent and divergent thinking processes .
Convergent
Using logic
Combining what normally "belongs" together
Being accurate
Finding the best answer
Playing by the rules
Divergent
Taking risks
Generating multiple answers
Looking from a new perspective
Combining what does not "normally" belong together
Changing what is known

Unit 2

- **Phase one: Empathy**
  - Empathy is the ability to put yourself in someone else's shoes to start "seeing" things through his/her eyes.
- **There are 3 ways to build empathy: 1) interviews, 2) observation and 3) experience.**

1. Interviews We regularly have customer meetings where we investigate current workflows, how each designer thinks, the environment in which they work, pain points, expectations, and more. Our interviews are not limited to the US, we conduct interviews in different parts of the world. It's fascinating to see how people see and tackle challenges differently. It's important to wear an anthropologist's hat during interviews and stay neutral. Even if you think you know the answer, ask why.

2. Observation

Give your user a task and just watch. If you ask, “Do you have issues buying things from Amazon?”, you will probably hear, “No, it’s very easy to buy things there.” But if you watch a person using it from behind their shoulders, you will see pain points along the way.

3. Experience

Use what your customer uses. It can be your own product, or it can be a competitor’s. This will give you direct access to the pain points and feelings of enjoyment your users experience.I test all the design and prototyping tools that I can. Not only to build new mental models, but also to identify, as an anthropologist, whether a user suggesting a feature is being directly influenced by an existing tool or service. Adopting new mindsets and avoiding existing mental models are probably one of the hardest things to do!

- **Phase Two: Define**

After building empathy, it’s time to revisit the initial design challenge and re-define the problem.

To define, or re-define, the problem or challenge, a point of view (PoV) formula can help: PoV = persona + need + insight

So very easily, we were able to define some of the XD pillars:

- Design at the speed of thought
- Performance and quality
- Meaningful workflows
- Contextual interface

- **Phase Three: Ideate**

After building empathy and re-defining the challenge, problem or need, it’s time to put our brains to work.

In my opinion, ideation is the best part of the process because it’s fun and exciting.

1. Diverge (Create Choices-Brainstorming)

The same multidisciplinary team who built empathy and re-defined the problem, gets together during a pre-specified time frame to “vomit” ideas without any judgment! Why? Because by focusing on quantity we quickly leave obvious solutions behind and enter the unknown where true innovation can be found. To accomplish this, follow the rules of brainstorming:

2. Converge (Make Choices)

With a ton of ideas to choose from, the team gets to select which they will work on. A good technique is voting with stickers: each team member gets a set of stickers and individually each team member marks the ideas they would like to work on.

After this process is complete, it’s easy to democratically select the top ideas.

Phase Four: Prototype

Let’s build to think and to feel. A prototype transforms an idea into something tangible and “experiment-able”.

“A prototype is worth a thousand meetings”, is a saying at IDEO. There

are three stages in this phase:

1. Inspiring — “What could it be?”
2. Evolving — “What should it be?”
3. Validating — “What will it be?”

Phase Five: Test

When prototypes are created, test them with real people. We test to refine prototypes and solutions, to learn more about the user, and to test and refine our PoV.

When testing, let users play with your prototypes, watch and listen. If small tweaks are easy to make, do them and test again. Get close to your users and most importantly, **never fall in love with your ideas.**

In Conclusion

Design Thinking is a method or process that starts with a design challenge, moves to the empathy phase (interviews, observation or experience), then to definition (or re-definition) of a problem or challenge, embraces ideation (diverge first and converge later), uses prototypes (build to think and learn fast) and continues with testing.

Unit-3 Design Challenge Themes:

The Main Challenge in the way of Design Process is “Patterns of Thinking”

What is Pattern of Thinking –

This the simplest form of thinking, where you perceive the things based on your own limited number of life experiences. Unfortunately, this type of thinking only takes into account one’s own perception of life, and it’s entirely based on own life experiences.

- Problem with Ingrained Patterns of Thinking:

Sometimes, the easiest way to understand something intangible, such as Design Thinking, is by understanding what it is not.Humans naturally develop patterns of thinking modeled on repetitive activities and commonly accessed knowledge. These assist us in quickly applying the same actions and knowledge in similar or familiar situations, but they also have the potential to prevent us from quickly and easily accessing or developing new ways of seeing, understanding and solving problems. These patterns of thinking are often referred to as **schemas**, which are organized sets of information and relationships between things, actions and thoughts that are stimulated and initiated in the human mind when we encounter some environmental stimuli. A single schema can contain a vast amount of information.

For example, we have a schema for dogs which encompasses the presence of four legs, fur, sharp teeth, a tail, paws, and a number of other perceptible characteristics. When the environmental stimuli match this schema — even when there is a tenuous link or only a few of the characteristics are present — the same pattern of thought is brought into the mind.

As these schemas are stimulated automatically, this can obstruct a more fitting impression of the situation or prevent us from seeing a problem in a way that will enable a new problem-solving strategy. Innovative problem solving is also known as

“Thinking outside of the box”.

An Example of Problem solving – Patterns of thinking vs. Thinking out of Box

Thinking outside of the box can provide an innovative solution to a sticky problem. 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.

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.

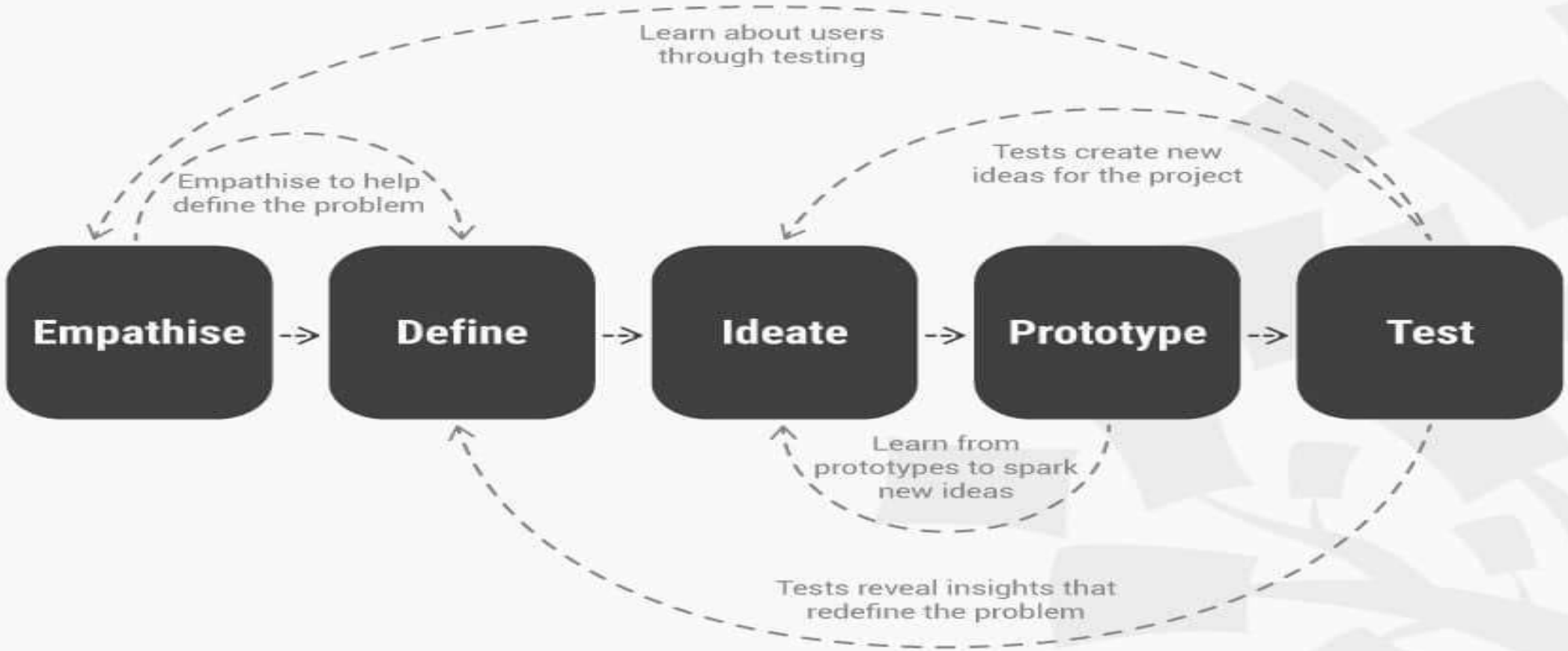
What is Wicked Problem Solving?

Wicked Problem Solving is an interactive self-paced course and toolkit that provides detailed processes and examples on how to effectively solve problems. It comes complete with an online collaborative white-boarding tool called Miro and a wealth of other resources to help you immediately apply what you have learned.

How It Works

Watch quick videos, then get hands on experience working through your own problems in your companion Wicked Problem Solving Miro board. Tom will guide you through each quick activity, and you'll be equipped to tackle just about anything, before applying the same with your team in-person or remotely!

DESIGN THINKING: A NON-LINEAR PROCESS



- Design Thinking is an iterative and non-linear process.
- This simply means that the design team continuously use their results to review, question and improve their initial assumptions, understandings and results.
- Results from the final stage of the initial work process inform our understanding of the problem, help us determine the parameters of the problem, enable us to redefine the problem, and, perhaps most importantly, provide us with new insights so we can see any alternative solutions that might not have been available with our previous level of understanding.
- Finally, Design Thinking is a Non-Linear Process. It never follows any set of instructions and can be reverted back if any mistake is identified in the middle of the Process

IDEATION TOOLS & EXERCISES.

- "**Ideation** is the mode of the design process in which you concentrate on idea generation. Mentally it represents a process of "going wide" in terms of concepts and outcomes. Ideation provides both the fuel and also the source material for building prototypes and getting innovative solutions into the hands of your users."

IDEATION: TOOLS, PURPOSE & METHODS

- Ideation is at the heart of the Design Thinking process.
- There are literally hundreds of ideation techniques,
- for example brainstorming, sketching, SCAMPER, and prototyping.

WHAT IS THE PURPOSE OF IDEATION?

- Ideation is the third and important step in the process of design thinking.
- Design Thinking is not the kingdom of designers.
- It's a systematic process to empathize with human problems and design the right solutions to them.

- Ideation is about challenging assumptions and exploring hidden territories. It helps to learn user problems and come up with new solutions.
- If ideation is carried out correctly, you never know which idea becomes the next innovatory solution.

- It's about going beyond the norm ideas and solutions.
- It's to explore new perspectives, diversifying ideas to innovate in a never before seen, and novel way.

- IDEAS.
- A small word with Four letters.
- But creates a big impact on the world.
- Ideation is a creative process of generating ideas and opening the mind of great thinkers.
- The process of ideation has evolved over a period leading to the creation of Ideation tools.
- As ideating is not a one-man task, it's more of a group activity. Now, Group means more people and that means MORE ideas. Thus, organizing the process of putting forward the idea is of utmost importance.

THE FOUR IDEAL METHODS OF IDEATION:

1. Brainstorming
2. Mind Mapping
3. Sketch Storm
4. Story Board

1. BRAIN STORMING

- **Brainstorming**

Brainstorming is a combined method of solving the problem.
It encourages putting up or storming up ideas randomly.

It lets the team freely let out their thinking process.

Also, it gives out a bunch of new ideas for which can be crafted into an original actionable idea. It lets the team feel free to let out their thinking process.

An experience way beyond an airplane

2. Mind Mapping

- Mind mapping is a visual representation of ideas.
- It is a form of creating connections between ideas by building relationship webs.
- The participants have a central focus on the problem.
- The problem has numerous roots of ideas or topics that are connected to another solution or idea.

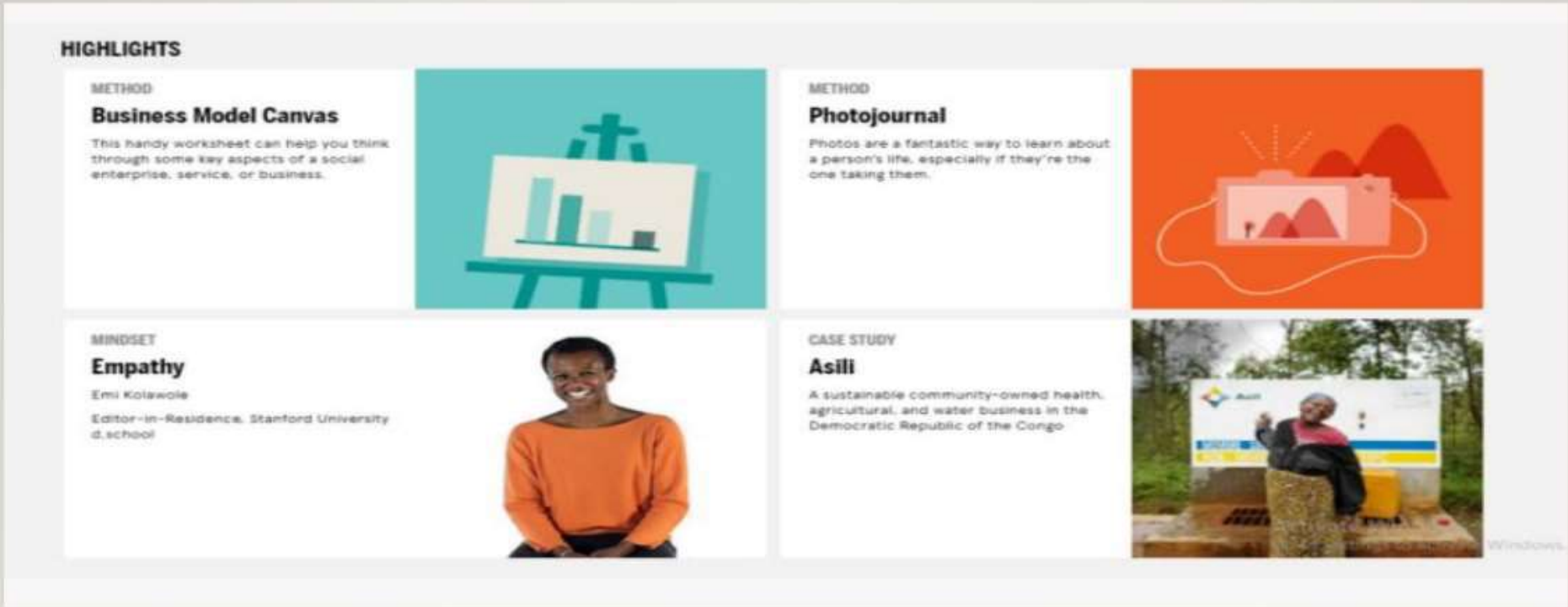
3. Sketch Storm

- Sketch Storm is putting out ideas and solutions in the form of diagrams and sketches. Not just words.
- It lets participants sketch out ideas in the form of various shapes which suit the idea formation.
- The sketching of an idea can be very simple & rough but detailed enough to convey the intention.

- 4. Story Board • Storyboarding encourages participants to create a story revolving around the problems. It emphasizes creating visual stories with main characters as design, dynamics of problems, a direction towards a solution, etc.

BEST IDEATION TOOLS:

1. Design Kit



- **Designkit** is an amazing tool provided by IDEO. The kit offers a powerful method based on human-centered design.
- The method is divided into three sections:

a) Inspiration,

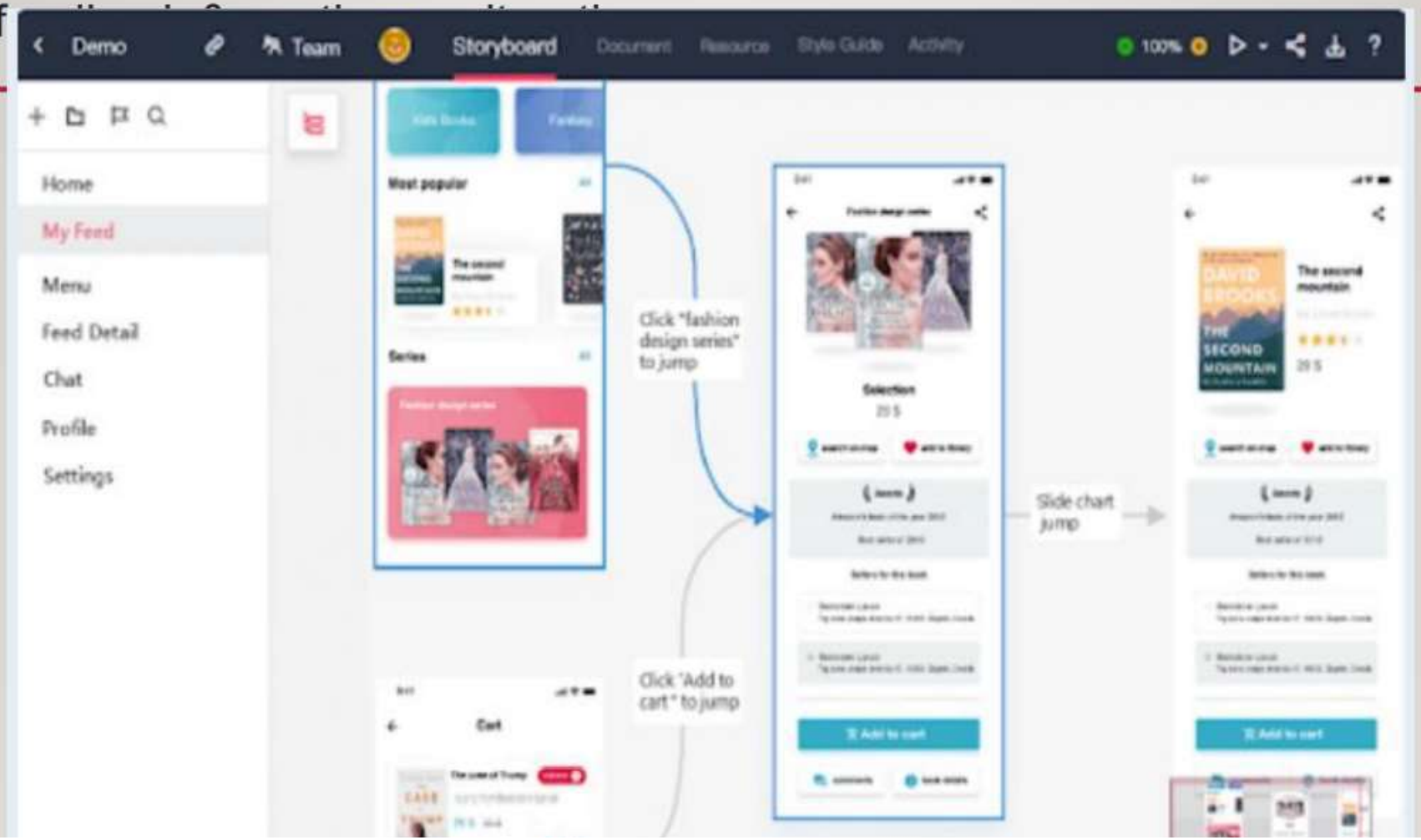
b) Ideation &

c) Implementation.

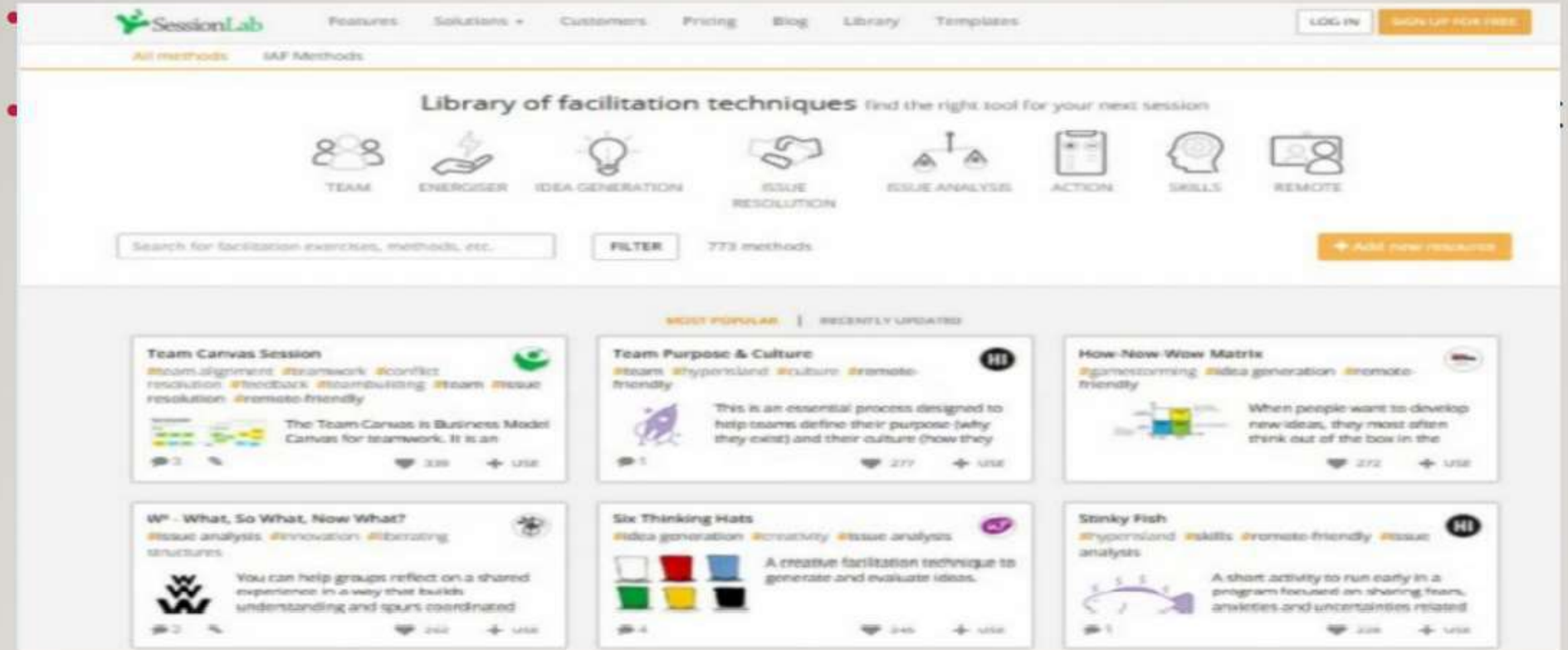
- Each section has various activities for ideating & product designing.

2. Mockplus:

Mockplus is an all-in-one design platform for fast and easy design. It focuses on rapid prototyping, effective collaboration, and scalable design systems. While emphasizing a collection of user f



- 3.) **Session Lab:**
- **SessionLab** is a wholesome library for Ideation generation & Innovation techniques. It has been new or never heard before ideation techniques. Each activity mentions the goal that will be fulfilled.



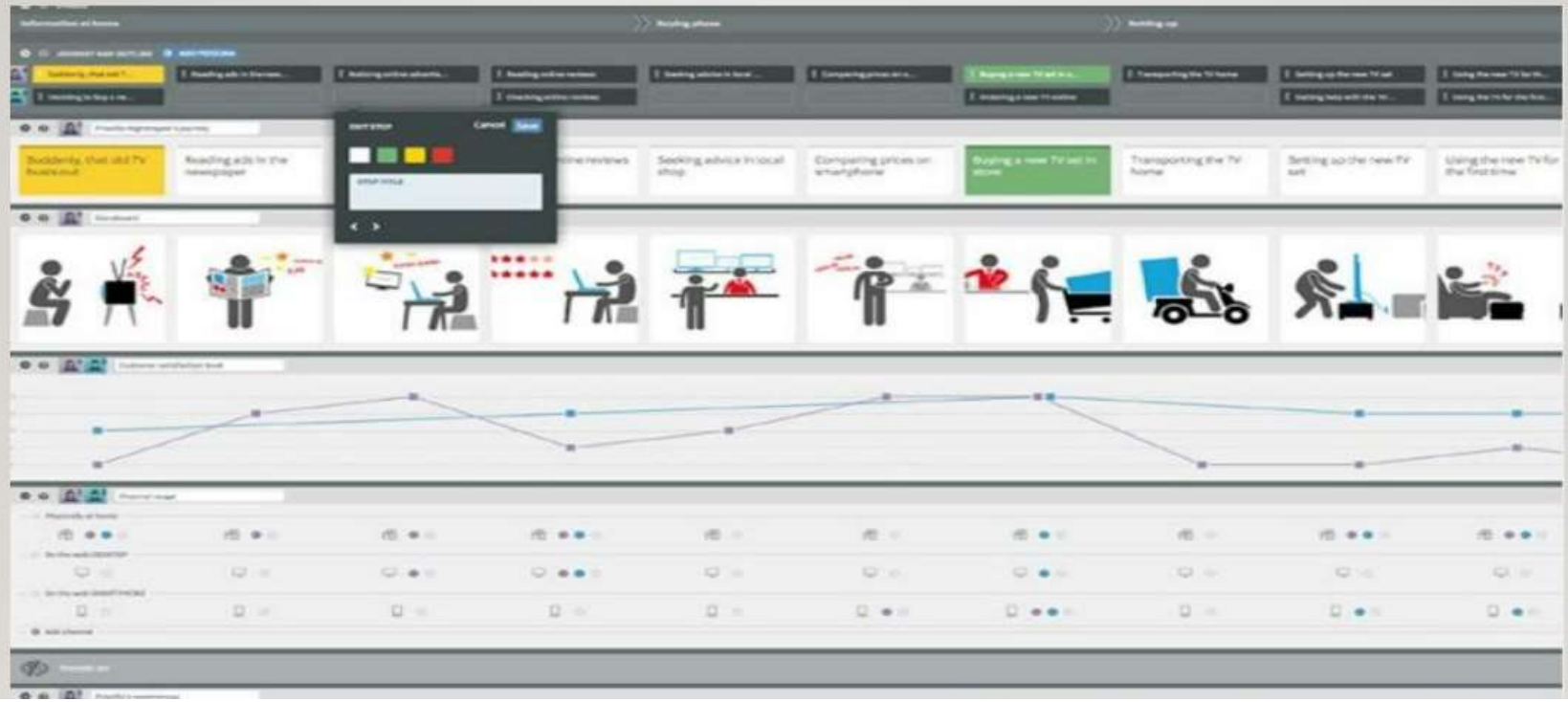
also lets

4) SMAPLY

Smaply is a journey mapping tool. It let users create and share customer journey maps, personas stakeholder maps, etc. It's a great tool to map out your customer experience. Thus, helping in discovering customer pain points and needs.

It helps to dig deeper into customer's expectations and requirements.

It encourages us to understand how stakeholders form connections with each other that influence your services.



5.OPEN INNOVATION TOOLKIT

- Mozilla offers this great free tool **Open Innovation toolkit**. It's a community-sourced set of methods to support & build better ideas and products.

- Their Method is divided into three principal categories: Gather Insights, Ideate, Prototype & test. It has filters for difficulty level- Low, Medium & Hard, and Time- 1 to 5 days, 5 to 10 days, 10+ days.

- It also lets the user filter out the activity based on the outcomes they want to achieve.

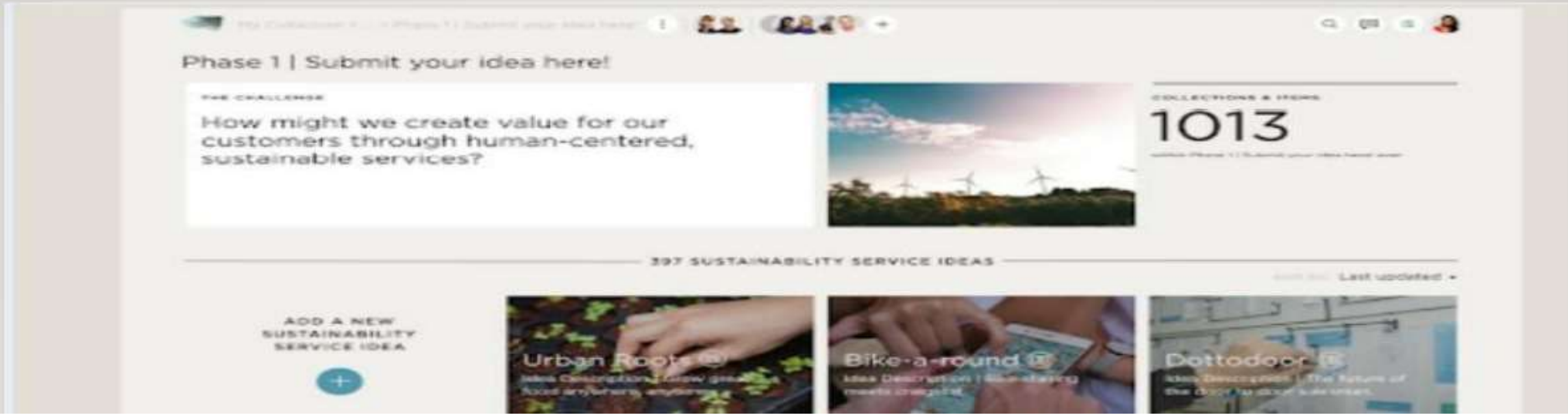
- Each Activity is further divided into detailed steps with purpose, outcomes number of participants, required materials, and resources.

- Do you want to validate an idea? It has the solution method. Or Do you want to prioritize your activities? The toolkit has it all.

6. SHAPE

- **The shape** is the newest software by design thinking influencers- IDEO. It's a collaboration tool to build, test, and tune your ideas.

- It bills itself as a collaborative tool for tackling tough challenges by administering customer-centered & creative problem-solving methods.
- It offers proven methods and templates for problem-solving. One can create their customized workspace based on organizational needs & challenges.



7. BOARD OF INNOVATION

- The **Board of innovation** is a firm of business design & innovation strategy. It has free tools for ideation, a problem discovery pitching checklist, and an evaluation sheet. It also has a tool to foster an innovative culture in the organization.
- So, it also has free guides and tools for strategy leaders, corporate innovators, and HR leaders.
- One of our favorite tools is Problem sizing canvas under problem discovery. It lets a user download their in-depth guide in the pdf version.

Personas

Design Thinking for Entrepreneurship & Innovation

What is a persona?

A persona is a realistic character sketch representing one segment of a targeted audience.

Great personas can

Bring focus
Build empathy
Encourage consensus
Create efficiency
Lead to better decisions

Create a persona
for your solution

Name: .....
Age: .....
Location: .....
Profession: .....

Drawing/photograph of person!

Back Story

Tell us something about their responsibilities and interests.

.....

.....

.....

Goals

What are they aiming to achieve from the product/service?

.....

.....

.....

Motivations

Why would they be interested in the product/service?

.....

.....

.....

Barriers

What are the possible reasons that could stop them from using the product?

.....

.....

.....

Chloe

Buyer Persona Example #1

Demographics		
	Age	30
	Language	English
	Location	America
	Education	Bachloors Degree
	Annual Income	70k
	Family Status	Single
Profession/Career		
	Job Title	Vet
	Industry	Pet & Wellness
	Decision Maker	Yes
	Challenges	Pricing / Value of Product
	Goals	Expanding to a new location
Interests		
	Favorite Social Media Channel(s)	Instagram
	Least Social Media Channel(s)	LinkedIn
	Favorite Brands	Bark Box, Pets R Us
	Favorite Content Type (Eg. Videos, Images, Audio Books, Etc.)	Video + Imagery

Johnny McLonny

Age : 25

Education : Masters

Occupation : Assistant Manager

Location : Canada

Technical Ability : Master

"I want to grow and learn everyday at my new job"

Bio

Johnny is an aspiring product manager. Johnny is actively looking for new opportunities right now. They are keen to learn and grow more in their new job.

Goals

- grow credibility
- learn new skills
- better income

Frustrations

- less experience makes it harder to be considered
- hiring process is tedious
- hiring managers don't reply

Dream companies

- Google
- Microsoft
- Apple
- Figma
- Youtube

Personality

#goaloriented #learnmore #skilled

“Proto-personas give us a shared understanding, not insight”

Why proto-personas are great

Fast to produce
Start the project as we mean to go on (user needs inform decisions)
Avoiding ‘designing for everyone’
Discover assumptions and misconceptions

How I Create A Proto Persona (UX Framework)

Jen Nguyen

Design Student

Behaviours

- Free time is based on her education schedule: classes, deadlines, exams, holidays, etc.
- Lives at university and survives off student loans
- Spends most of her time online and interacting with people through a digital medium
- Familiar and up-to-date on most consumer apps
- Very resourceful when it comes to finding information and applying it to her studies

Pain points

- Doesn't know where and how to start a design project
- Missing classes means it hard to catch up
- Too much information to read online
- Spends too much time on documents to make them look pretty instead of the actual designs
- Starts way too late and a project
- Doesn't want to ask for help too many times
- Struggles to balance school work with personal life

Demographics

- Lives in London, UK
- First year of university studying Design BA
- 19 years old

Needs & Goals

- Needs real world design advice and guidance
- Need content that is easily digestible in order to remain interested, ideally video.
- Follow a existing process and execute on a class project
- A fun way to learn that could keep her engaged
- Someone to give her confidence that she is moving in the right direction.
- Needs to execute projects quickly
- Wants to impress her friends, lecturer, and parents

Tools & Devices

- iOS and iPhone user
- 13' MacBook Pro
- Facebook, WhatsApp, Instagram, TikTok, Snapchat
- GSuite: Docs, Slides, Sheets, Forms
- Looks out of free design tools: Blush, Figma, Invision

- Studied Art Foundation previously at College
- Can spend up to £3500 per term
- Relies on public transport

Goal-directed persona

This persona cuts straight to the nitty-gritty. It focusses on: “What does my typical user want to do with my product?”. The objective of a goal-directed persona is to examine the process and workflow that your user would prefer to utilise in order to achieve their objectives in interacting with your product or service. There is an implicit assumption that you have already done enough user research to recognise that your product has value to the user, and that by examining their goals, you can bring their requirements to life.

Role-Based persona

The role-based perspective is also goal-directed and it also focusses on behaviour. The personas of the role-based perspectives are massively data-driven and incorporate data from both qualitative and quantitative sources. The role-based perspective focusses on the user's role in the organisation. In some cases, our designs need to reflect upon the part that our users play in their organisations or wider lives. An examination of the roles that our users typically play in real life can help inform better product design decisions. Where will the product be used? What's this role's purpose? What business objectives are required of this role? Who else is impacted by the duties of this role? What functions are served by this role?

Engaging persona

Engaging personas can incorporate both **goal** and **role-directed** personas, as well as the more **traditional** rounded personas. These engaging personas are designed so that the designers who use them can become more engaged with them. The idea is to create a 3D rendering of a user through the use of personas. The more people engage with the persona and see them as 'real', the more likely they will be to consider them during the process design and want to serve them with the best product. These personas examine the **emotions** of the user, their **psychology**, **backgrounds** and make them relevant to the task in hand. The perspective emphasises how **stories** can engage and bring the personas to life.

Fictional persona

The fictional persona does not emerge from user research (unlike the other personas) but it emerges from the experience of the UX design team. It requires the team to make assumptions based upon past interactions with the user base, and products to deliver a picture of what, perhaps, typical users look like. There's no doubt that these personas can be deeply flawed (and there are endless debates on just how flawed). You may be able to use them as an initial sketch of user needs. They allow for early involvement with your users in the UX design process, but they should not, of course, be trusted as a guide for your development of products or services.

Lauren Jules

"I need an app that is fast, simple, and easy. I need to record an idea before I forget it."

Personal Description

Lauren is an undergrad enginerring student in Chicago, IL. She has never used Evernote, but does use her phone to keep notes, usually using the stock Note-taking app. She finds it to be fast, easy, and simple, which are the main things she looks for in an app. She believes that pen and paper can never be replaced. She often finds herself using post-it notes for quick notes.

Demographics

Age: 22
Education: Undergrad in Engineering
Location: Chicago, IL
Gender: Female

Technological

Lauren has a laptop that she uses all the time while in class. She also has a tablet but right now it is inconvenient to use while in class because she can't type fast enough on it to keep up with the instructor. Lauren has a smartphone as well, but she only uses it for phone calls and for checking her email.

Roles

Lauren is a student in Engineering at a university in Chicago. She also has a part-time retail job so her schedule is very tight.

Desires

Lauren doesn't believe that an app can ever replace taking notes on pen and paper. She finds that typing on a virtual keyboard is too slow. She desires an app that will allow her to take short notes quickly and easily. She finds herself constantly searching for a specific page of notes or post-it so an app that would help keep her better organized is desired.

Behaviors

Computer Usage

Once a week — 5-10 hrs/day

Note Taking Devices

None — Many

Devices Owned

None — Many

Note Taking

A little — A lot

Note Taking App Usage

None — A lot

Should User Research be a part of your Design Process?

What is User Research?

User research is the methodic study of target users—including their needs and pain points—so designers have the sharpest possible insights to work with to make the best designs. User researchers use various methods to expose problems and design opportunities, and find crucial information to use in their design process.

User research is probably the most controversial topic in the design process which has received mixed responses from the design community. Some say that user research is extremely overrated while others swear by its effectiveness. Some say that user research can completely be omitted and better results could be achieved from user tests while others say that user research is indispensable to the success of the product.

Why such an extreme gap in the thought?

Allow me to explain the rationale behind both of these ideologies.

In Favor of User Research

Designers who support user research are of the opinion that user research helps them in understanding user behaviors and reactions. They want to avoid the part where they make assumptions about the user, design as per their own whims and fancies and fail miserably after the product's launch. They rather prefer designing with data that shows who are the users and how they behave.

User research often starts with an understanding of the goal/vision of the product and questions such as-

In Favor of User Research

- Why are we designing this product?
- For whom are we designing?
- What do we already know about our users?
- What problems do users face while using this product?
- What do we intend to know about our users with user research?

Once you have an understanding of your ‘why’, you move on to methods like contextual inquiries, card sorting, interviews, surveys and questionnaires to gather intuitive inputs from real users.

For instance, if you’re designing a school management app, your user research will include interviews and contextual inquiry with the admin staff of various schools. You would be interested in knowing how they spend a regular day in school and what problems they face on a daily basis. Problems like manually adding attendance record of each student into the system and how that process is prone to errors can only be discovered when you sit and listen to them in their work environment.

That’s the advantage of user research. It helps you uncover problems people feel simply through talking and empathizing with others.

Against User Research

There are many examples from revered companies like Apple who don’t do market research. They believe that findings from user research can be skewed and nothing can be predicted about the future behavior of users.

Think of it this way- you spend 5–10 days in doing user research and building a product which works as per user expectations. But when you launch it, the users are still clueless or worse, they don’t like it anymore. Welcome to the world of uncertainties!

For this reason, I believe user research is a phase that can be skipped. A better approach is to build the Minimum Viable Product and get to the market fast, take users’ input and reiterate on the feedback.

Final Thoughts – Where is User Research Useful

The design process can never be the same for everyone. Nothing is set in stone and, to an extent, it depends on your project and its requirements what approach you should take. User research is one small (but crucial!) part of product development. Therefore, as a designer, one should be ready to adapt as per the project requirements.

Final Thoughts – Where is User Research Useful

User research is more valuable when you are working on a legacy product and you need to enhance the experience of the product. Just make sure you avoid the Deadly Sins of User Research. However, in products where you need to go to market fast, it's okay to skip user research.

User research, when done right, will help you design a product which matches user expectations. However, it's not just about using different observation and feedback collection methods to gather user inputs.