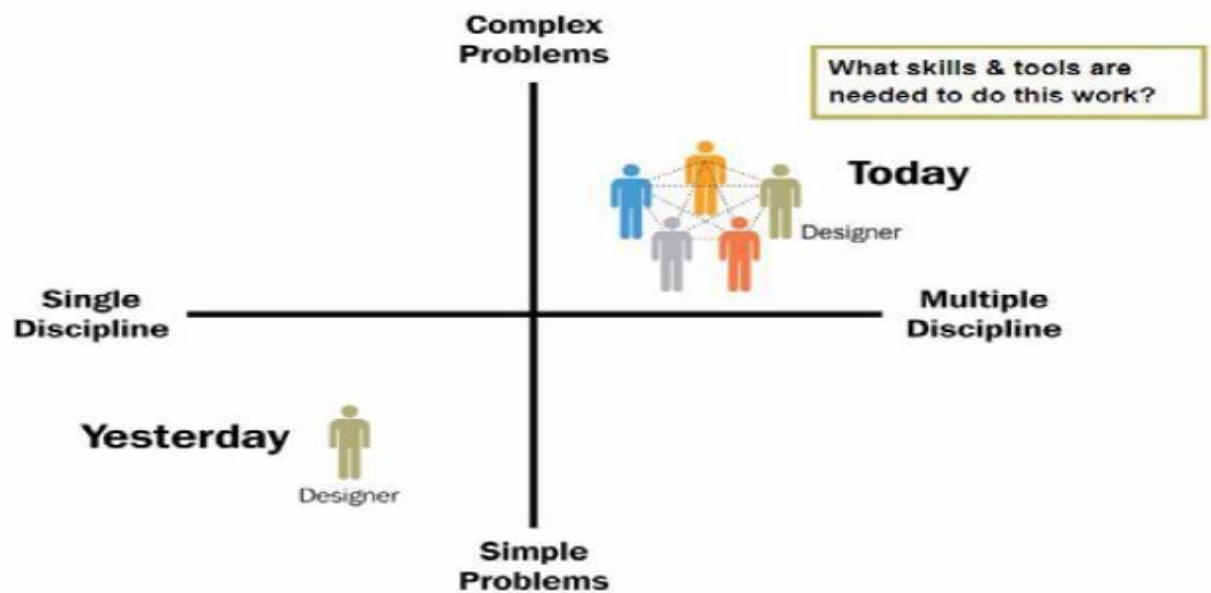


# UNIT - II

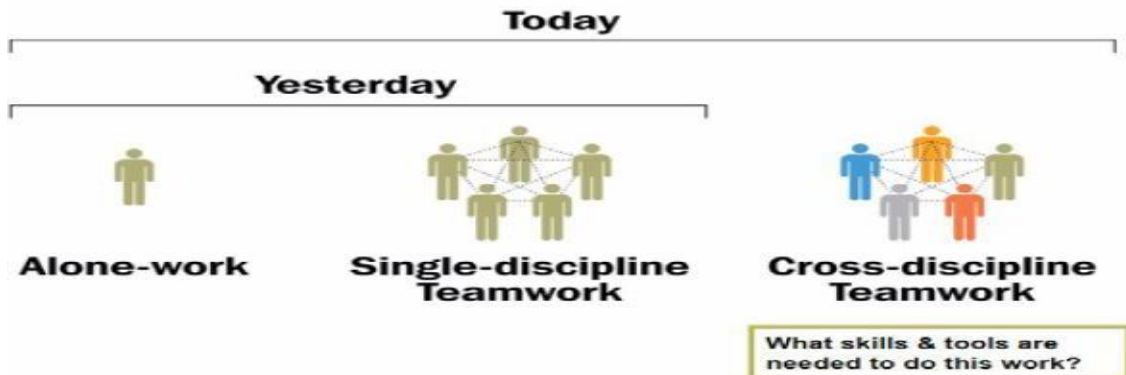
## Design thinking Vs Human centered design:

- Design thinking is a methodology that uses complex problems, and it is a way of using systemic reasoning and intuition to explore ideal future state
- Design thinking becomes more central to **business strategies**, **marketing strategies** and **execution works in operations** and **product design** and helps to tackle social problems.
- A new scope with in design thinking:

## What Designers Face is Changing



## How Designers Work is Changing



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

One of the first question people ask when hearing about Design thinking is, ”**what is Design thinking best used for?**”

Design Thinking is suited to address a wide range of challenges a wide range of challenges and is best used for bringing about innovation within the following contexts:

- 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 is not necessarily only understood as a process or method for solving a set-in-stone collection of problems. It can also be combined with others methodologies, business strategies, social innovation models and management practices.

- Design Thinking **starts with Empathy**, a deep human focus to gain insights which may reveal new and unexplored ways of seeing, and courses of action to follow in bringing about preferred situations for business and society
- It involves **reframing the perceived problem or challenge** at hand, and gaining perspectives, which allows a more holistic look at the path towards these preferred situations.
- It encourages **collaborative, multi-disciplinary team work** to leverage the skills, personalities and thinking styles of many in order to solve multifaceted problems.
- It initially employs **divergent styles of thinking** to explore as many possibilities, deferring judgment and creating an open **ideation space** to allow for the maximum numbers of ideas and points of view to surface.
- It later employs **convergent styles of thinking to isolate potential solution streams**, combining and refining insights and more mature ideas, which pave a path forward.
- It engages in **early exploration** of selected ideas, rapidly modeling potential solutions to encourage **learning while doing**, and allow for gaining additional insights into the viability of solutions before too much time or money has been spent
- It tests the prototype which survives the processes further to remove any potential issues.
- **It iterates** through the various stages, revisiting empathetic frames of mind and then redefining the challenge as new knowledge and insight is gained along the way
- **It starts off chaotic and cloudy** steam rolling towards points of clarity until a desirable feasible and viable solution emerges.

## Design Thinking Approach:

**Fundamental concepts** which are integral to the approaches are

|                     |  |
|---------------------|--|
| 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.<br>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 promises to provide a realistic, practical and innovative solutions to the problems of organizational concern and gives a **systematic approach to finding solutions**
- **The distinguishing feature of design thinking is that it encourages solution focused thinking or solution based thinking.**
- The design thinker is supported to have a clear idea of the goal of the entire process.
- **The design thinkers are not supposed to solve every specific problem, but to start the process with the end goal in mind**
- This methodology helps because by focusing on the present and the future conditions as well as the parameters of the problem statement, alternative solution can be explored simultaneously.

## Design thinking Vs Scientific Method:

- The Design Thinking approach is altogether different from the scientific method

| Scientific Method  | Design Thinking  |
|--|--|
| <p>The scientific method begins with rigorously defining <b>all the parameters of the problem</b>, so as to arrive at a solution</p> | <p><b>In</b> Design thinking it is supposed to identify <b>both the known and the ambiguous facets of the problem statement along with the current situation</b>.</p> <p>Design Thinking helps to unearth hidden parameters and open alternate paths to reach the solution</p> <p>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.</p> <p>This can , at times also lead to redefined of the problem statement</p> |

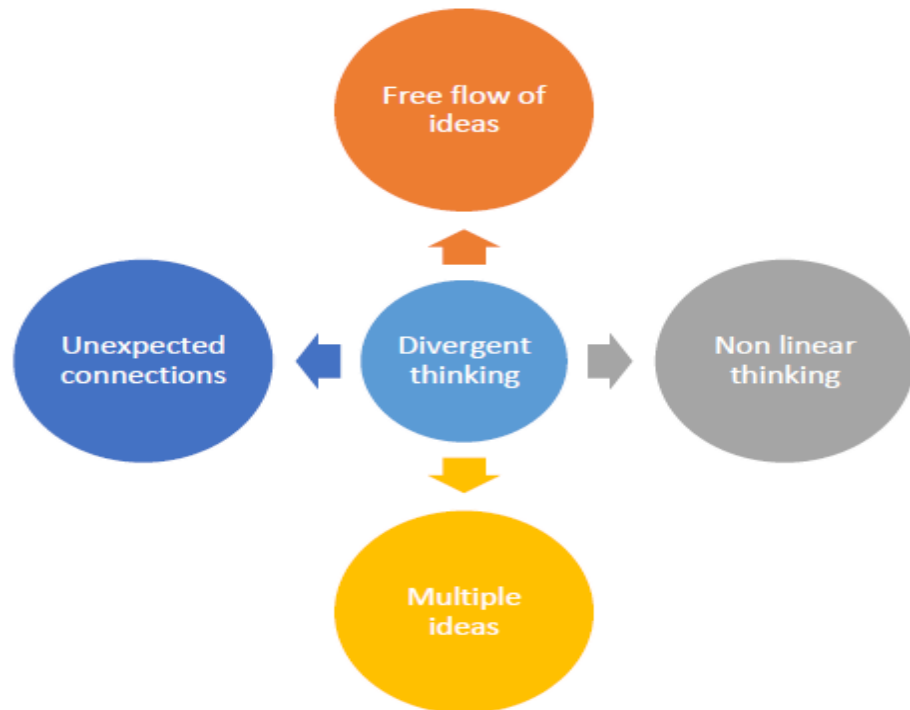
## Design Thinking ---Divergent Thinking:

Divergent thinking is the process of devising more than one solution for a problem statement. It refers to the thought process of generating creative solutions.

The main features of divergent thinking:

- It is a free flowing Chain of ideas.
- It happens in a non linear manner. i.e it does not follow any particular sequence of thinking. Moreover ideas can emerge at the same time, rather than one idea coming up only after the other has occurred.

- Non-linearity also means that multiple solutions are thought of and explored at the same time. This happens in a very short amount of time and unexpected connections are developed between the ideas.



- The term Divergent Thinking was first coined by J.P Guilford in 1956.
- Divergent thinking is supposed to enhance creativity of thinkers.
- Psychologists have claimed that the difference in creativity levels of people is dependent on the type of semantic networks of concepts inside the human mind. There are **two types of connections**
  - Flat
  - Steep
- The design thinkers with flat network are those with numerous loose conceptual connections. They are more creative.
- The people with steep networks are more logical, because of the linear associations between the nodes. Because divergent the thinking proceeds in a non-linear fashion, a person with flat associative network will be more successful in divergent thinking.

## **Exercise on Divergent Thinking:**

### **Case Study:**

**Problem Statement:** The process of knowledge transfer is a huge problem for the Organization. Let's call organization 'DT'. DT wants to eliminate the overhead of shelling out extra money and investing time for transferring knowledge to its new employees. The problem statement at hand is "Knowledge transfer adds to the cost of the company". Let's think of ways to eliminate or at least, reduce the cost to the company.

**Solution:** Following can be some of the possible and even not-so-possible solutions.

- DT can eliminate the process of knowledge transfer.
- DT can conduct classroom sessions for knowledge transfer, where a large number of new employees can be seated and just one instructor can deliver sessions to many employees at once. This will reduce the cost as the number of paid instructors required will be less.
- DT can come up with a document for knowledge transfer and can mail it to every new employee. The employees can go through the document and hence, can self help for knowledge transfer.
- DT can ask the employees to search for material online to gain knowledge of new tools and processes, which are currently in use in the industry.

There may be many other solutions that may come to your mind. Write them down on a sheet of paper. Here, won't focus on whether a solution is possible, feasible or viable. It just needs to bring ideas to the table, no matter how absurd they may sound. This is called the process of divergent thinking, where a thinker is free to move or flow in any direction.

## Design Thinking- Convergent Thinking:

- Convergent Thinking is exactly opposite of what divergent thinking is
- The term convergent Thinking was coined by ‘**Joy Paul Guilford**’ in **1956**.
- The concept of convergent thinking requires the design thinker to go through all possible solutions thought during divergent thinking and come up with a correct solution.
- Convergent thinking is the type of thinking in which a thinker is generally supposed to come up with a single well- established best—possible solution to a problem.
- Convergent thinking requires speed, accuracy, logic reasoning and techniques.
- Convergent thinking delivers the best and a concrete solution to a problem statement, taking into account all the factors and requirements specified in the problem statement

### 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.

Exercise on Divergent Thinking and start applying convergent thinking on it  
Case Study:

**Problem Statement:** The process of knowledge transfer is a huge problem for the Organization. Let’s call organization ‘DT’. DT wants to eliminate the overhead of shelling out extra money and investing time for transferring knowledge to its new employees. The problem statement at hand is “Knowledge transfer adds to the cost of the company”. Let’s think of ways to eliminate or at least, reduce the cost to the company.



The following ideas in divergent thinking exercise

- i. Elimination of knowledge transfer program
- ii. Having a single instructor for knowledge transfer program in a class room session
- iii. Preparing a document for knowledge transfer program
- iv. Making it mandatory for employees to search for knowledge resource online.
- v. Hiring only those employees who are experienced enough and who doesn't need knowledge transfer.

Apply convergent thinking.....

- It can be easily said that option 1 is not feasible. Every employee does not have an idea of a company's tools and techniques and hence cannot be expected to survive without knowledge transfer
- Option V is also not acceptable. The best practice of a company is seldom known to new employees and taking an assumption about an employee's knowledge is a huge mistake.
- Option 4, it was not assures of the pace at which learning will happen for the new employees. Each employee can take variable amount of time to grasp the concepts. The time taken to search material online and read them is an overhead in itself and it cannot be monitored.
- Hence, the two better options that remain are option 2 and option 3. however, one cannot correctly, estimate the effectiveness of document for knowledge transfer. It is similar to reading material online.
- Therefore the best option available is to **have an instructor teaching employees in classroom program**

Although, the employees won't get personal attention at times, yet by maintaining a fine balance between the strength of the batch and length of class, this can be best option to reduce the cost and overhead.

This is how convergent thinking gives one best solution

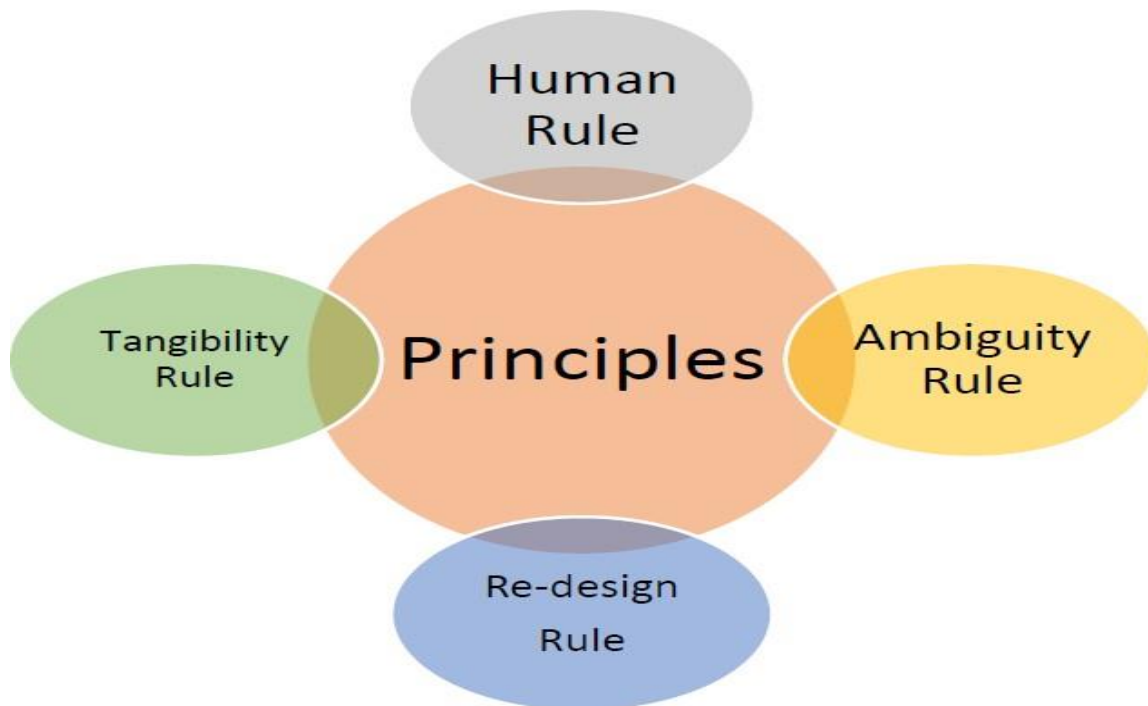
### 2.0.3. Design Thinking –Attributes

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

#### The principles of Design Thinking:

According to the Christoph Meinel and Larry Leifer , there are four principles to design thinking.

|                      |  |
|----------------------|--|
| The Human Rule       | This rule states that all kinds of design activity are ultimately social in nature                               |
| The Ambiguity Rule   | This rule Requires all design thinkers to preserve ambiguity in the process design thinking.                     |
| The Re-design Rule   | The Re-design rule states that all design are basically examples of re-design                                    |
| The tangibility Rule | The tangibility rule states that making ideas tangible always facilitates communication between design thinkers. |



These four principles form the foundation of the design thinking process. A design thinker needs to form his ideas and put the forward based on these principles.

The Challenges:

The next attribute is called as the '**wicked Problems**'. These are the challenges that are faced by the design thinkers.

- Design thinking helps the designers in almost all professions to tackle these wicked problems. These challenges are supposed to be ill- defined or tricky
- **Horst Rittel** was the first person to refer to such problems with the word wicked problems.
- **In the case of ill- defined problems**, the problem statement and the solution are both unknown at the beginning of the design thinking exercise.
- **In well –defined problems**, at least the problem statement is clear and the solution is available through technical knowledge.
- **In wicked problems**, the design thinkers may have a general idea of the problem, but significant amount of time and effort goes into **requirement analysis**.
- Requirement gathering, problem definition and problem shaping are the major parts of this aspect of design thinking.

#### 2.0.4. **Design Thinking- Analysis Vs Synthesis**

##### **Analysis:**

- Analysis is derived from the Greek word 'analysis', which **translates into 'breaking up'** in English.
- Analysis is older than the times of great philosophers like Aristotle and Plato. As discussed in the previous section, analysis is the process of breaking down a big single entity into multiple fragments.
- It is a deduction where a **bigger concept is broken down to smaller ones**. This breaking down into smaller fragments is necessary for improved understanding.
- So, how does analysis help in design thinking? During analysis, design thinkers are required to break down the problem statement into smaller parts and study each one of them separately.
- The different smaller components of the problem statement are to be solved one-by-one, if possible. Then, solutions are thought for each of the small problems. Brainstorming is done over each of the solutions.

- Later, a **feasibility check** is done to include the feasible and viable solutions. The solutions that don't stand firm on the grounds of feasibility and viability are excluded from the set of solutions to be considered.
- Design thinkers are, then, encouraged to connect with the diverse ideas and examine the way each idea was composed. This process of breaking down the bigger problem statement at hand into multiple

## Synthesis

- Synthesis refers to the process of combining the fragmented parts into an aggregated whole.
- It is an activity that is done at the end of the scientific or creative inquiry. This process leads to creation of a coherent bigger entity, which is something new and fresh.
- How does synthesis come into picture in design thinking? 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.
- Out of 10 available solutions, around 2-3 solutions may need to be excluded since they may not fit into the larger picture, i.e. the actual solution.
- 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.
- The solution is completely different from the problem statement. During synthesis, it is ensured that the different ideas are in sync with each other and do not lead to conflicts.

## 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:

Now, let's break down the problem statement into various constituent parts. Following are the subparts of the same problem statement, broken down to elementary levels.

- 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:** Now, let's start solving each problem individually. In this step, we will do synthesis. Let's look at one problem at a time and try to find a solution only for that problem statement, without thinking of other problem statements.

- To solve the problem of lack of motivation, the management can plan some sort of incentives that can be given on a regular basis. The efforts put in by the employees must be rewarded well. This will keep the employees motivated.
- 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. This can be made available to new joiners. Hence, additional human resource is not required for knowledge transfer and this will reduce the figures in the company's budget

Now, it was observe carefully, the third solution may not be feasible all the time. It cannot be assured of expert professionals coming for interviews all the time. Moreover, expert professionals demand more compensation than not-so-expert professionals. This will increase the company's budget.

Hence, combine the other three solutions to form a coherent one. The final solution will be for the management to first have a talk with the employees leaving the organization to know the reasons behind attrition, then come up with awards in suitable categories and then, create an easily and universally accessible document in the organization for knowledge transfer.

This way, analysis and synthesis together help in design thinking process. Design thinkers start with breaking down a problem into smaller problems that can be handled and studied easily. Then, the different solutions are combined to form a coherent single solution.

Popular Design thinking Frame works:

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

### 2.0.5. HCD - Human-Centered Design

IDEO developed contextualized toolkits which repackaged the Design Thinking processes. One such iteration focuses on the social innovation setting in developing countries. For this context, the terminology needed to be simplified, made memorable and restructured for the typical kinds of challenges faced. The HCD process (Human-Centred Design) was re-interpreted as an acronym to mean **Hear, Create, and Deliver**.

#### **H: Hear**

Similar to early phases in other Design Thinking processes, the Hear stage is about developing an empathic understanding of users, as well as Defining the problem that the team is trying to solve. It serves the purpose of gaining a solid foundation in the context of the problem and sufficiently reframing it to progress. In this phase of the process, design thinkers need to:

- **identify their challenge,**
- **recognize existing knowledge in the challenge space,**
- **identify people to engage with to understand the deeper human side of the challenge,**
- **engage in a range of ethnographic research activities to uncover sufficient human insight, and**
- **Develop points of view or stories to guide the creation phase.**

## C: Create

Similar to the Ideate and Prototype phases in d.school's 5-stage approach, the Create stage is concerned with exploration, experimentation and learning through making. It involves pinpointing potential areas of exploration, and then engaging those closest to the problem to co-create solutions. This allows design teams to maintain the highest levels of empathy during early design phases, as well as weed out potential problematic assumptions made by designers who do not sufficiently understand the context.

- Highlight opportunities to explore from insights gained in the Hear phase
- Recruit participants for the co-design task from a diverse pool of those affected
- Maintain awareness of sensitivities by avoiding judgments
- Encouraging storytelling and expression
- Facilitate action orientated creation of tangible solution

## D: Deliver

The Deliver phase of the HCD process is centred on logistical implementation, and overcoming any obstacles which may exist when rolling out a solution within the required context. Though solutions arrived at may provide a functional patch to a problem, getting by in communities and bypassing any other roadblocks on the path of implementation is essential for the process to be completed successfully.

## Human-Centred Design (HCD) process

### Definition:

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

- Human-centered design is a creative approach to solve problems
- It has been championed by Nobel Prize Laureate **Herbert Simon**, Developed by **Stanford university Design school**
- **Human-centered design** is distinguishes **other problem solving approaches** by its **intensive focus on understanding** the perspective of the **person** who experiences **a problem and needs**.
- The solution that has been designed for the end users is truly meeting their needs effectively.

- The **end users** are **constant part of design process** and become part of the design team itself in this human centered design.
- Human-centered design process has many forms, the model developed by Stanford design school has 5 Key phases.
- The phases are
  1. Empathize
  2. Define
  3. Ideate
  4. Prototype
  5. Test and iterate
- For general understanding Human-centered design consists of three phases.
  1. Inspiration Phase
  2. Ideation phase
  3. Implementation Phase
- In inspiration Phase it consists Empathize and Define stages
- In Ideation Phase it consist ideate stage and prototype
- In implementation it consist testing and iterate stages.
- In the Inspiration Phase designer learn directly from the people(end users and stake holders) for his design, and immerse himself in their lives and come to deeply understand their needs
- In the Ideation Phase designer make sense of what he learned, identify opportunities for his design, and prototype possible solutions
- And in the Implementation Phase designer will bring solution to life, and eventually, to market. And the solution will be a success because it kept the people looking to serve at the heart of the process
- Human-centered design is all about building a deep empathy with the people designing for; generating tons of ideas; building a bunch of prototypes; sharing with the people, and eventually putting a new innovative solution out in the world.
- . Human-centered design (HCD) is a term product creators use to describe a process of **designing for people**
- HCD develops solutions to problems by involving the human perspective in all steps of the problem-solving process
-



- The four fundamental principles of HCD.
  1. Focus Upon the People
  2. Find the Right problem
  3. Think of everything as a system
  4. Always test design decisions.

**Focus upon the people:**

Whatever the designer designs always thinking of people who will use this product/service.

Keep in mind that product or service is just tool that helps people to reach their goals

It is vital to identify the real goal of real people who will use the product.

The process of identification starts with who will be using this product? IN what context (time, place, device etc) will it most likely happen?

After define the target, figure out critical user journeys. A tool called the job to be done (JTBD) frame work can help that.

When \_\_\_\_\_, I want to \_\_\_\_\_, so I can \_\_\_\_\_

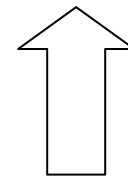
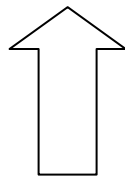
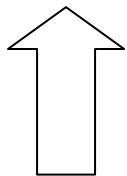
This frame work provides an excellent way to identify critical user journeys and map them to possible solution.

JTBD Framework

When \_\_\_\_\_,

I want to \_\_\_\_\_,

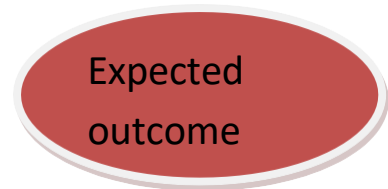
so I can \_\_\_\_\_



Situation

Motivation

Expected  
outcome



## **Find the Right problem**

Not all problems worth solving. Don Norman identifies two types of problems: Fundamental problems and symptoms of the problem. It is essential to solve a fundamental problem first because by doing that it will solve a root cause of problem.

Identifying Fundamental problem requires time. But no matter how much time it takes, the process of identification of core problems should be an inalienable part of the design process. Otherwise it leads to wrong orientation towards the problem.

## **Think of everything as a system**

Users Should Have Good User experience at all touch points, both digital and physical.

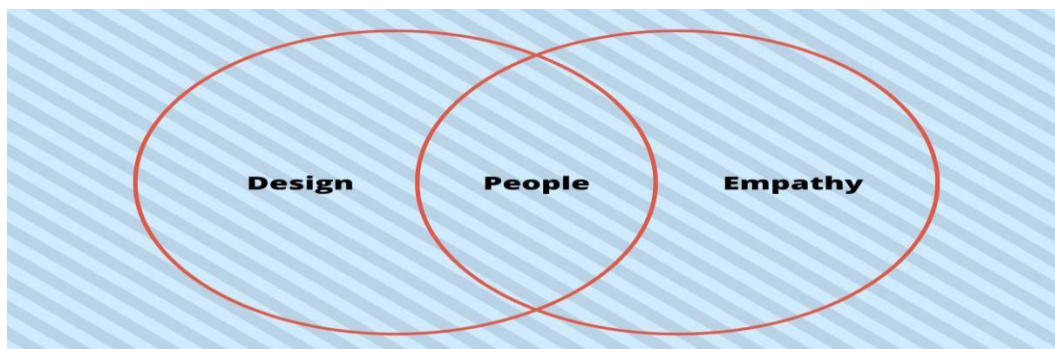
Don't focus solely on one part of a user journey; always think about the big picture. i.e. what want to achieve with experience and what is the final result care about.

## **Always test design decisions**

The feedback from the testing session will help to understand what part of design requirement will improve further. No matter how much time spend on ideating and prototyping design solution, but it should be always test it with real people.

## **Examples of human centered design.**

Human centered approach problem is an approach of problem solving mostly used in design and management sectors by defining human perspectives in all steps of problem solving.



## 1. Pull/Push Door:



The Norman Door

| Problem  | Solution designed  |
|--|--|
| <ul style="list-style-type: none"><li>➤ The design had interrupted human brain cognitive Bias.</li><li>➤ For brain seeing handle triggers an action to pull it.</li><li>➤ In this case the push and pull part of the door are fitted with a handle, this creates confusion in brain.</li></ul> | <ul style="list-style-type: none"><li>➤ The push part of the door does not need handle.</li><li>➤ Design a door with only in the pull side of the door.</li><li>➤ Leave the push side with a plain pad.</li><li>➤ People will push the door automatically if they don't see a handle</li></ul> |





2. **Kids Toothbrush:**

Kids hold tooth brushes is totally different from an adult. so it is harder for them to use a toothbrush that are designer for adults.



Tooth brush for adult

| Problem  | Solution designed   |
|--|---|
| <ul style="list-style-type: none"><li>➤ Kids hands are so small</li><li>➤ They hold tooth brush inside their fist. Adults hold it inside the fingers</li><li>➤ Lack of motivation to brush their teeth</li></ul>  | <ul style="list-style-type: none"><li>➤ Made the hands of brush fat and squishy</li><li>➤ Introduced small bristles</li><li>➤ Introduced funny character to the handle</li><li>➤ Created funny accessories</li></ul>  <p data-bbox="948 1787 1398 1822">Designed by IDEO for Oral-B</p> |

### 3. Portable Music player –I pod Shuffle

- Portable music players are introduced in 1997 from that time manufacturers tried to include more and more functionalities of music players. This result in abandoning the user experience of these devices.
- Too much of functionalities and complicated design. The control buttons are too close and accessibility was an issue. Most people use portable music player when they are outside (jogging ,gym, gardening etc) .and it was difficult to hold it during activities

| Problem  | Solution designed   |
|--|---|
| <ul style="list-style-type: none"><li>➤ Inaccessible buttons</li><li>➤ Too much features and increased complexity</li><li>➤ Difficulty in carrying it</li></ul>  | <ul style="list-style-type: none"><li>➤ Simple and accessible buttons</li><li>➤ Comes with a clip</li><li>➤ Reduced complexity with sleek design</li></ul>  <p data-bbox="1003 1356 1344 1390">Designed by Apple Inc</p> |

#### 4. Ketchup bottle:

- Getting full ketchup out of a ketchup bottle was a pain task. The ketchup was thick and it takes more time to squeeze out till the last drop from that bottle and that's why HEINZ introduced an inverted bottle design.
- HEINZ purchased the inverted bottle design from an American designer named Paul Brown. They redesigned the bottle to have a handgrip and holding space .because of its inverted design , the user will get the last drop from the bottle

| Problem   | Solution designed   |
|---|---|
| <ul style="list-style-type: none"><li>➤ Difficulty in getting full ketchup out of the bottle</li><li>➤ Difficulty in handling and squeezing the bottle with one hand</li></ul>  | <ul style="list-style-type: none"><li>➤ Designed inverted standing bottle</li><li>➤ Designed bottle for easy handling with one hand</li></ul>  <p data-bbox="902 1220 1446 1253">Designed by Paul Brown for HEINZ</p> |

#### 5. Lay's Stax packaging



- The famous snack and beverage Brand PepsiCo introduce a new type of packaging for lays.
- PepsiCo previous CEO Indra Nooyi Introduced the human centered design approach in lays
- PepsiCo’s design team analyzed how people are using their products, and they find out most of the women prefer to eat neat and clean.
- They want to have last chip in that packet but they are not ready to dump all that small cracked chip into their mouth
- Solution is created a vertical and round bottom can with tray, so the user can take out the tray whenever they need a snack and put it back in after use



| Problem   | Solution designed  |
|---|--|
| <ul style="list-style-type: none"> <li>➤ Normal package can't be reused</li> <li>➤ Product wastage is high</li> </ul> | <ul style="list-style-type: none"> <li>➤ Designed around pillar package</li> <li>➤ Introduce a tray for easy access</li> <li>➤ Snack size was reduced .so user can finish it in two bites</li> </ul> |

## Winning Companies Use Human Centered Design:

Kellogg's Corn Flakes:



Human centered Design has been around since the 1800's. In 1894, Kellogg Cereal was invented as a more digestible breakfast alternative for hospital patients. In seeing how they struggled to eat toast, Kellogg boiled wheat and rolled the dried flakes to make cereal the patients could eat more easily. He then tried this technique with corn and observed how the patients ate the corn. This became today what we know as Kellogg's Corn Flakes.

This focus on observing human interactions with empathy for their needs is putting the customer at the hub and why human centered design is so valuable to a product's or service's success.

### Uvex:



Uvex wanted Altitude to Create a new generation of protective safety eyewear. By incorporating user centered design in their approach to learn what users really want, they were able to design fit logic safety Eyewear, an innovative product design that combines comfortable fit, functionality, and style and subsequently generated high sales for Uvex.

### Colgate (Electrical Toothbrushes):





Colgate Hired Altitude to restore their leadership position in electronic toothbrushes. Innovation Strategy and research team determined that users wanted a better fitting, more effective, longer lasting, and easier to maintain toothbrush. They develop the motion, a high-powered, slim profile brush, with dual oppositional oscillating heads and a patented ergonomically correct arcing neck

## **Role of Empathy in design thinking:**

- As the starting point of the design process, Empathy allows a designer to understand the people who will eventually use their product or service
  - Empathy is a core value of design thinking .it is also the first step in the design thinking process.
  - Empathy, draws attention to the abilities of researchers and designers to see the world through other people’s eyes, feel what they feel, and experience things as they do
  - Empathy allows a designer to understand the user’s physical and emotional needs.
  - The Oxford Dictionary defines Empathy as “the ability to understand and share the feeling of another”.
  - Empathy is the first step in design thinking because it is a skill that allows us to understand and share the same feelings that others feel. Through empathy, designers are able to put ourselves in other people's shoes and connect with how they might be feeling about their problem, circumstance, or situation
- Some questions to consider:
- What is the person feeling?
  - What actions or words indicate this feeling?
  - Can you identify their feelings through words?
  - What words would *you* use to describe their feelings?
- Empathy is the cornerstone of any successful design project. The extent to which you understand and empathize with your users ultimately determines the outcome of your design
  - This means observing and engaging with people in order to understand them on a psychological and emotional level. During this phase, the designer seeks to set aside their assumptions and gather real insights about the user.

- Design Thinking cannot begin without a deeper understanding of the people that designers are designing for. In order to gain those insights, it is important for designer as a design thinker to empathize with the people you are designing for so that you can understand their needs, thoughts, emotions and motivations
- Finally, empathy shows a designer how users think about the world and what is meaningful to users.

## **Why Empathy is so important?**

- In a social context, empathy is often what drives us to take action
- If we see people suffering or struggling, and we are able to empathize with their situation, we are compelled to help relieve them in some way.
- Designers need to build empathy for their users in order to take the right course of action
- It's important to understand how the user feels when interacting with a certain product or interface; does the layout of this website evoke feelings of frustration?
- In building empathy, designers can create products which truly please the user and make their lives easier
- Without this empathy, the design process lacks that all-important user-centricity which often marks the distinction between product success and failure.

## **Where does empathy fit into the Design Thinking process?**

- During the empathize phase, the designer spends time getting to know the user and understanding their needs, wants, and objectives
- Empathize phase requires you to set aside your assumptions. It's human nature to assume that others will think and feel the same as you in particular situations, but of course this isn't always the case.
- the first step in empathizing with your users is to suspend your own view of the world around you in order to truly see it through your users' eyes
- When it comes to Design Thinking and Human –Centered Design it's time to stop guessing and start gathering real insights about the user!

## **What is empathic design?**

- One of the main objectives of empathize stage is to identify user needs and behaviors that are latent, or unarticulated.
- As a designer, it's important to distinguish between what people say they would do in a certain situation, and what they actually do
- In reality, users may have habits or desires that they're not aware of, so it's essential for the designer to observe the user in action

- Empathic research and design is not concerned with facts about the user, such as their age or location. Rather, it focuses on their feelings towards a product and their motivations in certain situations.
- Why do they behave in a certain way? Why do they prefer to do this instead of that? Why do they click here rather than there when presented with a particular screen or page?
- These are the kinds of insights you will uncover during empathize phase, and they will help you to create user experiences that cater to your audience.