

# Design Thinking- Understanding the process

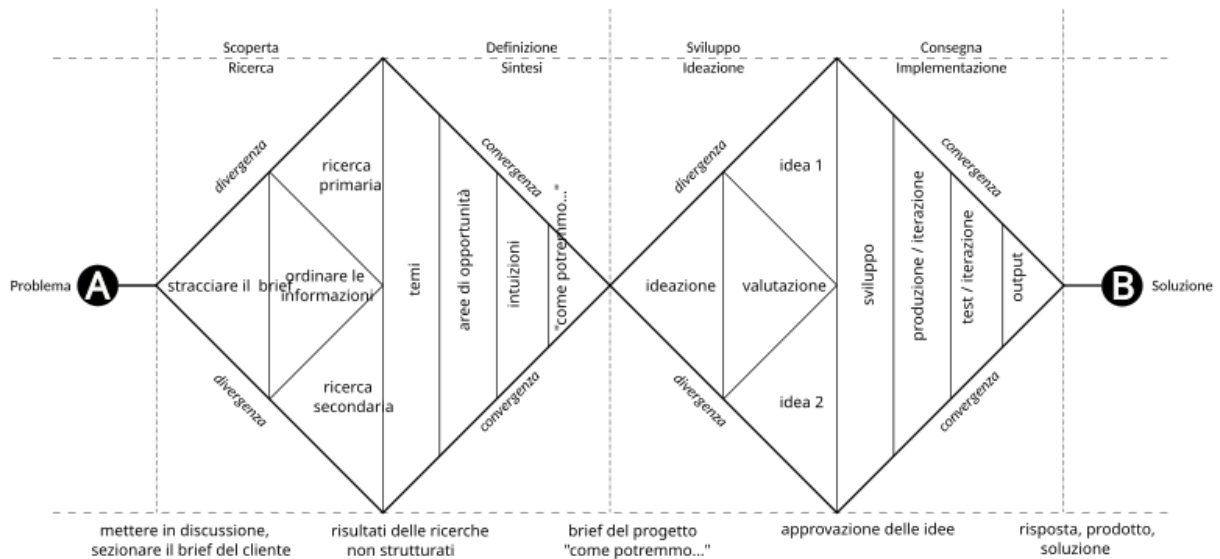


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## Introduction

Design Thinking is a human-centered, iterative approach to problem-solving that emphasizes empathy, creativity, and experimentation to develop meaningful solutions. At its core, it focuses on deeply understanding the people for whom we are designing, ensuring that the solutions we create genuinely address their needs and challenges.

## Key Principles of Design Thinking

1. **Human-Centered**: Design thinking is anchored in empathy and understanding, aiming to uncover real user needs, desires, and pain points. By putting people first, this approach ensures that solutions resonate with users and add tangible value to their lives.
2. **Iterative**: Design thinking involves continuous cycles of refinement. Rather than seeking a perfect solution from the outset, it embraces an iterative process where ideas are tested, refined, and adapted based on user feedback.

3. **Collaborative:** Emphasizing teamwork and diverse perspectives, design thinking often brings together individuals from different disciplines. This collaborative approach sparks fresh ideas, drawing on the varied expertise and insights of all team members.
4. **Experimental:** Design thinking values a mindset of experimentation, where trying out new ideas—and learning from failures—is seen as an essential part of the process. This experimental outlook encourages risk-taking and supports learning from each iteration.
5. **Visual and Hands-On:** Design thinking often uses visual methods, such as sketching, prototyping, and storyboarding, to make abstract concepts tangible. Hands-on activities, like building models or creating mockups, help communicate ideas clearly and enable rapid feedback.

## The Intersection of Feasibility, Human Needs, and Viability

Design thinking operates at the intersection of three crucial factors:

- **Human Needs:** Ensuring the solution genuinely addresses the goals, pain points, and desires of the users.
- **Feasibility:** Taking into account technical and operational capabilities to assess what's realistically achievable.
- **Viability:** Considering the market and business aspects to ensure the solution aligns with organizational goals and can be sustainably implemented.

When these elements are balanced, design thinking can generate solutions that are practical, impactful, and viable in the market. This intersection embodies the value to both the user and the market, allowing for innovations that create meaningful consumer value and tap into emerging opportunities.

## The Design Thinking Process Pipeline

Design thinking generally follows five core stages, each maintaining a user-centered focus throughout. Here's an overview of each stage:

### 1. Empathize

- This first stage emphasizes understanding users' experiences, needs, and emotions through direct interaction and observation. The goal is to step into the users' shoes, which allows designers to grasp the context and challenges they face. Techniques like interviews, shadowing, and journey mapping are common tools.

### 2. Define

- In the Define stage, the insights gathered in the Empathize phase are synthesized to clarify the core problem. This stage is about distilling observations into a clear problem statement, often called a "Point of View" (POV), which guides the design process. A

well-articulated problem statement aligns the team on the real challenge and paves the way for focused, user-centered solutions.

### **3. Ideate**

- The Ideate phase is all about generating a range of potential solutions. Using brainstorming, mind mapping, and similar techniques, the team explores ideas broadly without limitations. This free-flowing creativity generates a diverse pool of concepts, allowing the team to push beyond initial assumptions and conventional approaches.

### **4. Prototype**

- In the Prototype stage, ideas are transformed into tangible representations, such as sketches, wireframes, or models, to be tested and refined. These prototypes don't need to be perfect; they are simply early versions of a solution that enable quick experimentation and feedback. Prototyping lets designers visualize ideas, test assumptions, and iterate based on findings.

### **5. Test**

- The final stage involves testing prototypes with actual users to gather insights on usability, appeal, and functionality. Feedback from this testing phase informs further refinement and, often, sends the team back to earlier stages for additional adjustments. Testing ensures that solutions not only work as intended but also meet real user needs effectively.

Throughout this process, the user remains at the center, with each stage rooted in understanding and addressing user goals and experiences.

## **Design Thinking's Impact on Product and Solution Goals**

In design thinking, understanding and aligning with user goals directly inform product goals. By uncovering what users genuinely need and value, design teams can shape solutions that meet both user expectations and business objectives. This alignment increases the likelihood of creating solutions that resonate in the market, providing value to consumers while capitalizing on opportunities.

## **Process**

### **Step 0: Pre-Design Thinking Setup - Setting the Stage**

Before diving into the formal design thinking process, it's essential to establish a foundation by clarifying what we already know about the challenge. This preliminary step allows the team to explore initial ideas, assumptions, and understand the scope of the problem.

### **Key Activities:**

1. **Brainstorming:** Bring together team members for a brainstorming session to discuss the challenge broadly. This is an opportunity to pool initial thoughts, identify any existing knowledge, and flag potential areas of uncertainty.
2. **Mind Mapping:** Create a mind map to visually outline all related aspects of the challenge, helping the team see the larger picture, potential directions, and interconnections. A mind map acts as a blueprint, showing how different parts of the problem and solution space might relate to one another.

### **Outcome:**

At the end of Step 0, the team should have a basic skeleton or initial understanding of the problem and any assumptions. This also includes an initial problem statement that captures the general direction the team will explore. While this is only a starting point, it provides clarity and a sense of focus before deeper user research.

## **Stage 1: Research - Understanding and Empathizing with the User**

The first official stage of design thinking is Research, where the goal is to gain a deep understanding of the user, their needs, motivations, and the context in which they experience the problem. This stage encourages the team to look beyond assumptions and gather real, meaningful insights directly from users and stakeholders.

In Research, the team takes a divergent approach, meaning they cast a wide net to gather as much information as possible about the problem, the user, and any surrounding factors. This involves not only looking at the problem in isolation but also examining the broader context.

### **Key Activities and Techniques:**

**Stakeholder Mapping:** Identify all stakeholders involved, directly or indirectly, in the challenge. This includes primary users as well as secondary stakeholders (e.g., family members, colleagues, service providers). Understanding stakeholders' roles and their connections helps paint a fuller picture of the ecosystem.

**Core Job-to-Be-Done:** Outline what users are trying to accomplish. This includes functional tasks (e.g., ordering a product, booking a service) and emotional goals (e.g., feeling safe, reducing frustration). By understanding users' core jobs, the team can better align solutions with users' fundamental needs.

**Question Map and Asking “Why?”:** Develop a list of critical questions to explore with users. Using the “5 Whys” technique can help dive deeper into motivations and root causes, revealing insights that users may not share directly.

**Data Collection:**

1. **Literature Review:** Review existing research, studies, and industry reports to understand background information and best practices related to the challenge.  
Surveys: Use surveys for quantitative data collection, helping identify broad trends, patterns, and preferences.
2. **Interviews:** Conduct one-on-one interviews to capture personal insights, anecdotes, and in-depth information directly from users. This allows for a more nuanced understanding of their experiences.
3. **Observation:** Observe users in their natural environment to see how they interact with products or services in real-time. This method often reveals pain points or user needs that may not be verbally communicated.

**Tools:**

1. **Empathy Map:** A visual tool that helps synthesize what users say, think, feel, and do, creating a comprehensive picture of their emotional and behavioral landscape.
2. **Stakeholder Map:** A diagram that shows all relevant parties and their connections to the problem, helping identify who may impact or be impacted by the solution.

**Outcome:**

The Research stage provides rich, real-world insights into the users' experiences, needs, and challenges. This foundation ensures that the following stages of the process remain rooted in actual user needs, not assumptions.

## **Stage 2: Define - Articulating the Problem and Setting a Clear Focus**

In the Define stage, the team takes the wealth of data gathered from the Research phase and distills it into a clear, concise problem statement. This step is critical because it focuses the design efforts and provides a guiding point for generating solutions. The Define stage often involves looking at the data from multiple angles to uncover deeper insights and sharpen the problem statement.

**Key Activities and Techniques:**

1. **Insights Synthesis:** Review all data collected in the Research stage and identify key insights, patterns, and themes. This involves clustering similar findings, mapping

relationships between user needs, and drawing connections between different data points.

2. **User Personas:** Develop user personas that represent distinct segments of the user base. Each persona encapsulates a unique set of needs, motivations, and challenges, allowing the team to maintain a user-centered approach throughout the process.
3. **Empathy Mapping and User Journey Mapping:**
  - a. Empathy Mapping: Revisit the empathy map to ensure the user's emotional and behavioral insights are reflected accurately.
  - b. User Journey Mapping: Visualize the user's experience from start to finish, identifying key touchpoints, pain points, and emotional highs and lows. This helps pinpoint critical areas where design improvements could create the most impact.
4. **POV (Point of View) Statements:** Craft Point of View statements that articulate the unique perspectives of different personas. Each POV statement should capture a type of user, their needs, and the main insights uncovered from research.
5. **"How Might We" (HMW) Statements:** Use the problem statement and POV insights to develop "How Might We" questions. These questions frame the problem as an opportunity and encourage creative exploration.

#### **Tools:**

1. **User Persona and Empathy Mapping:** Organize insights and data into clusters or themes to identify patterns and relationships between different observations.
2. **User Journey Maps:** Detailed maps showing each step of the user's experience and interactions, illuminating critical points where design can make a difference.

#### **Outcome:**

At the end of the Define stage, the team should have a well-defined problem statement and How Might We questions that clearly outline the direction for ideation. This problem statement is rooted in user insights and framed as an opportunity, making it actionable for the next stage of the design thinking process.