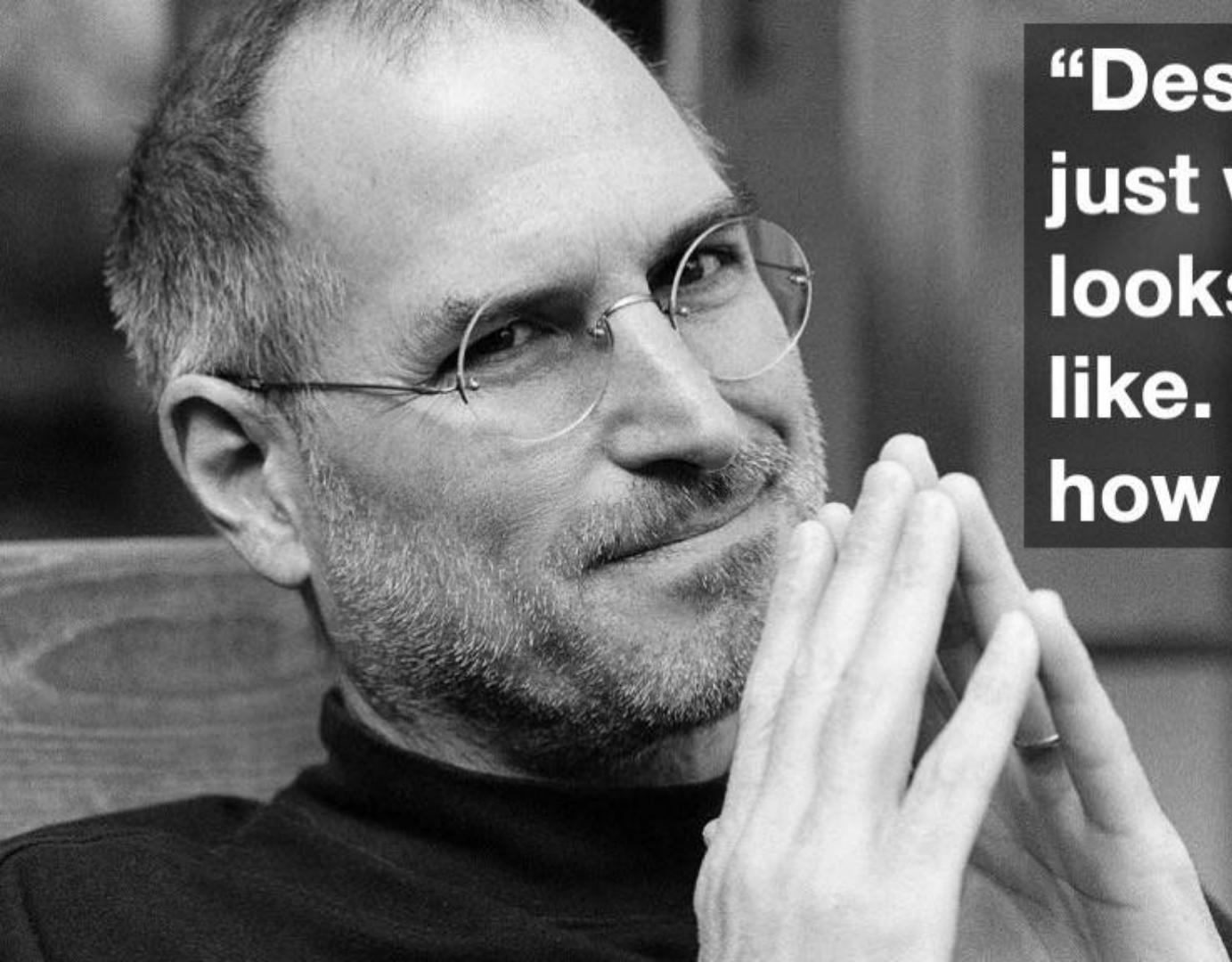


Design thinking

Karīna Villerte Ģrle





“Design is not just what it looks and feels like. Design is how it works.”

Steve Jobs

Design innovation is a creative problem-solving approach that blends user empathy, technical feasibility, and business viability to create new products, services, or systems

Design innovation turns complex technologies into intuitive, meaningful, and seamless human experiences

Technology

Engineering analysis
Static & dynamics
Electronics & mechatronics
Programming methodology
Bioengineering
Materials
Thermodynamics
Chemical engineering

Manufacturing (feasible)

Manufacturing technology
Manufacturing Process
Supply chain management
Rapid Prototype

Business

Accounting
Finance
Economic analytics & policy
Marketing
Operations
Information Technology
Entrepreneurship
Competition & strategy

Design Innovation (Product)

Design & Interactivity (usable)

Human computer interaction
Visual thinking
Design for sustainability
Aesthetics & form

Technology

Business

Human values

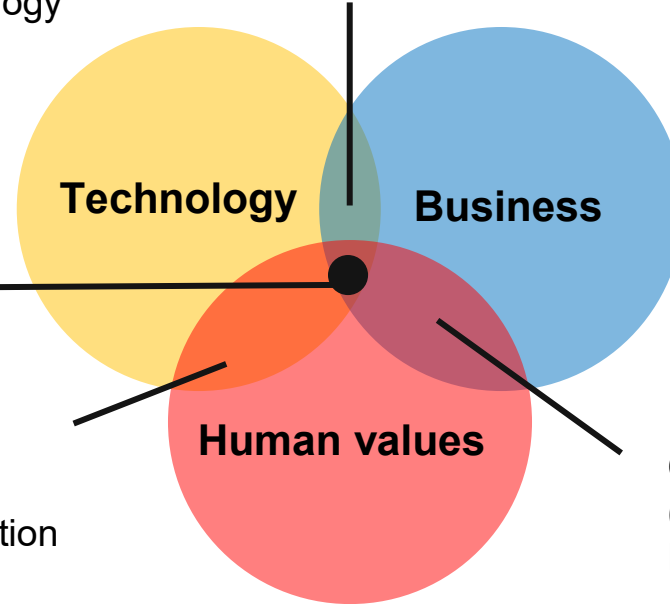
Human Values

Psychology
Antropology

Sociology
Ethnography
Need-Finding

Organizational Behavior (valuable)

Managment & teams
Human Research
Organizational dynamic
Negotiation



In 2009, Airbnb was nearly bankrupt, earning just \$200 a week. The founders identified a key issue through design innovation:

- The listing photos were poor quality
- They tested this hypothesis in New York, renting a camera, and taking professional photos of the listings
- The result – weekly revenue doubled



Design Thinking

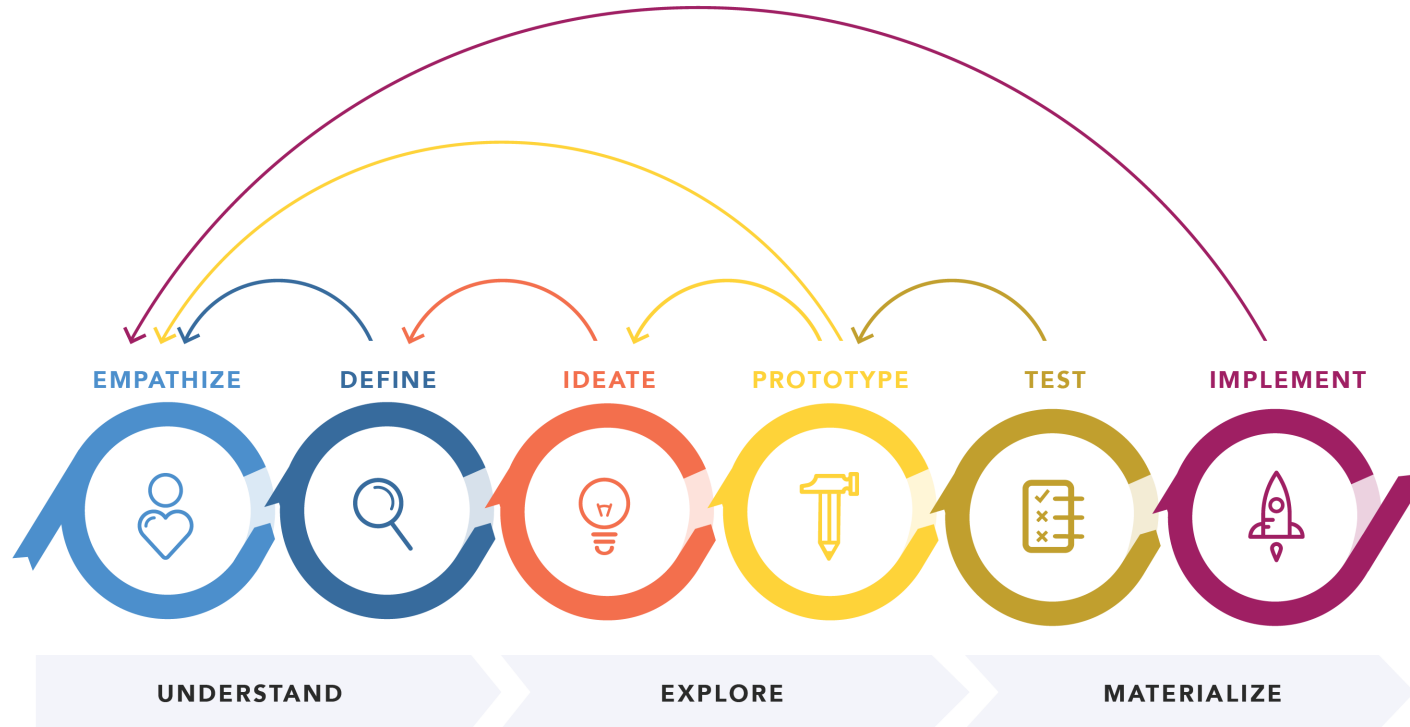
What is design thinking

- User centred process
- Iterative process
- Challenge assumptions
- Redefine problems

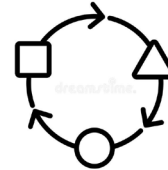
Where you can use design thinking

- New service
- Improve product or service
- If you don't know where to start
- Developing a policy
- Developing a new product or service

Design thinking process



Design thinking benefits



Iterative process for chasing innovations

Iterative process for chasing innovations

New light

View challenges from different perspective

Experiments

Prototype creation and testing for instant feedback

Adapts

Universal methodology for different cases

Collaboration

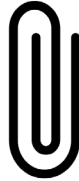
Involves employees across the company

Design thinking Challenges



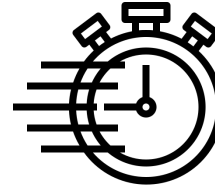
Perfectionism

Iterative
process until
idea is perfect



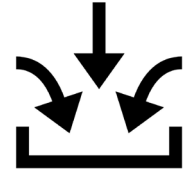
Attachment

Attachment to
prototype –
refuse to see
problems



Trying out for
one product or
case

Trying out for
one product or
case. Needs
changes in all
ecosystem



Lack of input

Lack human
feedback about
the product

Design thinking practices

- Establish an open environment for collaboration
- Research competitors
- Learn at every stage
- Test several brainstorm tools
- Clear vision before prototype



Design Thinking



An innovative **process** that identifies user needs to create desirable, viable, problem-solving products.

Human-centered Design



A design **mindset** that improves existing products through iteration for an enhanced user experience.

"Design thinking is a human-centered approach to innovation that draws from the designer's toolkit to integrate the needs of people, the possibilities of technology, and the requirements for business success."

–Tim Brown

Chair and co-CEO of IDEO

Symptom: Average Handle Time (AHT) reached 40 minutes per customer

Root Cause: Frontline agents were paralyzed by cognitive overload—juggling 15+ legacy IT systems and physically searching through paper archives for signatures and contracts while customers waited on hold

Misconception: Management initially blamed agent performance and requested "more training"



CALL CENTER

Empathize: Researchers sat next to agents, uncovering that the system infrastructure, not human skill, was the bottleneck

Define: How might we create a single, unified workspace that delivers the right information instantly?

Ideate: Agents and IT co-designed a Service Blueprint to map data flows

Unified Interface: Built a simple, digitized front-end dashboard that pulled data from all legacy systems and paper archives into one searchable bar

Results:

- 90% Reduction in call handling time (from 40 minutes down to <5 minutes)
- Massive boost in Customer Satisfaction (CSAT) and Employee Retention

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Phase	Traditional Business Approach	Design Thinking Approach
Starting Point	Company assumptions & scaling down metrics	Real-world empathy and physical observation
Focus	How the product looks (aesthetics/size)	How the user interacts with the product (UX)
Problem definition	Small group = less tools	Root of the problem
Testing	Reviewing charts and financial projections	Handing prototype to potential users

Empat hize

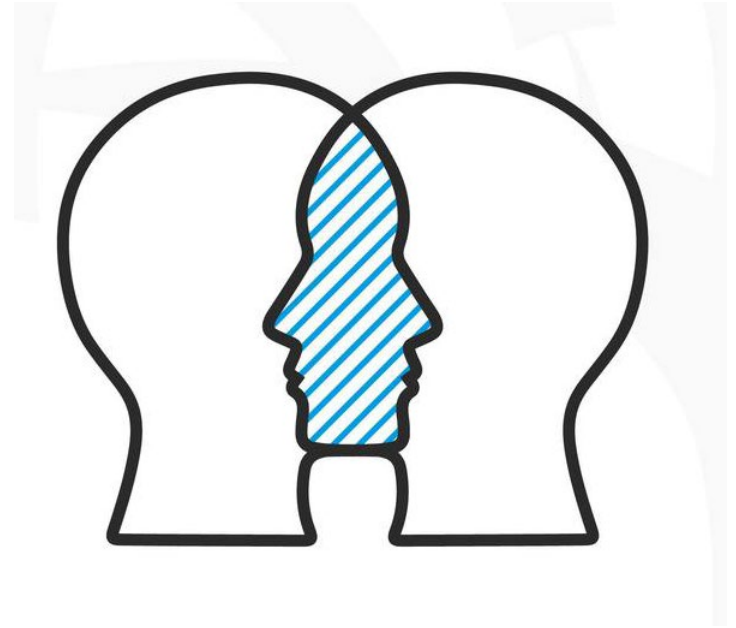
Emphat ize

Understand the user, experience their world - the foundation of human centered design. This phase focuses on understanding user needs, emotions, and motivations by setting aside personal assumptions to uncover true pain points



Empathize methods

- Registered observation
- Journal
- Research
- The five Whys
- Journey mapping
- Product life cycle
- Business Canvas



DEFINE

Define

The Define phase of design thinking involves synthesizing observations from the Empathize stage to formulate a clear, human-centered problem statement that guides the project



- Context exploration
- Data analysis
- Problem tree
- Opportunity tree
- Secondary research
- SWOT analysis
- How others solve it



IdEat e

Create a solution to solve the problem
The transition stage between
understanding user problems and
executing tangible fixes



- Point of view – user, need, insight
- Bad idea storm
- Brainstorm
- Drawing storm
- Act-storming
- Solve it as...
- Ask a friend



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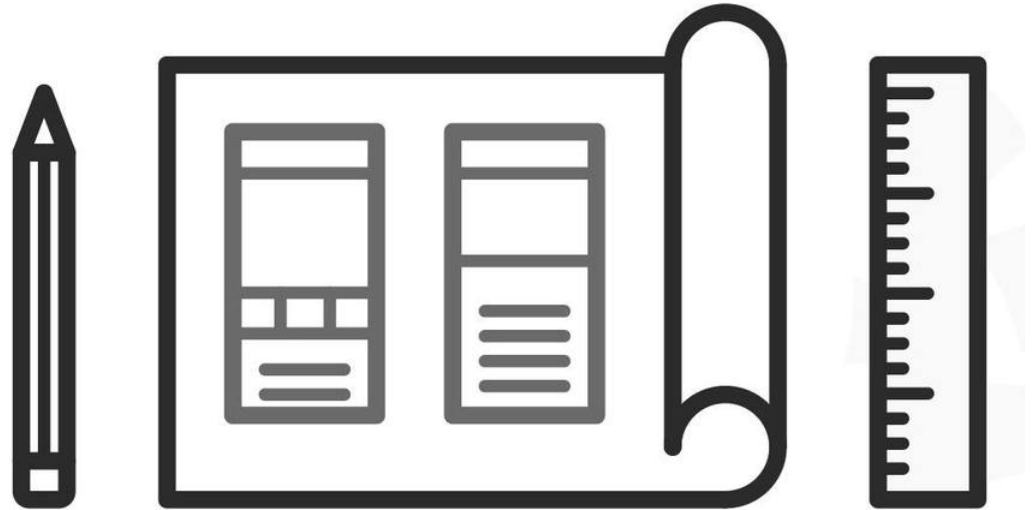
pr ot ot ype

The experimental phase where abstract concepts are transformed into tangible artifacts. The primary purpose is to create low-cost, scaled-down versions of products to rapidly investigate ideas before investing significant development resources



pr ot ot ype

- Paper prototype
- Low Fidelity prototype
- Digital prototype
- High Fidelity Prototype

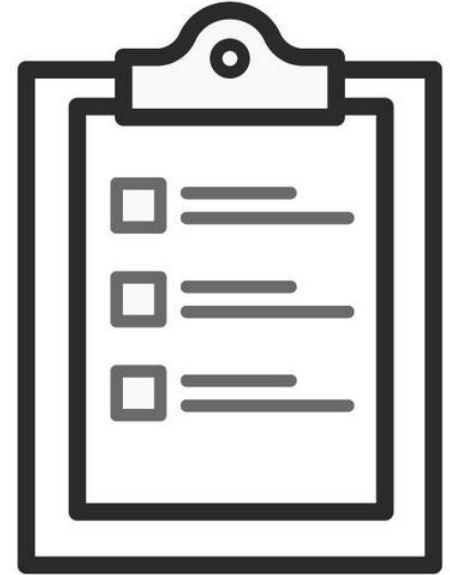


TEST

Gather feedback from users and stakeholders about concept and prototype. Iterate theory, ideate, prototype, and test as needed. Need to create company culture to test and learn from your data and errors. Product needs to be tested, to see how it works in real life.



- Testscenario
- User testing
- Vision for the future
- Audience testing
- Extreme user research
- Wizard of Oz
- A/B test



Case - sustainable

Problem: Apparel and footwear industries generate millions of tons of textile waste, and material production accounts for 70% of Nike's carbon footprint

The Goal: Shift from a linear product lifecycle to a zero-carbon, zero-waste future

The Hurdle: Traditional design prioritized looks and instant performance, completely ignoring what happens to a shoe after the consumer throws it away



Empathize: Designers mapped the entire product lifecycle—from raw material harvesting to landfills—to understand where waste occurs

Define: How might we design elite performance products using their own factory waste as the primary resource?

Ideate: Nike partnered with OpenIDEO to crowdsource solutions globally from eco-designers, engineers, and material scientists

Nike Grind & Circular Guides: Created a global material ecosystem where worn-out sneakers and manufacturing scraps are shredded into "Nike Grind" rubber and foam. This by-product is now co-designed into new products, retail store floors, and athletic tracks

Results:

- 30% reduction in midsole defect waste through smarter digital patterning
- 99.7% of waste from Nike's strategic footwear factories is now diverted from landfills



Design thinking

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