



TORRENS
UNIVERSITY
AUSTRALIA

HCD402

Module 1:

Introduction to

Human Centred

Design

Agenda

- An Overview of Human-Centred Design (HCD)
- Key Principles of HCD
- HCD Process
- Benefits of HCD
- Examples of Successful HCD Projects
- Conclusion



Introduction to Human-Centred Design

Creating Solutions with People in Mind



Credit: ©HBS

An Overview of Human-Centred Design

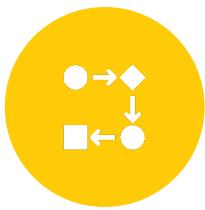
- Human-Centred Design is an iterative approach to problem-solving that involves understanding the needs, wants, and limitations of the end-users throughout the design process. It places people at the centre of the design process, aiming to create products, services, and experiences that truly meet their needs.
- HCD encompasses a range of methodologies, tools, and techniques that enable designers to empathize with users, challenge assumptions, and create innovative solutions.
- Focus on empathy and understanding the users' perspective.
- Involves collaboration and multidisciplinary teams.



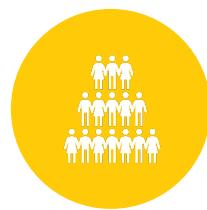
Key Principles of HCD



User-Centred: The needs, preferences, and goals of the end-users are prioritized throughout the design process. By understanding their context, motivations, and pain points, designers can create solutions that resonate with them.



Iterative: HCD involves an iterative process where designs are continuously refined and improved based on user feedback. This iterative approach allows for rapid prototyping, testing, and learning, resulting in better outcomes.



Holistic: HCD considers the broader context and environment in which the design will be used. It takes into account social, cultural, economic, and environmental factors to create solutions that are sustainable and considerate of the larger ecosystem.

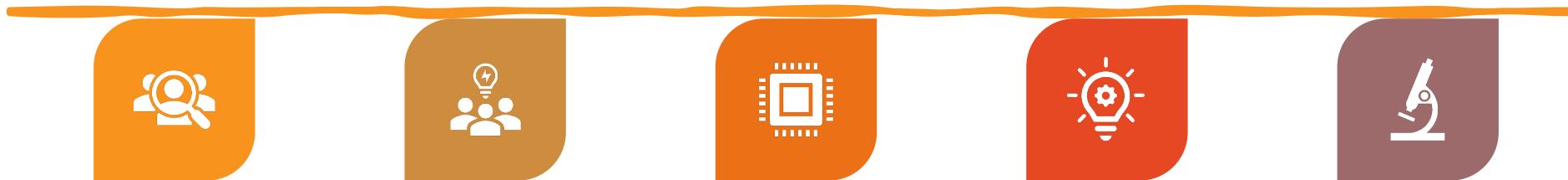


Collaborative: HCD promotes collaboration among stakeholders, designers, and end-users. By involving different perspectives, expertise, and experiences, a more comprehensive and effective solution can be developed.



Sustainable: HCD encourages the creation of designs that are socially, economically, and environmentally responsible. It seeks to minimize negative impacts and maximize positive outcomes for individuals, communities, and the planet.

HCD Process



RESEARCH: The HCD process starts with in-depth user research to understand the needs, motivations, and pain points of the target users. This involves conducting interviews, observations, surveys, and other research methods to gather insights.

9/6/23

IDEATE: In the ideation phase, designers generate a wide range of potential solutions through brainstorming sessions and creativity techniques. This is a divergent phase aimed at encouraging creative thinking and generating innovative ideas.

PROTOTYPE: Prototyping involves building tangible representations of the proposed solutions. These prototypes can take various forms, such as low-fidelity sketches, wireframes, or interactive mock-ups. Prototypes are used to gather feedback and test the viability of ideas.

TEST: Testing involves evaluating the prototypes with end-users to gain insights into their experiences and preferences. This user feedback helps refine the designs and identify areas for improvement. Testing can be conducted through user interviews, usability testing, or A/B testing.

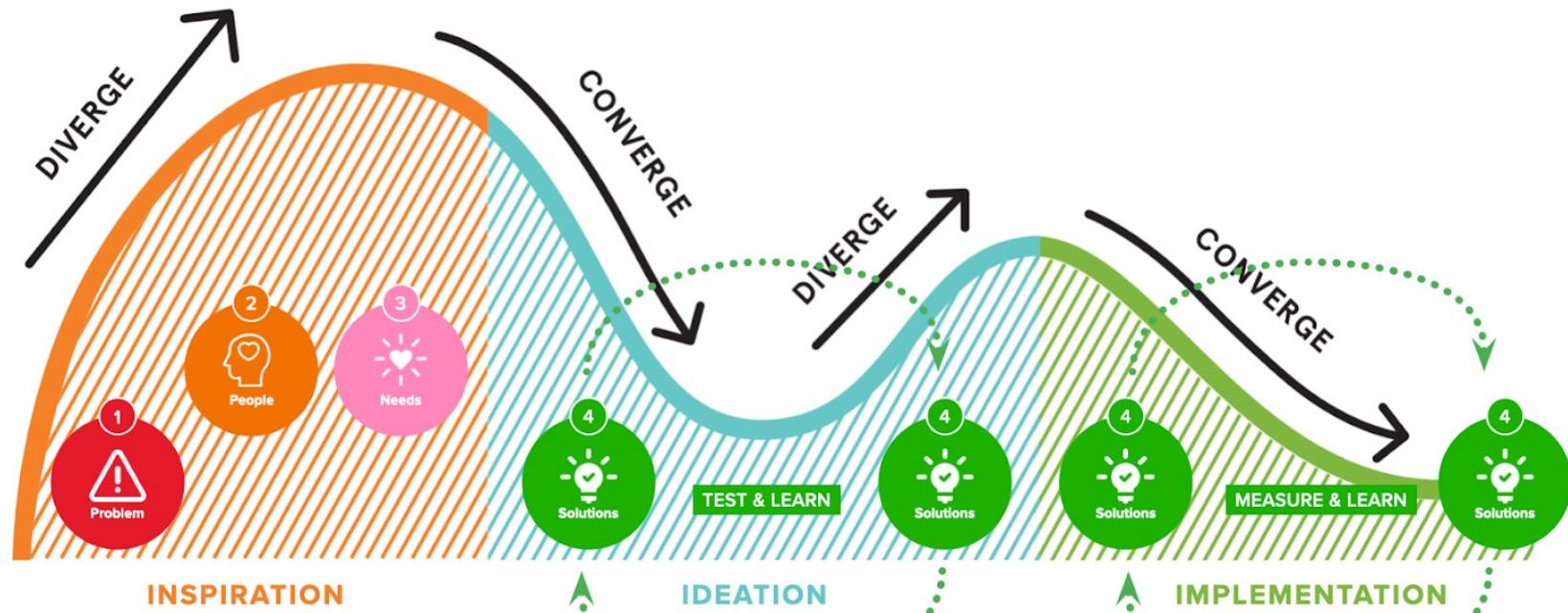
IMPLEMENT: Based on the feedback and insights gathered during testing, designers refine and develop the final design solution. This involves translating the prototypes into a functional and user-friendly product, service, or experience.

6

HCD Process

HCD design process by IDEO

* image source IDEO.org





Benefits of HCD

- **Improved User Experience:** By putting users at the centre of the design process, HCD leads to designs that truly meet their needs and expectations. This results in better user satisfaction and adoption.
- **Increased Innovation:** HCD fosters creativity and encourages designers to think outside the box. By empathizing with users and understanding their challenges, designers can come up with innovative solutions that address real-world problems.
- **Reduced Risk:** By involving users throughout the design process, HCD minimizes the chances of costly design failures. User feedback and testing help identify potential issues early on, leading to more successful outcomes.
- **Higher Adoption Rates:** Designs that resonate with users are more likely to be adopted and embraced. HCD ensures that the end-users' needs and preferences are considered, increasing the likelihood of successful adoption and sustained usage.
- **Positive Social Impact:** HCD goes beyond individual needs and considers the broader societal implications of design choices. It promotes designs that are socially responsible, inclusive, and environmentally sustainable.

Examples of Successful HCD Projects:

Project: Apple iPhone

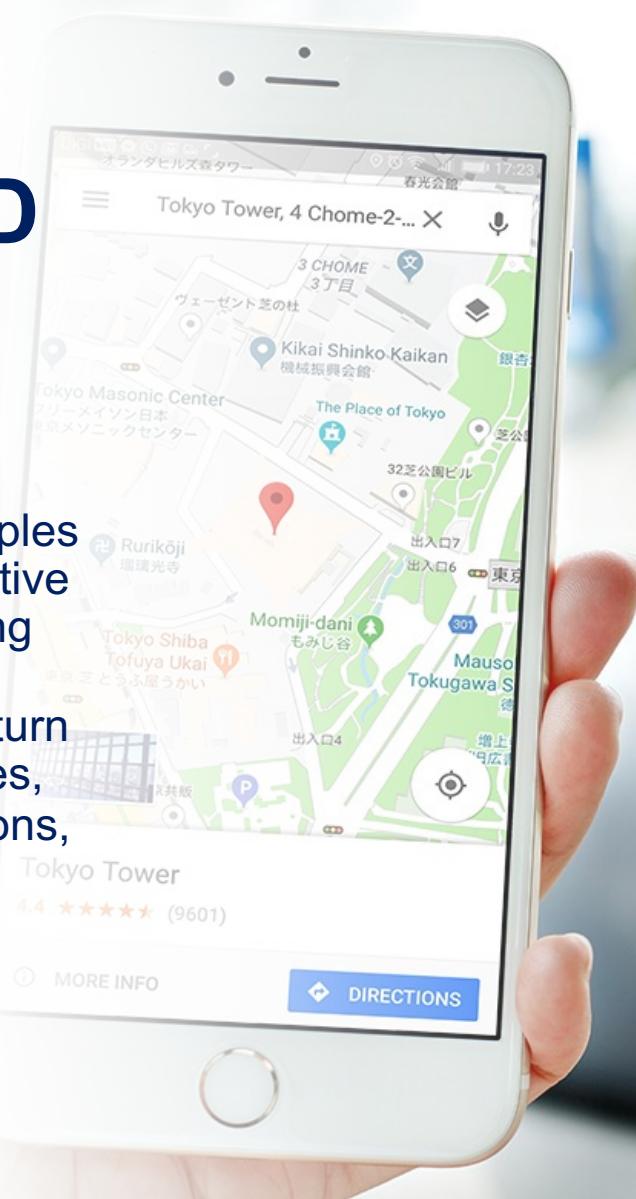
The iPhone revolutionized the smartphone industry by putting user experience at the forefront. Apple's HCD approach focused on intuitive interfaces, seamless integration of hardware and software, and a user-centric design philosophy.



Examples of Successful HCD Projects:

Project: Google Maps

Google Maps utilized HCD principles to create a user-friendly and intuitive navigation platform. By conducting user research and testing, they refined features such as turn-by-turn directions, real-time traffic updates, and personalized recommendations, making it a widely used mapping service.



Examples of Successful HCD Projects:

Project: Tesla Model S

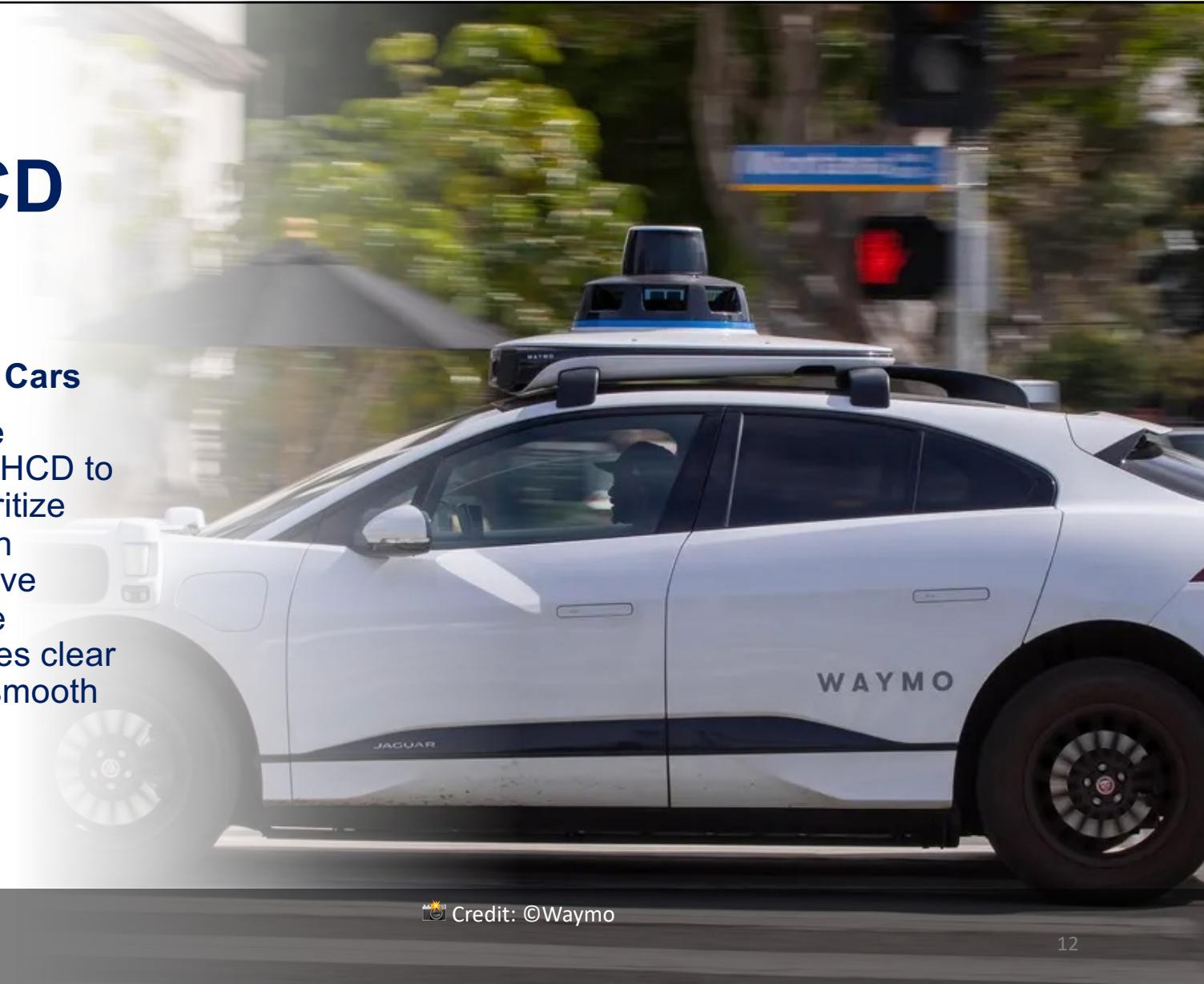
Tesla's Model S electric car demonstrates HCD principles in the automotive industry. By prioritizing user experience, Tesla created a sleek design, intuitive user interface, and innovative features such as autopilot, reimagining the driving experience.



Examples of Successful HCD Projects:

Project: Waymo's Self-Driving Cars

Waymo, the autonomous vehicle project by Alphabet Inc., utilized HCD to design self-driving cars that prioritize user safety and comfort. Through extensive user testing and iterative design, they developed a vehicle interface that builds trust, provides clear communication, and ensures a smooth ride.



Credit: ©Waymo

Examples of Successful HCD Projects:

Project: UBER

Uber's success can be attributed, in part, to their HCD approach. By understanding the pain points of traditional transportation services, Uber created a seamless mobile app that prioritizes user convenience, real-time tracking, and cashless transactions.

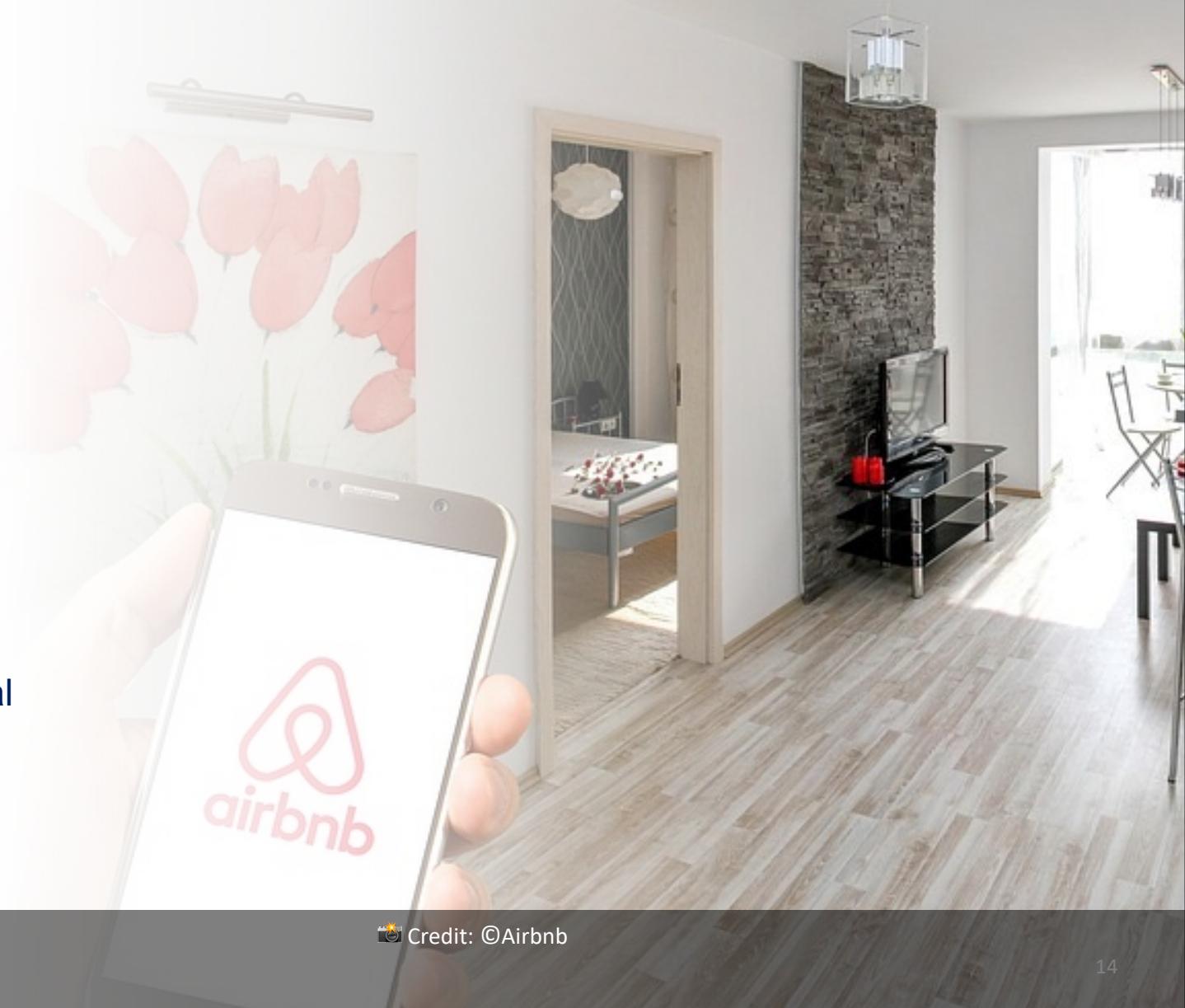


 Credit: ©Uber

Examples of Successful HCD Projects:

Project: Airbnb

Airbnb disrupted the hospitality industry by leveraging HCD principles. They focused on providing personalized, unique, and authentic travel experiences by connecting travellers with local hosts. Airbnb's platform design encourages trust, transparency, and user reviews to create a sense of community.



Credit: ©Airbnb

Examples of Successful HCD Projects:

Project: Duolingo Language Learning App

Duolingo, a popular language learning app, employed HCD to create an engaging and effective learning experience. By understanding user motivations and incorporating gamification elements, they developed a platform that makes language learning accessible, interactive, and fun.



duolingo

 Credit: ©Duolingo

Examples of Successful HCD Projects:

Project: Fitbit's Wearable Fitness Trackers

Fitbit's wearable fitness trackers exemplify HCD in the technology and wellness domain. By understanding user motivations and behaviours, Fitbit designed devices that track activity, sleep, and heart rate, providing personalized insights and encouraging users to achieve their fitness goals.



Credit: ©HarvyNormanAU

Examples of Successful HCD Projects:

Project: Marriott's Mobile Check-in

Marriott, a global hospitality company, employed HCD principles to enhance the guest experience through mobile check-in. By understanding the pain points of traditional check-in processes, they designed a mobile app that allows guests to check-in, select room preferences, and receive digital room keys, streamlining the arrival experience.

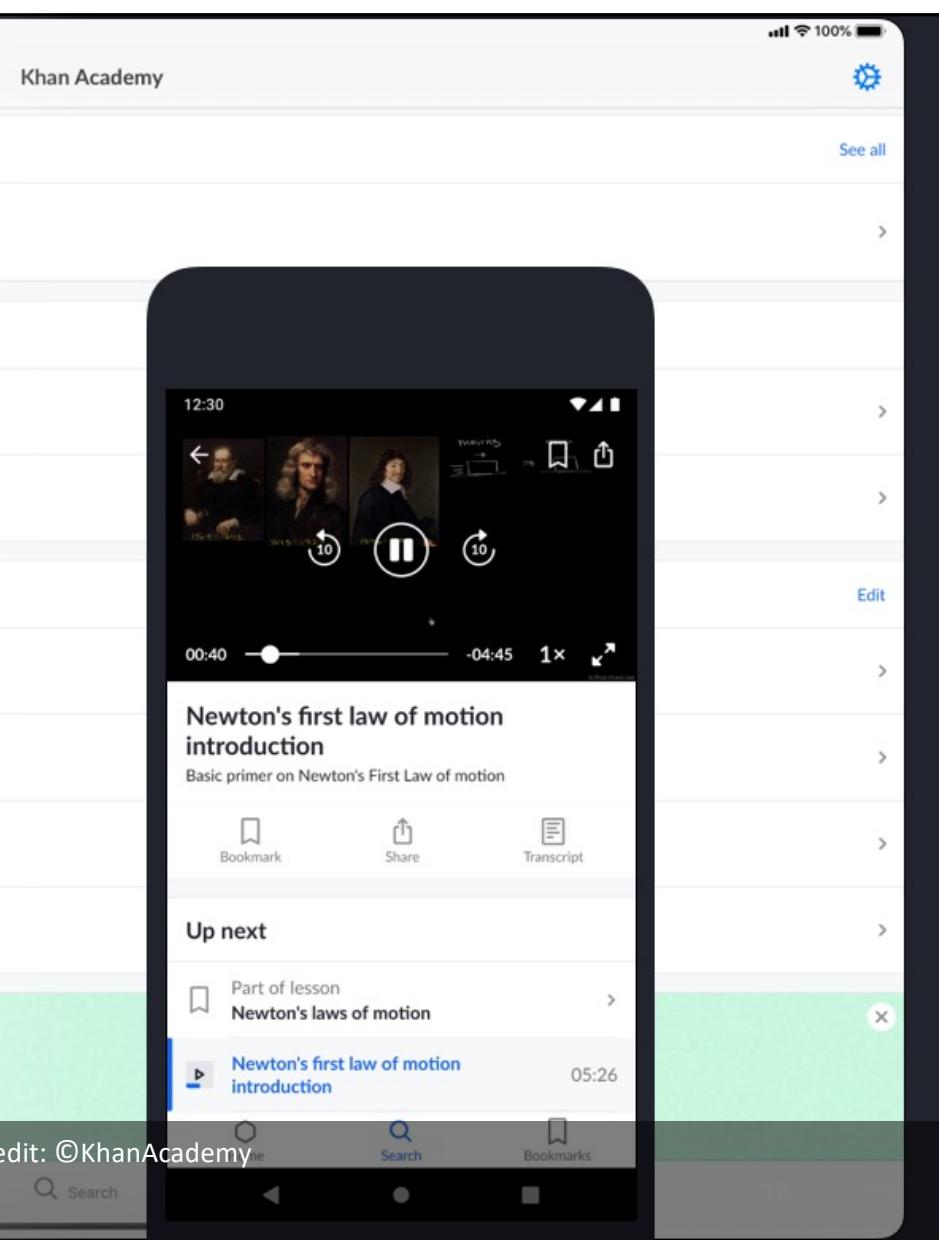


Examples of Successful HCD Projects:

Project: Khan Academy's Online Education Platform

Khan Academy, an online learning platform, utilized HCD to create a personalized and accessible educational experience. Through iterative design and user feedback, they developed an intuitive interface, adaptive learning modules, and a vast library of educational content.

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Examples of Successful HCD Projects:

Project: IDEO's HCD in Healthcare

IDEO has applied HCD to numerous healthcare projects. For instance, they worked with hospitals to improve the patient experience by designing empathetic spaces, optimizing workflows, and integrating technology for better care delivery.



 Credit: ©HuddyHealthcare

Examples of Successful HCD Projects:

Project: IDEO's Shopping Cart Redesign

IDEO, a renowned design consultancy, applied HCD principles to redesign the shopping cart. Through user research and iterative prototyping, they created a more ergonomic, manoeuvrable, and user-friendly cart, resulting in improved shopping experiences.

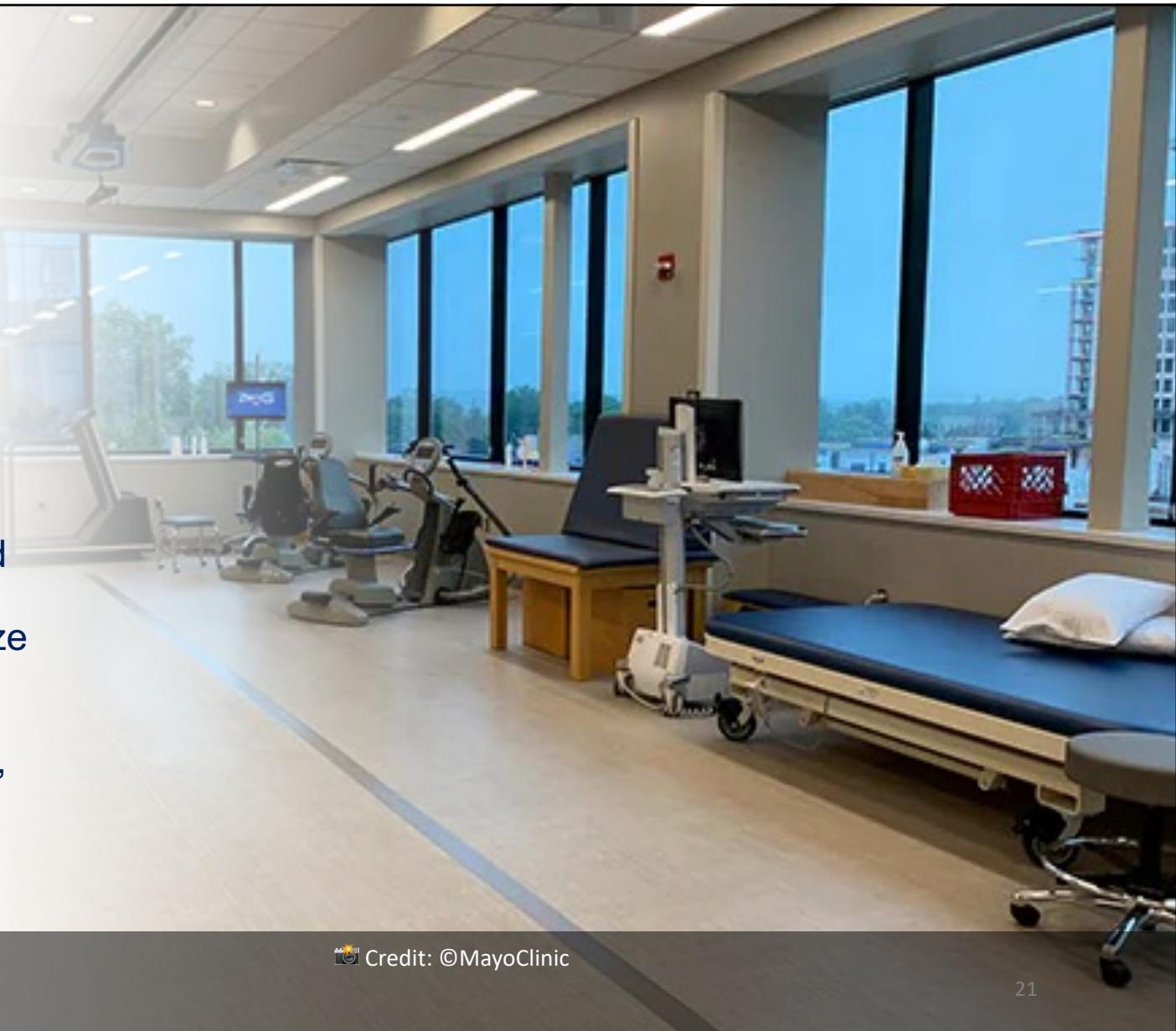


 Credit: ©IDEO

Examples of Successful HCD Projects:

Project: Mayo Clinic's Patient Room Redesign

Mayo Clinic employed HCD to enhance the patient experience and improve care delivery. They redesigned patient rooms to prioritize comfort, safety, and patient engagement. The project included features such as adjustable lighting, integrated technology, and personalized spaces.



 Credit: ©MayoClinic

Examples of Successful HCD Projects:

Project: Proximity Designs' Irrigation Systems for Farmers

Proximity Designs, a social enterprise, utilized HCD to develop affordable and user-friendly irrigation systems for smallholder farmers in Myanmar. Through iterative prototyping and close collaboration with farmers, they designed efficient and locally appropriate irrigation solutions, improving agricultural productivity and livelihoods.



 Credit: ©Proximity Designs

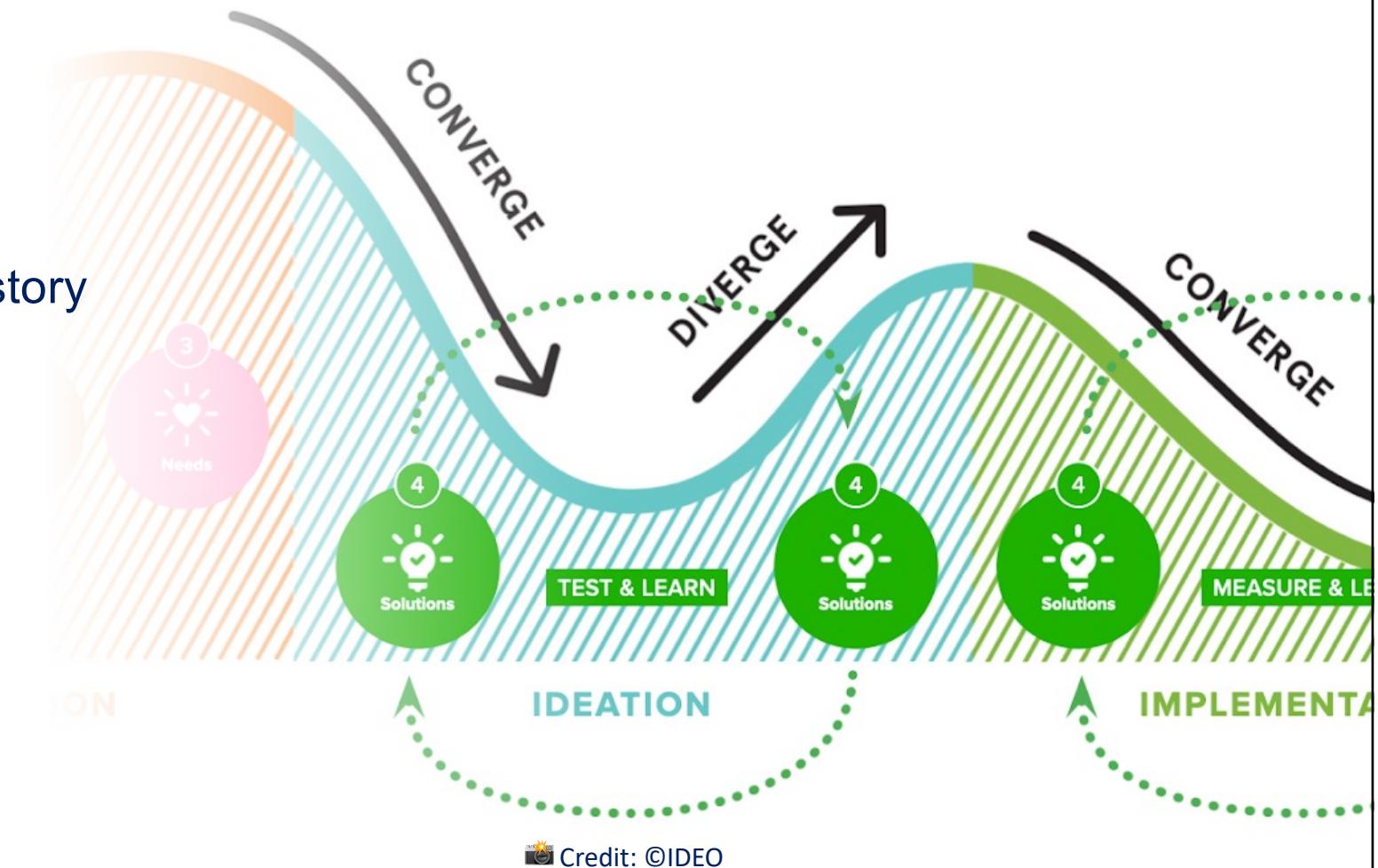


HCD design process by IDEO

* image source IDEO.org

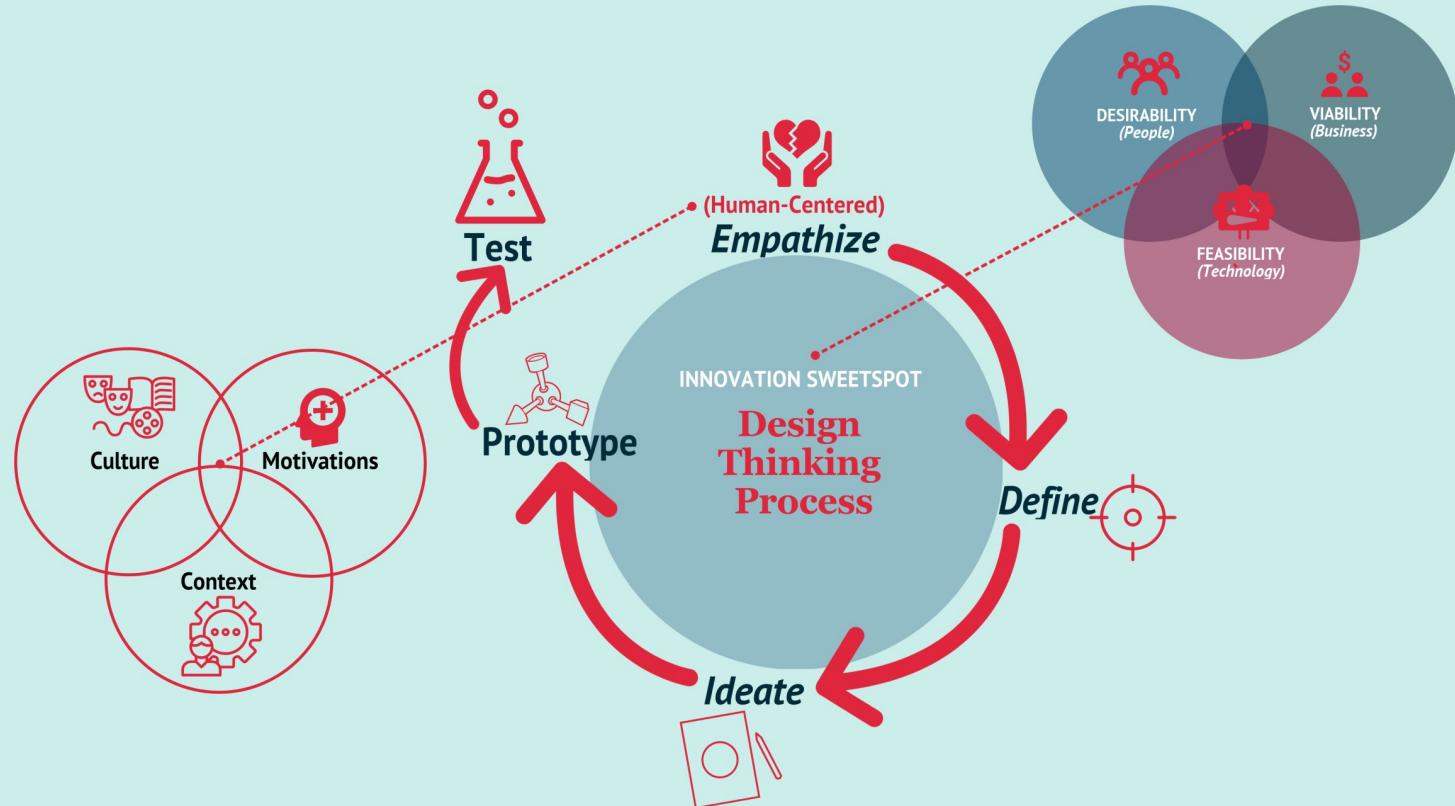
Conclusion

- What is HCD?
- HCD overview and history
- HCD Principles
- HCD Process
- HCD Benefits
- HCD Success Stories



Human-centered Design In A Nutshell

Human-centered design, also known as user-centered design, describes a framework that helps businesses understand the needs, wants, contexts, constraints, and behaviors of their users. Human-centered design (HCD) is an approach that makes users the priority to develop useful products and services.



Frameworks readapted and reproduced by FourWeekMBA, source: IDEO (designthinking.ideo.com)

Q&A



Thanks
for your
attention!

