How Can We Build an Accessible and Inclusive Built Environment?

Part II: The AccesS User-Centered Design Approach

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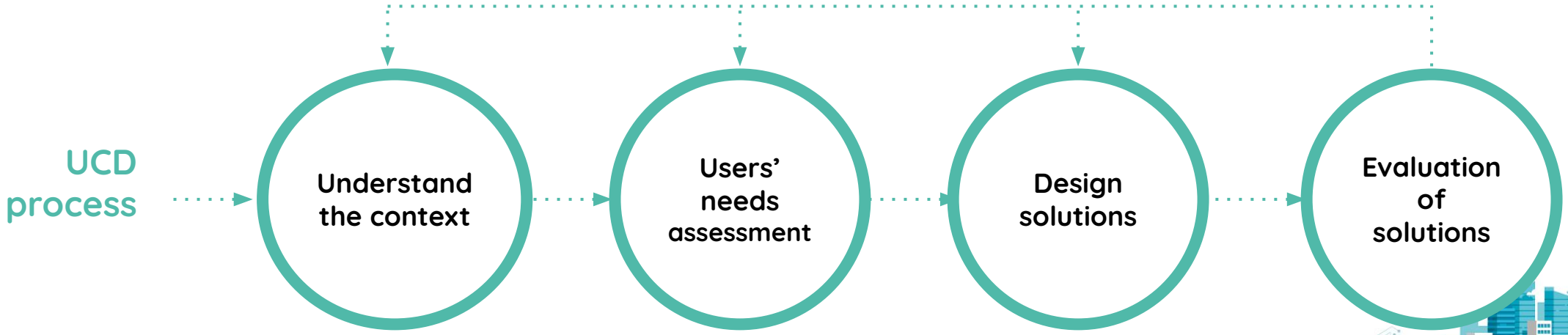
User-Centred Design Approach - Methodology

User-centred design definition

User-centered design (UCD) is an iterative design process in which designers focus on the users and their needs in each phase of the design process.

In UCD, **users are involved throughout the design process** thanks to a series of research and collaborative design methods and tools, to ensure that the developed products, services or systems meet their needs.

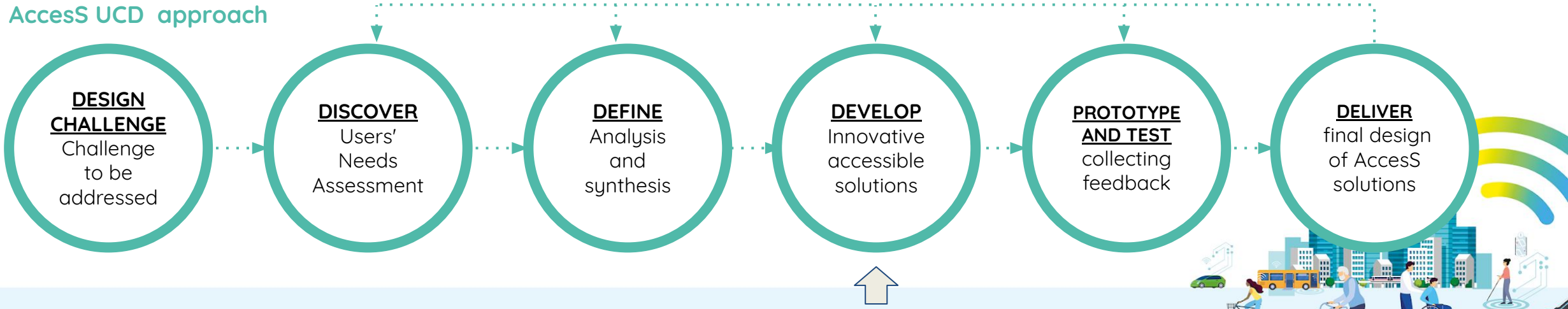


User-Centred Design Approach - Methodology

User-centred design principles

- **The user centrality** focusing on people in each stage of the design process, with the aim of deeply understanding users' needs, desires and challenges.
- **Iterative approach:** Ideas are continuously tested, refined and improved based on the feedback received thanks to the engagement of users and stakeholders.
- **Multidisciplinary collaboration:** in order to address complex problems, the design team should include professionals from across multiple disciplines.

AccesS UCD approach



Design Challenge/Questions

Typology	Demo sites	Location	General design challenge
Case of cultural heritage buildings	Brancacci Chapel	Florence, Italy	*'How can we improve the **accessibility of museums and cultural spaces and its surroundings** for people with disabilities, ensuring easy navigation, inclusive experiences and enhanced comfort for all visitors and workers?'*
	Christo and Jeanne-Claude Center	Gabrovo, Bulgaria	
Case of people care facilities	Droom je Thuis Foundation	Naaldwijk, Netherlands	*'How can we make **care facilities and its surroundings accessible and comfortable** for patients, families, visitors, and workers, addressing their accessibility and vulnerability needs?'*
	Casa Girasole	Massagno, Switzerland	
Case of public services buildings	Palazzo di Città	Bari, Italy	*'What solutions can we implement to make **public buildings and spaces and its surroundings more accessible** and inclusive while ensuring usability and comfort for all citizens?'*
	Mercado de Verónicas	Murcia, Spain	

Discover - Stakeholder and User Engagement

Mixed methods: surveys, interviews, workshops, desk research.

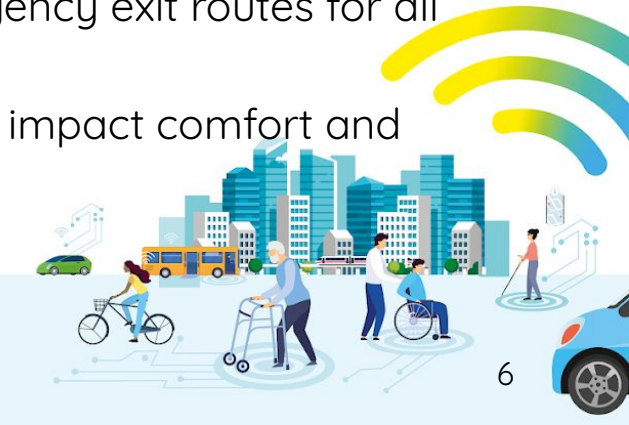
280 participants across demo sites: **end-users, staff, local authorities, disability orgs.**

Category	Examples	Role in research
End users	Visitors, residents, people with disabilities, employees, staff, conservators, operators	Expressed direct experience and needs
Civil society and advocacy organisations	Disability councils, NGOs	Provided insight on barriers and systemic perspectives
Institutional and administrative actors	Local governmental actors	Shared regulatory constraints

Areas of accessibility - User needs

Coherent with EN 17210:2021

1. **Wayfinding** - navigation, signage, and orientation support within spaces.
2. **Horizontal circulation** - accessibility of entrances, doors, windows, patios, terraces, and the suitability of surface finishes and materials.
3. **Vertical circulation** - features such as ramps, stairs, handrails, lifts, and escalators that support movement between different levels.
4. **Specific areas, equipment, and provisions** - includes service counters, seating areas, waiting zones, storage areas, kitchenettes, and accommodations for assistance dogs.
5. **Sanitary accommodation** - accessible toilets and washroom facilities designed for diverse user needs.
6. **Engagement** - user interfaces, controls, switches, and interactive elements that support user engagement and autonomy
7. **Evacuation and emergency exit** - inclusive fire safety measures and accessible emergency exit routes for all users.
8. **Environmental conditions** - factors such as lighting, acoustics, and indoor climate that impact comfort and usability.



Define - Users' needs and Barriers in the 3 Clusters

Pilot Cluster	Main Findings	Key User Needs & Barriers
Cultural Heritage Buildings (Florence, Gabrovo)	Restricted spaces, conservation limits; accessibility conditioned by heritage rules	• Wayfinding tools for sensory and cognitive accessibility • Limited mobility access (stairs, uneven floors)• Multisensory and digital alternatives to physical access • Staff training for inclusive assistance
People Care Facilities (Naaldwijk, Massagno)	Mixed user groups (residents, caregivers, families); emphasis on comfort and safety	• Clear, intuitive navigation and signage • Automatic doors, continuous flooring, adaptable lighting • Digital tools for monitoring comfort and safety • Emotional well-being and domestic atmosphere
Public Service Buildings (Bari, Murcia)	Complex public contexts; accessibility linked to mobility and infrastructure	• Step-free and wide circulation routes • Seamless connection from public transport to building access • Inclusive micromobility and accessible parking • Digital booking/info systems for independent access

Develop - From Users' feedback to Solutions

While not all identified issues or expectations can be fully addressed within the scope of the project, these insights are playing a key role in shaping the design and development of the AccesS tools and use case scenarios, using a Roadmap - a set of recommendations for developing the tools

Pilot Cluster	Main Roadmap Priorities
Cultural Heritage Buildings(Florence, Gabrovo)	• Accessibility constrained by heritage rules • Need for monitoring of comfort and visitor flows • Improved wayfinding and multisensory experience
People Care Facilities(Naaldwijk, Massagno)	• Navigation and comfort for residents • Energy and environmental monitoring • Support for caregivers and family members
Public Service Buildings(Bari, Murcia)	• Step-free access and internal circulation • Integration with public transport and micromobility • User-friendly digital access to services

INFORM → **AccesS Digital Innovations**

Prototype and Test, Deliver

Pilot implementation and testing

- Site-specific solutions implemented across demo sites
- Users and stakeholders involved in **testing activities**
- Feedback collected on usability, accessibility, and effectiveness

Evaluation

- Assessment through **KPIs and qualitative feedback**
- Comparison across pilot sites using common evaluation framework
- Validation of technical and user-centered performance

Final design

- Solutions refined according to feedback and **UCD iterative approach**
- Integration of findings into **final digital and design outputs**
- Preparation for broader adoption and replication

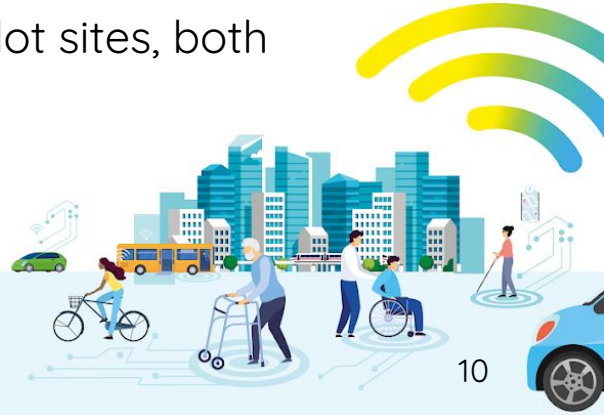
Full results on euproject-access.eu

WP2 - Deliverable 2.1 including:

- Detailed user needs and roadmap per each pilot site
- Inclusive active mobility focus

Lessons learned and conclusions

1. **Understanding users** – The UCD approach helps bridge the gap between **technical design, policies, and real user experiences**
2. **Integrated goals** – Accessibility, usability, comfort, and sustainability must be pursued together
3. **Multidimensional accessibility** – Accessibility includes **physical, cognitive, sensory, digital, and communicative** aspects, requiring an intersectional approach to vulnerabilities
4. **Continuous engagement** – Co-creation and iteration enable inclusive innovation and support **long-term accessibility monitoring**
5. **Meaningful participation** – Engagement should avoid **consultation fatigue**, ensuring realistic expectations and active user involvement
6. **From insights to solutions** – Findings have already informed design decisions in pilot sites, both **digital and physical**



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