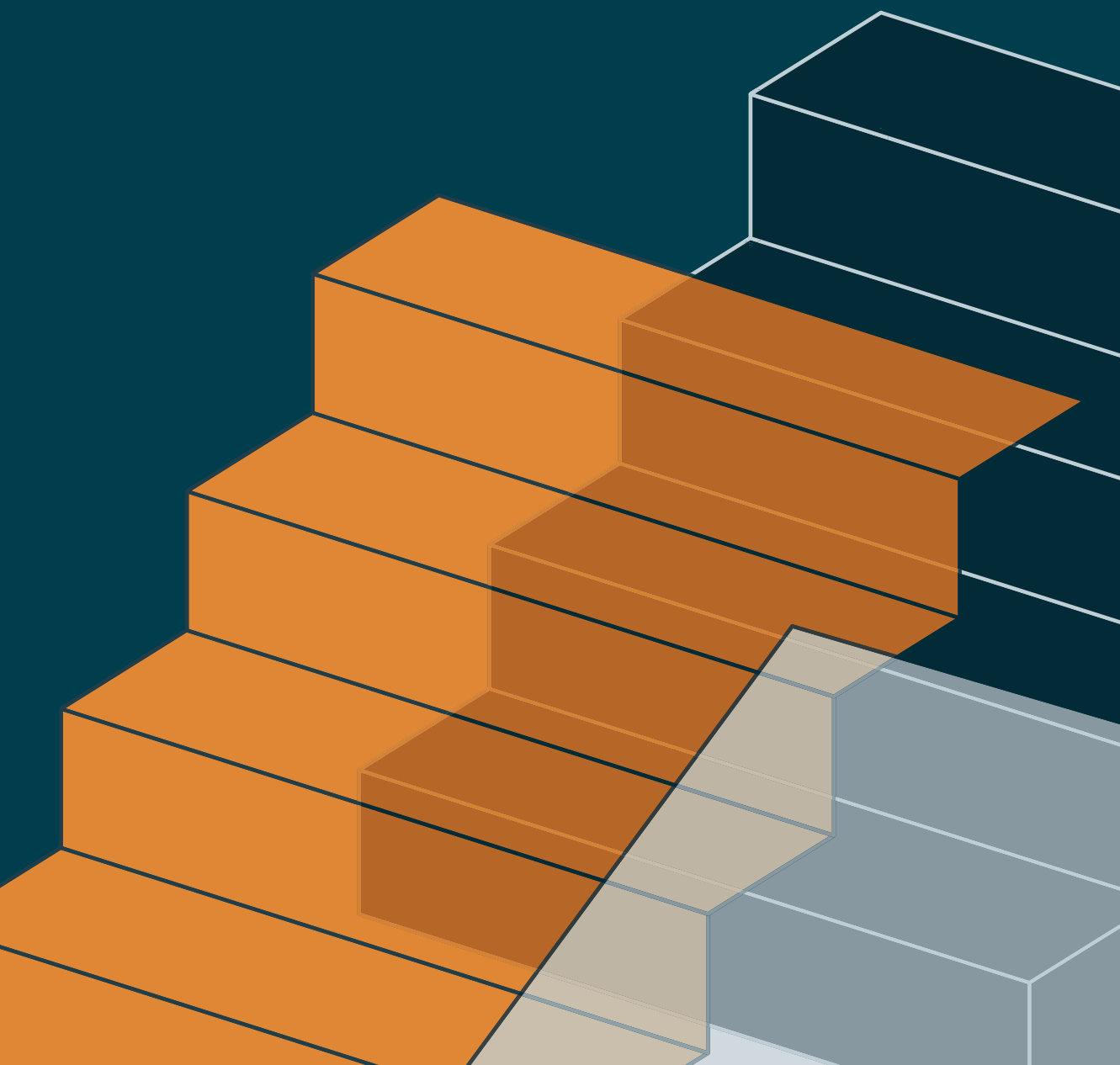
# **Designing Inclusive *Pathways***

Revealing Barriers and Reimagining Accessibility at TU Delft



Designing
Inclusive
*Pathways*

**Master thesis - Strategic Product Design**
Designing Inclusive Pathways
Revealing Barriers and Reimagining Accessibility at TU Delft
August 2025

**Author**
Viktoria Proffen
Faculty of Industrial Design Engineering
Delft University of Technology

**Graduation Committee**
Dr. Stella Boess - chair
Department of Human Centered Design
Faculty of Industrial Design Engineering
Delft University of Technology

Dr. Rebecca Price - mentor
Department of Design, Organisation and Strategy
Faculty of Industrial Design Engineering
Delft University of Technology

## Preface

Working on accessibility at TU Delft has been a journey that went far beyond a graduation project. It touched on questions of justice, care, and belonging that are not abstract but deeply connected to how people live every day. At times, this project was inspiring, at other times, it was confronting and frustrating. As someone without disabilities, I cannot claim to know what this exclusion feels like. What I could do was listen carefully to the stories that were shared with me, and try to understand the weight of everyday barriers through the perspectives of others. These encounters left a deep impression and made clear that accessibility is not a side issue, but a matter of justice and equality.

The project has challenged me both as a designer and as a person. It pushed me to move between empathy and strategy, between the emotions in lived experience and the structures of an institution. I often found myself questioning what change really means in a place as large and complex as the TU Delft, and what role design can play in shifting not only systems but also mindsets. These questions are not fully answered, and perhaps they never will be, but they shaped the path of this work.

This thesis is not only the end of my time at TU Delft, but also a starting point. While working on this project, I have met people who are already carrying change, often quietly and without recognition. I hope this work contributes to their efforts, however small the contribution may be.

Lastly, I am grateful to many people for their support:

- To Stella and Rebecca - thank you for your guidance, sharp questions, and the encouragement.
- To everyone that shared their experiences, was part of my interviews, co-creation sessions or evaluation sessions - thank you for making this project possible in the first place
- To Gechang - thank you for choosing to graduate on the same topic, going through this journey together was way more fun, than doing it alone.
- To my friends in Delft - thank you for the endless support, for the coffee breaks, our shared love for Cabo, and all of the conversations. I am so grateful that I met you.
- An meine Freunde zuhause - Danke für eure jahrelange Unterstützung bei allem, was ich so anstelle, und danke dafür, dass ihr mich schon häufiger besucht habt als in Detmold, Delft muss wohl schöner sein.
- An Paula - Danke für die Workcations, die Nachtschichten und all die Updates. Ich bin sehr dankbar, dass wir uns in Detmold kennengelernt haben und jetzt gleichzeitig Thesis gemacht haben, hat sich fast so angefühlt wie all die Gruppenarbeiten damals.
- An meine Familie - Danke für eure endlose Unterstützung, ich bin unglaublich dankbar, euch zu haben. Danke, dass ihr meine Interessen und meine Bildung immer gefördert habt, ob in Deutschland, Belgien oder jetzt in der Niederlande. Ich verspreche ich halte mich jetzt mit internationalen Umzügen erstmal zurück. Ein besonders großes Danke an Fridde - danke dafür dass du mir das Studium hier überhaupt erst ermöglichst hast.

## Summary

This thesis explores how accessibility at TU Delft is understood, experienced, and addressed, and how it might be reshaped into a more connected, inclusive, and proactive practice. It treats accessibility not only as a technical matter of compliance but also as a question of culture, governance, and everyday practice.

The research followed a modified Systemic Double Diamond. In the exploratory phase, literature review was combined with observations of the TU Delft context. Interviews, a survey, and two process probes revealed barriers, how they are encountered, and how reporting systems function in practice. These insights reframed accessibility from isolated problems into a systemic challenge shaped by structures, mindsets, and power dynamics. A design futuring process was then used to develop scenarios and a preferred future vision, which was tested and refined in two co-creation workshops with stakeholders.

The findings show that accessibility at TU Delft is fragmented and often reactive. Formal and informal initiatives exist but remain poorly connected. Reporting channels are unclear, feedback is limited, and responsibilities are not well defined. Improvements usually follow complaints or external pressure rather than being anticipated, and progress is slowed by a culture of perfectionism and compliance.

To respond to these complex challenges, I developed a set of strategic tools. The Framework translates the main findings into three focus areas, mindset, systems, and governance, with inclusive design as a connecting strand. It provides a way to understand accessibility as an institutional process rather than a checklist. The Agency × Understanding Matrix makes visible where different actors currently stand and where the greatest leverage for change lies. Two entry points were designed in response: the “Access Follows *Who*?” campaign which makes exclusion visible and reframes accessibility as a shared cultural issue, and the “Pathways of Access” workshop, which uses lived experience as a starting point, bringing stories and examples of exclusion into dialogue with institutional actors to clarify roles and responsibilities. A strategic and a tactical roadmap translate these ideas into a sequence of actions, combining immediate steps, such as clearer reporting and feedback loops, with longer-term changes, including embedding accessibility officers in faculties and connecting accessibility to the broader social safety infrastructure.

Evaluation sessions confirmed the relevance of these tools and highlighted the importance of follow-up, visible responsibility, and alignment with institutional priorities. The project concludes that accessibility at TU Delft should not be treated as an afterthought or a checklist. Instead, it needs to be understood as hospitality and justice: a commitment that shapes systems, culture, and daily life.

## A Note on Accessibility & Possible Biases

### Accessibility of this Report

The font used in this report is Inclusive Sans, designed by Olivia King with a specific focus on accessibility, legibility, and readability. The body text is set at 11 pt with a line spacing of 15 pt to support comfortable reading. The line length is 123.25 mm, which results in fewer than 80 characters per line, aligning with readability recommendations for reducing eye strain and improving text tracking.

All colours in the report were tested using a contrast checker to ensure compliance with the Web Content Accessibility Guidelines (WCAG) contrast requirements. These design choices aim to make the report more usable for a wider range of readers.

### Possible Biases

At the same time, it is important to acknowledge that the research itself is not free of bias. The framing of accessibility, the boundaries drawn around the project, and the selection of stakeholders to engage with were all shaped by my own perspective as a researcher and designer. The insights presented reflect both the voices of participants and my understanding of them, situated in the particular institutional context of TU Delft. While care was taken to involve a variety of actors and to remain transparent about process, the findings cannot be read as totally neutral. Rather, they represent a situated account, influenced by methodological choices, interpretation, and the dynamics of the conversations that took place.



## A Note on AI Use

With encouragement from my supervisors, I used AI-assisted tools during this project. NotebookLM, Turboscribe, ChatGPT, Perplexity, Lovable, and Sora supported different parts of the work: helping me understand literature, transcribe interviews, structure texts, and create visual materials. My studies at TU Delft also made me aware of the risks of bias and hallucination in AI, so I always treated the outputs critically and checked them carefully. NotebookLM helped me to work through scientific literature in detail, Turboscribe made interview transcription efficient, Lovable generated a mock-up of a website, and Sora generated illustrations. ChatGPT and Perplexity played a broader role. As a non-native English speaker, and someone who tends to write very long sentences, I used them to make my self-written texts clearer and more concise, and to check for repetition. I always compared the changes to the original to make sure no meaning was lost. They also helped structure interview guides, outline the report, and summarise key take-aways at the end of chapters, though these were always checked for accuracy. Furthermore, I used them on the final version of the report to give feedback on coherence and readability.

To conclude: AI made some tasks more efficient, but it never replaced my own responsibility. The tools supported the process, while the accuracy, quality, and interpretation of the work remained with me.

# Glossary

### Accessibility

Accessibility is about whether people can actually use a space, product, or service. It means removing physical, sensory, and cognitive barriers so that participation is possible for everyone (Harniss, 2014).

### Barrier

A barrier is anything that gets in the way of participation. Sometimes barriers are obvious, like a staircase without a ramp. Other times, they are less visible, such as instructions that are hard to understand or digital tools that don't work with assistive technology. (Clarkson et al., 2003)

### Design for All

Design for All means that no one should be excluded from using something. Here the goal is to create things that work for everyone, regardless of age, ability, or background, however this doesn't mean that there is a one-fits-all solution (Persson et. al, 2014). Design for all was defined as 'design for human diversity, social inclusion and equality' by the European Institute for Design and Disability („EIDD Stockholm Declaration," 2004).

### Diversity

In this context Diversity refers to the wide range of human characteristics, skills and experiences. As mentioned in Designing for human diversity is seen as essential to meeting the challenges of the 21st century (Holmes, 2018). Beth Tauke speaks of eight issues of diversity: Race, Ethnicity, Gender, Class, Age, Physical Ability/Disability, Mental Ability/Disability, and Religion, which are not to be managed away, but something to be recognized and valued in the design process (Preiser & Smith, 2010).



### Exclusion

Exclusion is commonly understood as being left out or being rejected by someone or something (Holmes, 2018). Keates and Clarkson introduce the concept of design exclusion, explaining that people encounter design exclusion when they cannot use or access a product, service, or space (Keates & Clarkson, 2004).

### Inclusive Design

Kat Holmes and Microsoft define Inclusive Design as follows: "A methodology that enables and draws on the full range of human diversity. Most importantly, this means including and learning from people with a range of perspectives" (Holmes, 2018, p. 54). Furthermore Kat Holmes emphasizes that "designing for inclusion starts with recognizing exclusion" (Holmes, 2018, p.1).

### Mismatch

A term often used by Kat Holmes to describe the gap between the design of a product, service, or environment and the needs or abilities of its users. Mismatch is not a personal deficit but a design flaw that can be addressed through more inclusive practices (Holmes, 2018). Holmes also clarifies that "mismatches are the building blocks of exclusion" (Holmes, 2018, p.2).

### Participatory Design

A Participatory design means involving users directly in the design process, especially those whose voices are often left out. By working together with people who have expertise of their experience, the outcome is more likely to meet real needs (Sanders & Stappers, 2008 ).

### Pathways

In this context: Emergent trajectories through which accessibility concerns are recognised, acted upon, and resolved within the university. Pathways can be formal (e.g., reporting systems, policies) or informal (e.g., peer support, grassroots initiatives). They are shaped by institutional structures, cultural practices, and individual actions, and may exist in parallel, sometimes overlapping or breaking down (Bos-de Vos, Deken, & Kleinsmann, 2022).

### Social Model of Disability

The social model of disability shifts the focus from the individual's impairment to the physical, attitudinal, or systemic barriers created by society. Rather than "fixing" the person, the goal is to remove these barriers, which is a core idea in inclusive design (Shakespeare, 2006 ).

### Universal Design

Universal Design is considered as "a concept of designing products and environments for the needs of people, regardless of their age, ability or status in life" (Persson et al., 2014, p.5). As the definition shows, the concept is closely related to Design for All. Holmes (2018) expands that it is about making products and environments accessible and usable by as many people as possible, right from the start, without needing special adaptations.

### Usability

Usability is about how well something works for the people who use it. It asks whether users can achieve their goals easily, efficiently, and with satisfaction, in the specific context where they need it (Persson, 2014; International Organization for Standardization, 2018).



## → Acronyms

**CeeSAA** – Citizen Science Accessibility Assessment project, the research initiative within which this thesis is situated.

**CREFM** – Campus Real Estate & Facility Management, the central TU Delft service responsible for the built environment and facilities.

**CRE** – Campus Real Estate, often used interchangeably with CREFM in stakeholder discussions.

**D&I Office** – Diversity & Inclusion Office, responsible for policies and initiatives related to equity, diversity, and inclusion.

**ESA** – Education and Student Affairs, the TU Delft service responsible for student administration and support.

**HSE** – Health, Safety & Environment

**IDE** – Faculty of Industrial Design Engineering.

**ME** – Faculty of Mechanical Engineering.

**StudAble** (formerly Student Onbeperkt) – Student association for students with disabilities at TU Delft.

**TPM** – Faculty of Technology, Policy and Management.

# Table of Contents

# 01 Introduction

In order to achieve the goal of understanding and improving accessibility at TU Delft, this chapter introduces the project and its context. I explain why accessibility matters, outline the aim and scope, and present the guiding research questions. Furthermore, I describe the link to the CeeSAA initiative and introduce the approach taken to reach the project's aim.

## 1.1 Project Introduction

This thesis is a graduation project for the Master Strategic Product Design at the Faculty of Industrial Design Engineering at Delft University of Technology. It is part of the CeeSAA project, a citizen science initiative at TU Delft that seeks to make accessibility assessments and the tools used for them truly accessible to all.

While CeeSAA focuses on developing and improving formal methodologies for assessing the accessibility of university buildings, this thesis extends the scope to explore accessibility at TU Delft with a more holistic view. The thesis considers not only top-down, policy-driven processes, but also bottom-up initiatives emerging from the campus community. To make sense of how these different efforts interact, this thesis approaches accessibility through the lens of pathways. Following Bos-de Vos, Deken, and Kleinsmann (2022), pathways are understood as emergent trajectories that unfold across multiple organizational contexts. They can be formal or informal, singular or parallel, and are shaped by how actors respond to tensions, breakdowns, and opportunities. Applied here, pathways describe the routes through which accessibility concerns are recognised, acted upon, and resolved at TU Delft.

Both CeeSAA and this thesis align with TU Delft‘s vision of becoming more inclusive, as outlined in the Campus Vision 2040 (Van Dorst et al., 2023). The university recognizes the importance of fostering an environment where everyone can participate equally in academic life, regardless of their abilities. This, however, is easier said than done. An analysis of current approaches and practices at TU Delft is needed to understand which challenges and opportunities exist.

The project is grounded in the understanding that accessibility is not just a matter of technical compliance, but also a cultural and institutional commitment. In an academic environment where people of different abilities, backgrounds, and needs come together, accessibility must be addressed across physical spaces, digital environments, services, and everyday interactions.

By situating the research within the CeeSAA framework while also engaging with the lived experiences of students, staff, and visitors, this thesis aims to investigate how accessibility is currently approached at TU Delft and to identify opportunities for more connected, inclusive, and sustainable pathways forward.

## → 1.2 Problem Context & Motivation

Article 1 of the Dutch constitution states that “All persons in the Netherlands shall be treated equally in equal circumstances. Discrimination on the grounds of religion, belief, political opinion, race or sex, disability, sexual orientation or on any other grounds whatsoever shall not be permitted.” (Ministerie van Algemene Zaken, 2023). Showing that even though everyone has different needs and abilities, which is what makes each person unique and distinctive, no one should be excluded or discriminated against.

The reality, however, is that many designs, whether products, services, or environments, still fail to account for the full diversity of users, resulting in design exclusion (Keates & Clarkson, 2004; Schmidt et al., 2024). Despite accessibility regulations like the UN Convention on Rights  of Persons with Disabilities, 16% of the world population experience barriers on a daily basis (World Health Organization: WHO, 2023).  This raises fundamental questions about whom the world is designed for and who is excluded by design on an everyday basis.

When accessibility, barriers, and exclusion are mentioned, people often think that this is only relevant for people with disabilities, but it is crucial to recognize that everyone can be excluded by design and that everyone can profit from an inclusive environment. Nearly everyone has encountered exclusion from designed products at some point. Whether it‘s a door that doesn‘t open properly, a car designed solely for the safety of men, left-handed individuals using right-handed scissors, or someone with long legs sitting at a too-low table (Holmes, 2018; Criado-Perez, 2019). Throughout our lives, our abilities vary, we are more or less able-bodied, injured, or tasked with carrying something heavy, resulting in diverse demands and needs  (Holmes, 2018; Microsoft, 2015).

When looking at educational environments like university campuses, which serve diverse communities and should aim to provide equal opportunities for learning and development, it becomes clear that inclusive design is particularly needed. If universities are to fulfill their mission as inclusive spaces of learning and innovation, accessibility must be a foundational, not secondary, concern.

In the Netherlands, the impact of non-inclusive environments is clearly demonstrated in higher education statistics. According to data from the Dutch Central Bureau of Statistics (Centraal Bureau voor de Statistiek, 2022), people with disabilities are significantly less likely to participate in and complete higher education. While 54 percent of people without disabilities study in higher professional education (HBO) or research-oriented higher education (WO), this figure drops to 48 percent for people with disabilities. The graduation rate shows a similar gap: 41 percent vs. 36 percent. These disparities exist despite the Netherlands‘ commitment to the UN Convention on the Rights of Persons with Disabilities in 2016, which aims to eliminate unnecessary obstacles and barriers.

Universities are places where people with varying abilities, backgrounds, and needs come together daily to study, work, teach, and research. When these environments are not designed inclusively, they create unnecessary barriers to participation and success. The gap between accessibility policy and lived experience likely also exists at TU Delft. As centers of innovation and knowledge, universities have both an opportunity and responsibility to develop and adapt inclusive approaches that can later spread to broader society.

This thesis tries to give a strategic starting point for the TU Delft to innovate accessible change.

## 1.3 Scope & Aim of the Project

The thesis aims to understand the current state of accessibility at TU Delft by identifying barriers, understanding how accessibility is perceived by the key stakeholders, exploring how current processes work and how current initiatives came to be and what support they received. This understanding feeds into the design goal: designing evidence-based interventions to address accessibility challenges for students, staff, and visitors in the context of TU Delft‘s campus.

Three key stakeholder groups are central to this research, as can be seen in Fig 1.1. Students, staff, and visitors with disabilities who use the TU Delft campus make up the primary group, the core stakeholders, as they directly experience the impacts of the campus environment in their daily lives. The second group, the direct stakeholders, consists of institutional stakeholders like Real Estate Management, facility managers, and policy makers who shape accessibility implementation. The third group, the indirect stakeholders, consists of the general TU Delft population, as according to Holmes (2018), everyone benefits from an inclusively designed environment.

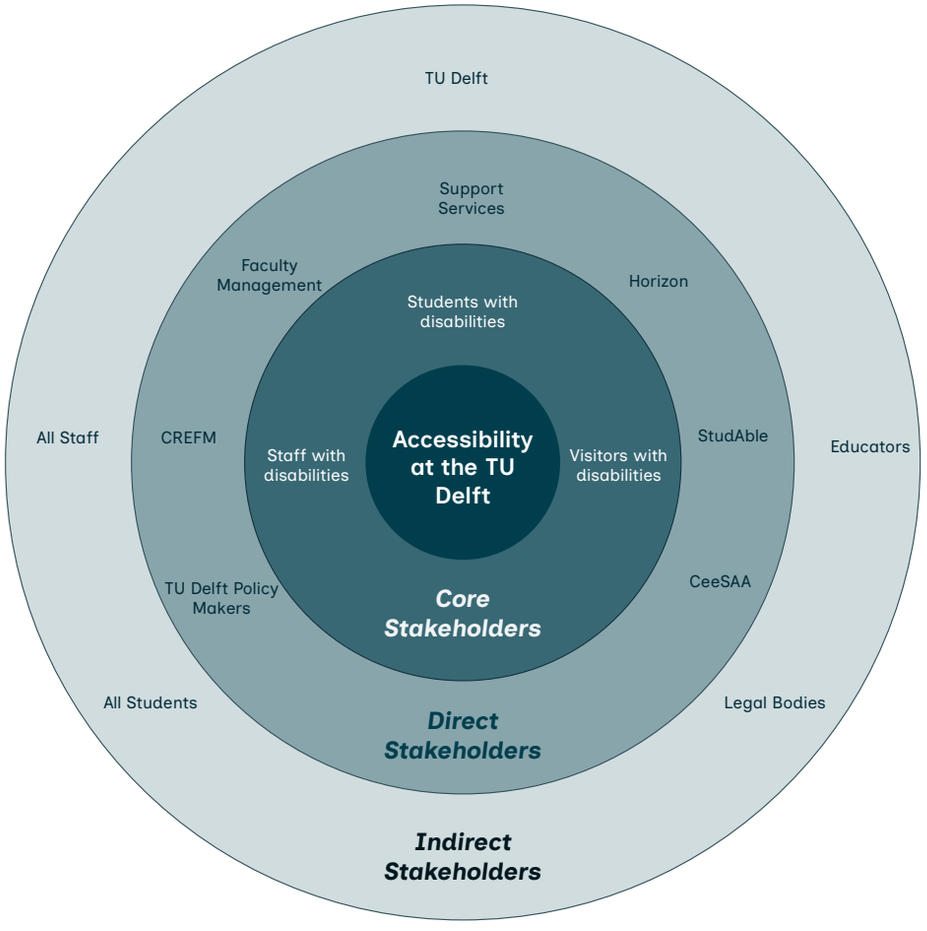



*Fig. 1: The Stakeholders mapped in Core, Direct and Indirect Stakeholders.*

## 1.4 Research Questions

This thesis addresses the likely gap  between accessibility policy and lived experience at TU Delft by investigating current barriers and exploring approaches to campus accessibility and inclusion. To achieve this understanding, it is guided by four core research questions:

- *RQ1: How do different stakeholders at TU Delft perceive and experience accessibility and inclusion on campus?*

  This research question serves to map the diverse landscape of accessibility experiences across the campus community. Understanding how students, staff, facility managers, and visitors with varying abilities perceive inclusion is essential to ensure that solutions address real needs rather than assumptions. This foundational understanding prevents the research from developing interventions that miss key stakeholder perspectives or inadvertently exclude certain voices.

- *RQ2: What are instances of  barriers and challenges, and how are these currently addressed?*

  This question identifies the specific accessibility gaps that exist at TU Delft and evaluates the effectiveness of current approaches. By documenting both physical barriers and systemic challenges, this question creates a comprehensive barrier inventory. Understanding current approaches, both formal and informal, reveals what works, what doesn‘t, and where opportunities for improvement exist.

- *RQ3: How do formal and informal processes function to identify, report, and resolve accessibility issues?*

  This question examines the mechanisms through which accessibility problems are surfaced and addressed, revealing the institutional dynamics that either enable or hinder progress. By comparing top-down formal channels with bottom-up informal networks, this question uncovers process gaps and identifies leverage points for systemic improvement.

- *RQ4: What tensions exist between different approaches to accessibility?*

  This question explores the competing values, priorities, and methodologies that create friction in accessibility work. Understanding is crucial for designing interventions that can navigate institutional realities while advancing inclusion goals. This question helps bridge theory and practice by acknowledging real-world constraints.

Together, these questions aim to build an understanding  of accessibility at TU Delft and provide a foundation for co-creating solutions that bridge institutional policies with community needs, ultimately fostering a more inclusive and accessible campus environment, not only through interventions, but by strengthening institutional infrastructure and coordination.

## → 1.5 Thesis Structure & Approach

This thesis follows a modified double diamond approach, as pictured in Figure 2, based on the Systemic Design Framework from the UK Design Council's Systemic Design Toolkit (Design Council, 2021). This framework retains the core principles of divergent and convergent thinking but applies them to complex, interconnected challenges, by embedding systemic perspectives and participatory processes throughout. The project is also guided by a design futuring process that enables the exploration of alternative futures and the creation of strategic pathways for change.

**Explore + Reveal**
The project began with a broad exploration of accessibility and inclusive design, both in theory and in practice. This included examining the TU Delft context and its connection to the CeeSAA project, combining literature review with on-campus observations to reveal existing patterns, stakeholder tensions, and infrastructural gaps.

**Reframe + Reimagine**
Insights from the exploration phase were deepened through interviews, a survey, and process probes capturing lived experiences and institutional perspectives. The analysis reframed accessibility from a set of isolated barriers into a systemic challenge shaped by governance, culture, and power dynamics, opening the space for alternative futures and strategies. This phase marks the first step in the design futuring process. Rather than remaining in reactive problem-solving, it uses systemic insights to reimagine possible directions.

**Create**
With a reframed understanding of the challenge, the project moved into co-creating strategic interventions using systemic design methods and futures thinking. This involved mapping relationships between people, policies, and processes, and designing concepts that could align these elements to support long-term, adaptable change. Here, design futuring offered a way to combine short-term interventions with long-term institutional strategies.

**Deliver**
The final phase synthesized the work into future scenarios, a framework, the agency x understanding Matrix, a multi-horizon roadmap, and two entry points. These outputs are intended not as fixed solutions, but as flexible tools to guide TU Delft towards a more integrated and proactive approach to accessibility. Together, they represent the final stage of the design futuring process, which involves moving from an understanding of the present system to envisioning alternative futures and charting pathways to reach them.

Throughout all phases, the project drew on participatory design practices, ensuring that those most affected by accessibility challenges were active partners in shaping knowledge and strategy.

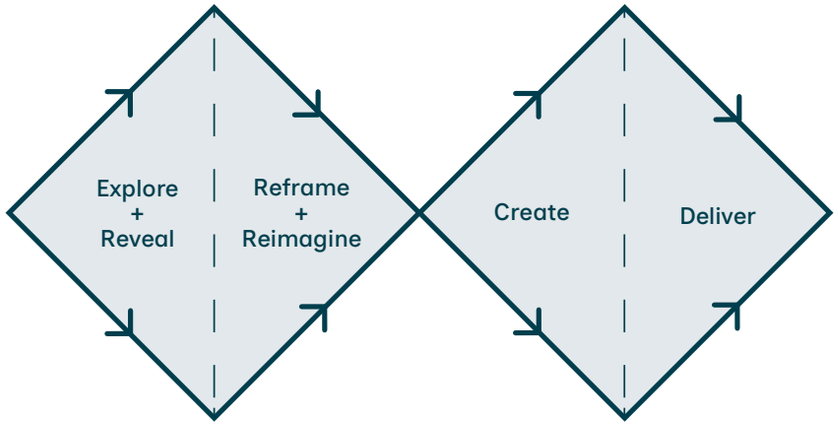



*Fig. 2: The Modified Double Diamond*

# 02 Understanding Accessibility & Inclusive Design

This chapter aims to of build a foundation for for this project  by introducing accessibility and inclusive design. It defines the key terms and concepts related to accessibility and inclusive design. I explain their origins, differences, and common goals, discuss critical perspectives, and introduce relevant tools and frameworks. Finally, I summarise the main insights that will guide the next steps of the research.

## 2.1 Basis Terminology

In order to understand the meaning of accessibility in the context of the TU Delft Context this section will define the necessary terminology. This will ensure a shared understanding of the key terms to ensure that everyone shares the same goal.

**Accessibility**
Kat Holmes defines accessibility in her book Mismatch as follows: “Accessibility: 1. The qualities that make an experience open to all. 2. A professional discipline aimed at achieving No. 1.” (Holmes, 2018, p. 55). Persson et al. (2014, p.21) define accessibility as: “the extent to which products, systems, services, environments and facilities are able to be used by a population with the widest range of characteristics and capabilities (e.g. physical, cognitive, financial, social and cultural, etc.), to achieve a specified goal in a specified context.” Thus it can be said that accessibility is about whether everyone can actually use a space, product, or service. It means removing physical, sensory, and cognitive barriers so that participation is possible for everyone (Harniss, 2014).

**Exclusion**
Exclusion is commonly understood as being left out or being rejected by someone or something. Keates and Clarkson introduce the concept of design exclusion, explaining that people encounter design exclusion when they cannot use or access a product, service, or space (Keates & Clarkson, 2004). In conclusion, exclusive design can be defined as designing with solely the average user in mind, rendering everyone else unable to use the product, service, or space properly.

**Diversity, Equity and Inclusion**
The TU Delft defines the terms as the following on their strategy website: “Diversity is the representation of different people and acknowledges and encourages individual visual and non-visual differences.” (Delft University of Technology, n.d. a)

“Inclusion is the act of welcoming, supporting, respecting, and valuing all individuals and groups.” (Delft University of Technology, n.d. a). “Equity relates to correcting imbalances. Ensuring fair access to opportunities and resources while taking into consideration individual’s barriers or privileges and eliminating systemic barriers and privileges.“ (Delft University of Technology, n.d. a).

**Belonging**
Belonging is one of the universal human needs and goals, it is the desire to belong to a social group or community, which cares about each other (Jimenez et al., 2015; Desmet et al. 2017). One could see belonging as the outcome of the interplay of inclusion, diversity and equity, as pictures in Fig. 3 below. According to the TU Delft Website Belonging is understood as the “sense of feeling as an essential or important part of the organization.” (Delft University of Technology, n.d.).

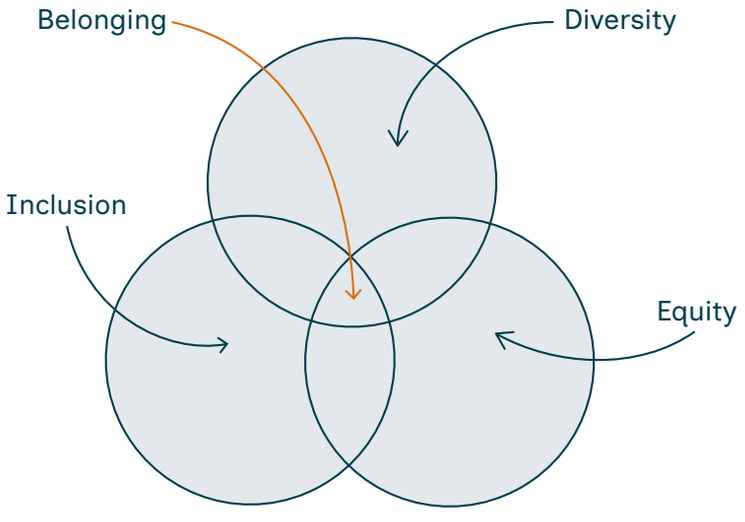



*Fig. 3: Belonging as the outcome of the interplay of inclusion, diversity and equity*

## 2.2 Unterstanding Inclusive Design

This section is exploring the origin of the different concepts of Universal Design, Design for All and Inclusive Design. The concepts are not only technical approaches, but also a social and ethical responsibility. They help to promote social inclusion and equal opportunities by avoiding barriers from the outset and enabling everyone to participate on an equal footing. Aiming to clarify the slight differences between the concepts and their common goal. The section will also show more critical perspectives on the concepts.

### Standardization & Norms

If one looks around, nearly everything in the environment is normed or standardized. From cars, doors, tv's to jeans, everything is underlying norms or standards. On the positive side this is making the production cheaper and thus products more accessible to the general population. On the problematic side the norms for the human body are often outdated and not questioned, leading to those who do not comply with the set standards to be excluded. Looking at most of the examples one can see that the standard bodies are mostly considered to be white, healthy men (Steiner & Zeller, 2024a). Therefore most things are mostly designed with men in mind. One example is the design of cars, which are still designed with the average man in mind, disregarding the needs and the safety of the rest of the world's population. Women face a 47% higher chance of serious injury and a 71% higher chance of minor injury in car crashes compared to men, with a 17% higher risk of death (Kahane, 2013), despite men being more frequently involved in accidents (Criado-Perez, 2019). This is also because till the year 2011, crash test dummies were only available in form of the male average. Disregarding so called out of position drivers, like women and everyone else not fitting the physique of the average 50th percentile man (Criado-Perez, 2019).

Why is this the case? Looking back at the historical standardized bodies, there is the Vitruvian Man by Vitruvius, the Body mass index with its origins in the 19th century, in the 20th century Ernst Neufert's Bauentwurfslehre and Le Corbusier's Modulor as the new standardized systems. All of these look at the ideal body rather than at the average person (Steiner & Zeller, 2024a).

Another example of this are the 'average' American couple Joe and Josephine, who were drawn by Alvin R. Tilley for Henry Dreyfuss's books Designing for People (1955) and The Measure of Man (1969). These two „average" Americans were not modeled after average American bodies. Rather, they were based on data from the fashion industry for Josephine and data from the U.S. Army for Joe. Thus, they do not represent the average body of the actual population, but rather a more ideal body (Steiner & Zeller, 2024a; Hamraie, 2020; Lupton, 2014).

The first inclusive standard was the Humanscale developed by Niels Diffrient in 1974, who looked beyond the ideal fit body standard towards all body types and ergonomic design (Lupton, 2014). According to Steiner & Zeller (2024a) and Lupton (2014) the Humanscale project responded to the universal design movements of the time, like the Independent Living, the Accessibility, the Disability movements of the late 60s and early 70s.

### Barrier free Design/ Access Studies

In the 1950s after World War Two and the Vietnam War there was a larger number of veterans with disabilities returning home to the US. There was a shift in the previous perceptions of normality, "because the moment when a 'disability' or an 'injury' no longer represents too great a 'deviation from the norm', i.e. is no longer perceived as too much of a 'difference' but rather as a 'normal state' or 'normality', the way in which 'those affected' are treated

also changes." (Bieling, 2019, p.44). This lead to an increased visibility, changes in policies and investments into rehabilitation programs, focusing on education and employment opportunities (Steiner & Zeller, 2024a; Persson et al, 2014). Accessibility became even a broader issue because of the Social Justice Movement in the 1960s, resulting in more awareness and active changes in design processes, leading not only to standards for accessible building, like ANSI A117.1, but also to the development of assistive technology (Steiner & Zeller, 2024a; Persson et al, 2014).

### → Design for All

The concept of Design for All has its origins in the 1960s in Scandinavia, tracing back to the concept of ergonomic design and democratic design (Steiner & Zeller, 2024a). Design for All means that no one should be excluded from using something. The goal is to create products and environments that can be used by everyone, however this doesn't mean that there is a one-fits-all solution (Persson et al., 2014). Design for all was defined as 'design for human diversity, social inclusion and equality' by the European Institute for Design and Disability (EIDD, 2004). It is about guaranteeing that everyone is included and no one is left behind (Steiner & Zeller, 2024b). The concept of Design for All is mainly used in Scandinavia today (Bendixen & Benktzon, 2015) and is often used interchangeably with universal design (Persson et al., 2014), which will be explained in the next section.

### → Universal Design

Universal Design is considered as "a concept of designing products and environments for the needs of people, regardless of their age, ability or status in life" (Persson et al., 2014, p.5). The architect Ronald Mace and the designer Elaine Ostroff are seen as the founders behind the concept, as they wanted to challenge the traditional approach to design for what was perceived as the average user, with aiming for a design approach that is more accessible and universally usable (Clarkson & Coleman, 2013). Universal Design wanted to encourage design solutions that would "work equally well for people with and without disabilities" (Steiner & Zeller, 2024a, p. 23). It is about making products and environments accessible and usable by as many people as possible, right from the start, without needing special adaptations. (Holmes, 2018). Developed in 1985, the concept became increasingly popular after the American with disabilities act (ADA) was passed in 1990, making Universal Design the standard in the US and thus bringing worldwide attention to the concept (Steiner & Zeller, 2024a).

Mace and his colleagues at the Center for Universal Design at the NC State University formulated seven universal design principles for designing products, as well as environments (Bieling, 2019; Persson et al., 2014). The following principles aim to provide guidelines and design criteria so that the end product can work for as many users as possible (Bieling, 2019):

1. Equitable Use
2. Flexibility in Use
3. Simple and Intuitive Use
4. Perceptible information
5. Tolerance for Error
6. Low physical effort
7. Size and space for approach and use

It is important to underline that universal design argues that what is barrier free to some might create a barrier for someone else, thus simply solving the barrier is not enough, it needs to be seen from multiple perspectives with intersectionality in mind (Persson et al., 2014).

## → Inclusive Design

The term Inclusive Design was introduced by the designer Roger Coleman in 1994 in his paper ‚The case for inclusive design‘ (Steiner & Zeller, 2024a; Clarkson & Coleman, 2013). Introducing the concept as “a simple concept to help them [manufacturers and retailers] see potential commercial benefits for their businesses” (Clarkson & Coleman, 2013, p.239). Susan Goltsman defines inclusive design as follows: “Inclusive design doesn’t mean you’re designing one thing for all people. You’re designing a diversity of ways to participate so that everyone has a sense of belonging.” (Steiner & Zeller, 2024a, p.13). Building upon Goltsman’s definition Holmes (2018, p.54) and Microsoft (2015, p.11) define Inclusive Design as “A methodology that enables and draws on the full range of human diversity. Most importantly, this means including and learning from people with a range of perspectives”.

These definitions show that inclusive design is of course about fostering belonging, but can also be seen as a business strategy. Universal design and inclusive design offer economic advantages, as they tap into new user groups, increase product acceptance and promote innovation. Rama Gheerawo, the director of the Helen Hamlyn Centre for Design, brings it to a point saying “Inclusive Design is a business strategy. It is about market share. It is not just about good intentions; it is about good business.” (Steiner & Zeller, 2024b). The example of the Ford Focus is given, which was developed in the 1990s with the demographic of eighty year olds in mind, adding easy to open doors and larger dials, which the other demographics didn’t complain about (Steiner & Zeller, 2024b).

It is important to clarify that while design for all and universal design are often used interchangeably, this is not the case with inclusive design. Holmes (2018) makes the distinction that universal design, especially with the seven principles in mind, is about the qualities or the attributes of a final design solution. In contrast, inclusive design focuses on how a designer arrived at a particular design, it is about the method rather than the final design. Most importantly universal design and the one-size-fits-all approach are different from inclusive design which uses a one-size-fits-one approach, emphasizing that one-size-fits-all does not fit anyone nicely (Holmes, 2018). Similarly, accessibility and inclusive design need to be distinguished from each other. Something being accessible is an attribute, while inclusive design should improve a product‘s accessibility, it is not a process or method for achieving all accessibility standards. As Holmes (2018, p.55) states “Ideally, accessibility and inclusive design work together to make experiences that are not only compliant with standards, but truly usable and open to all.”

## 2.3 Critical Perspectives

Having discussed the historical development, aims and guiding principles of Barrier free Design, Design for All, Universal Design and Inclusive Design, the following section focuses on critical perspectives that question the underlying assumptions and the outcomes of these approaches in practice. While all share the stated ambition of designing “for all”, research has shown that they can, in practice, reproduce exclusions, privilege certain bodies and experiences, and place greater emphasis on compliance than on meaningful inclusion. Drawing on concepts from Critical Disability Studies and Critical Access Studies this section examines the structural, cultural and procedural limits of these approaches and considers more context-sensitive and participatory alternatives.

### Limits of Standardisation in Universal and Inclusive Design

It is important to also look at the emerging critical perspectives on Barrier free Design/Access Studies, Design for All, Universal Design and Inclusive Design.

All of them have in common that they want to be inclusive and design with everyone in mind or designing for all. However, it is important to note that universal design in practice often centers on standardization, prioritising the development of uniform guidelines and criteria. This emphasis on standardisation can overshadow the actual needs and lived experiences of individuals, as the process risks focusing more on compliance than on people themselves (Bieling, 2019; Park, 2012). Furthermore Bieling (2019) points out, that the concept of universal design itself faces fundamental limits. The diversity of human bodies, abilities, and life situations means that no single solution can ever be truly universal. There will always be individuals whose needs are not met by a supposedly all-encompassing design. This raises the question of whether the pursuit of universality can ever be fully achieved, or whether it risks masking ongoing exclusions (Heylighen & Bianchin, 2018; Heylighen & Dong, 2019). The variety of disabilities and individual needs often means that truly inclusive solutions require individualised or tailored design approaches, rather than relying solely on universal solutions (Park, 2012; Heylighen & Bianchin, 2018; Heylighen & Dong, 2019).

### Insights from Critical Disability Studies

These critiques can be deepened through concepts from Critical Disability Studies, in particular compulsory able-bodiedness and the Normate, which describe how “normal” is socially constructed in ways that maintain able-bodied privilege (Karlsson & Rydström, 2023). While universal and inclusive design present themselves as neutral, they are often developed against a background assumption of a normative, non-disabled body, with deviations accommodated only in so far as they can be integrated without disrupting expectations.

Building on this structural critique of what counts as “normal”, it is also necessary to examine how designers themselves define the scope of “all” or “everyone” in their work. It needs to be critically reviewed who designers consider as “all” or “everyone”, and of course also who the designers are. Aimi Hamraie is arguing that in this case everyone is simply people, body types and mindsets that designers know of based on their own experience or based on frameworks (Steiner & Zeller, 2024c). This narrowing of “everyone” becomes even clearer when we look at the historical roots of accessibility research and policy.

### Historical Context and Critical Access Studies

The emerging research area of Critical Access Studies, shows a view from the last 10 or 15 years and makes it clear that one also

needs to consider the context within Access Studies/Barrier free design first started. The educational opportunities at universities, were targeted at white, middle-class veterans , in a time were the US was very racially segregated (Hamraie, 2020). This leads to the question of who is counts as everyone or all in this context, it becomes clear that the focus was often on white people with disabilities (Steiner & Zeller, 2024c). A lot of accessibility research was done at the universities with the veterans, which the first accessibility standards, like the ANSI A117.1, are based on. This resulted to the first standards not take into account a wide range of disabled bodies (Hamraie, 2020). Critics have also argued that the rehabilitation programmes and later on Universal Design have been used to make disabilities invisible and to design them away (Steiner & Zeller, 2024a). Park (2012) further critiques that there is a tendency to move from a norm-based design concept, toward a normative design culture. In such a culture, the standards become prescriptive and shape not only design practice but also societal expectations of what is 'normal' or desirable. These historical and cultural limitations also interact with present-day political and professional climates.

Here, Karlsson & Rydström (2023) caution against what McRuer (2006, p.18) calls a "discursive climate of tolerance": the celebration of diversity and accessibility while maintaining structural hierarchies. Under such conditions, inclusive design may operate less as a transformative practice and more as a legitimating gesture, signalling openness while leaving ableist norms largely intact.

Hamraie (2020) states „Critical access studies help us think about accessibility not as a de facto good or as a kind of common sense, but as a type of friction and struggle and as an ongoing and unfinished process and as a set of ethical commitments that are grounded in a vision of a transformed world, not just a retrofitted world". Critical Access Studies does not take existing design goals for granted, but instead interrogates their underlying assumptions and power structures. It questions the concepts by asking questions of what lies behind the concepts and their meaning. Rather than accepting accessibility as a finished product or a box to be checked, it questions who is understood as the disabled user, whose needs are centered, and how histories of race, class, and gender shape both the standards and the lived realities of access, asking what is the concept of access and what is the longterm goal for society (Steiner & Zeller, 2024c; Hamraie, 2020). It addresses tensions like disability rights vs. disability justice, in which access is seen as an act of hospitality, as something that is cultural and relational, rather than something that can be measured or standardized. Compliance culture vs. disability culture, going beyond what the regulations are saying and even questioning the primacy of the codes, showing that standards introduced to guaranteeing accessibility can lead to barriers themselves, like the curb cut for example (Steiner & Zeller, 2024a). It questions the understanding of normalcy and who is seen as the disabled user. Moreover it clarifies that accessibility is an ongoing process, a place of friction and something that people need in different ways (Hamraie, 2020). Quemuel Arroyo similarly states "Accessibility is not static. This is an ever-evolving space." (Steiner & Zeller, 2024d).

### → Understanding and Agency: Bridging Bottom-Up and Top-Down

These critiques point not only to limits in the understanding of accessibility, but also to limits in the agency of those involved, their ability and willingness to initiate or influence change within their institutional and professional contexts. As Emirbayer & Mische (1998) note, agency is shaped both by structural position, so formal authority, access to resources, and by personal orientation toward action, so motivation, willingness to challenge

norms. In the context of accessibility, a stakeholder may have deep conceptual understanding, informed by lived experience or critical perspectives, but lack the structural power to implement change. Conversely, those with high formal authority may have low awareness of accessibility as an ongoing, cultural, and relational process (Hamraie, 2020), leading to actions that reinforce compliance culture rather than dismantling barriers.

Literature on strategic reframing and organisational transformation (Dorst & Watson, 2020) highlights that meaningful change often requires a meeting point between bottom-up and top-down approaches. Bottom-up initiatives bring lived experience, contextual insight, and creative problem-solving, the understanding of accessibility as a complex, relational, and ongoing process (Hamraie, 2020). Top-down action brings formal authority, resources, and the capacity to embed changes into systems, so the agency to act at scale. When these two remain disconnected, accessibility efforts risk being either symbolic and under-resourced (bottom-up without agency) or compliance-driven and detached from lived realities (top-down without understanding).

### → The Paradox of Inclusive Design and Justice as Fairness

A related challenge to the "design for all" ideal comes from what Heylighen and Bianchin (2018) call the paradox of inclusive design. The paradox of inclusive design, as described by Heylighen and Bianchin (2018), further deepens this critique. While the aim is to design for the widest possible audience, taking specific differences seriously can at times conflict with that goal. Drawing on the philosopher John Rawls's theory of justice as fairness, they suggest shifting focus from making each individual artefact usable by everyone, to looking at the overall distribution of usability across a system, city, or organization.



The key is to improve the position of those who are "worst off" in the given context. In Rawls's view, fair decisions are made "under a veil of ignorance," as if we did not know our own abilities, advantages, or disadvantages (Heylighen & Bianchin, 2018). Applied to design, this means deciding in ways that are fair regardless of one's position. This shifts universal and inclusive design from being only about the end product to being about a fair process that includes those affected in setting priorities and is willing to put the needs of the most disadvantaged first (Heylighen & Bianchin, 2018).

### → Beyond Empathy: Rethinking Designer–User Relations

Building on Heylighen & Dong (2019), there is also a need to question the role of empathy in inclusive and universal design. While often presented as a key design value, empathy can be biased, incomplete, and shaped by the designer's own embodiment, beliefs, and social positioning. They recommend an ethical step before attempting empathy, asking in whose shoes one can realistically stand, and a perspectival step that recognizes the bodily as well as cognitive dimensions of perspective-taking. In cases where empathy's limits are too great, participatory or co-design approaches may be more appropriate than empathy-based design alone.

### → Constructive Ways Forward

In summary, Critical Access Studies insists on continually questioning who is included, whose needs are prioritized, and how access can be reimagined away from logistics and regulations to meaningful justice and accountability. The dream is a culture that makes inaccessibility impossible (Hamraie, 2020).
Lastly it is important to state that Inclusive Design should be an act of allyship when the designers themselves are not people with

disabilities, practices like co-design or participatory design should be embedded, seeing people with disabilities as the experts (Guffey, 2024). If this is not the case ones design can become a so called ‘disability dongle’, a term coined by the design strategist and disability advocate Liz Jackson, which is a well-intended, elegant, yet useless solution to a problem people with disabilities never knew they had (Hamraie, 2020; Guffey, 2024). One of the best known example for a disability dongle is JUU, a electrical wheelchair created by Toyota that can climb stairs (Guffey, 2024).

Bieling (2019) argues that universal design will never replace individualized adaptations and assistive devices, which should be seen as essential complements to avoid leaving those at the margins behind.

Another critical perspective is that universal design must always be understood in context. Social, cultural, and technical factors shape what is possible and what is needed (Bieling, 2019). Universal solutions must therefore be flexible and adaptable, rather than rigidly standardized.

As a constructive way forward, Park (2012) suggests that designers could focus on four core criteria to make design more genuinely inclusive: ensuring accessibility, promoting destigmatisation, taking into account the role of aid tools and care takers, and ensuring compatibility with assistive technologies. These criteria can help move the focus away from a strong focus on standardization and toward more meaningful, context-sensitive inclusion.



## → 2.4 Inclusive Design Toolkit

There are many different tools developed in the recent years. There is for example the Inclusive Design Toolkit by the University of Cambridge (Clarkson et al., 2007), Cards for Humanity, an online tool by the consultancy frog (Fisher, n.d.), and the widely recognized Inclusive Design Toolkit by Microsoft (Microsoft, 2015). The team around Kat Holmes and Albert Shum at Microsoft developed their first inclusive design toolkit in 2015, with Kat Holmes expending on it with her book Mismatch in 2018. Ever since then Microsoft continues to develop new guidebooks and tools to promote inclusive design.
In their first Inclusive Design Toolkit they introduced the three following inclusive design principles that guide their work, as well as the persona spectrum. The team got their knowledge from partnering with inclusive design leaders and innovators in the field (Holmes, 2018).

### → Recognize Exclusion

Kat Holmes emphasizes that “designing for inclusion starts with recognizing exclusion” (Holmes, 2018, p.1). Exclusion in this case can be understood as being left out or being rejected by an object, an environment, or people. Exclusion often happens when there is a mismatch between the design of a product, service, or environment and the needs or abilities of its users. Holmes (2018, p.2) states that “mismatches are the building blocks of exclusion”. Microsoft (2015) expands with “Exclusion happens when we solve problems using our own biases”, showing that exclusion is not an accident, it is a consequence of design decisions, many of which are made unconsciously, based on the designer’s own abilities and worldview, yet exclusion is rarely intentional, designers rarely set out to leave people behind.

But exclusion is not only about permanent disabilities. A new parent holding a child with one arm, a tourist who cannot read the

local language, or anyone with temporary or situational limitations may all find themselves excluded by design choices that assume a “normal” user. As the Microsoft (2015, p.8) puts it, “There’s no such thing as ‘normal’”. Disability, as Holmes (2018) reframes it, is not just a health condition, but a mismatch between person and environment, a moment when the world, as built, does not fit. These mismatches are the seeds of exclusion.
The first step, then, is to become aware of these mismatches, to notice who is left out, and challenge the assumptions that led to that outcome.

Recognize exclusion = Notice the mismatches and who gets left out by our designs, whether by accident or habit.

### → Learn from diversity

Our differences are not obstacles to overcome; they are sources of insight, creativity, and innovation. The heart of inclusive design is not just empathy, but true learning: putting people with different abilities, backgrounds, and perspectives at the center of the design process from the very beginning.

Both Holmes (2018) and Microsoft (2015) emphasize that people who live with exclusion become experts in adaptation. Their experiences reveal where designs fall short or even fails, and often, how they might be improved. Rather than imagining what “someone different” might need, inclusive designers seek out those voices: listening, observing, and co-creating with individuals who navigate the world in ways distinct from the dominant norm.
This principle challenges the myth that ‘designers know best’. Instead, it is the users, across the full spectrum of ability and experience, who know what adaptation looks like, and who can show us what’s possible when we widen the circle of participation.



Learn from diversity: Involve, listen to, and learn from people whose needs and perspectives differ from our own.

### → Solve for one, extend to many

Designers sometimes worry that focusing on inclusion means catering to the “lowest common denominator”, that making something accessible for a small group will make it less useful, or appealing, for everyone else. In reality, the opposite is often true. When we design a solution for someone with a specific, permanent disability, for example a one-handed door handle, we often create something that benefits people with temporary injuries, or even someone carrying groceries, or a child. As Microsoft (2015) notes with their “Persona Spectrum,” constraints that arise from permanent disability often overlap with temporary or situational limitations; a feature that works for one type of user extends, naturally, to many.

This is not about one-size-fits-all. Inclusive design is about creating flexibility, opening up multiple paths for engagement, so that everyone can participate with a sense of belonging. In Susan Goltsman’s words, “Inclusive design is not designing one thing for all people. It’s designing a diversity of ways for everyone to participate in an experience, with a sense of belonging.” (Holmes, 2018, p. 53).

Solve for one, extend to many: When we create solutions for specific needs, we often create innovations that benefit a much wider group.

### → The Persona Spectrum

To translate these principles into practice, Microsoft (2015) introduced the Persona Spectrum, a tool that reframes how we understand and design for inclusion.

Traditionally, personas in design have focused on fixed categories like: “disabled,” “elderly,” “left-handed,” etc. The Persona Spectrum, by contrast, focuses on ability as a continuum, showing how permanent, temporary, and situational limitations intersect, as Fig. 4 shows.

For example, consider the ability to use one arm:

- Permanent: A person born with one arm
- Temporary: Someone with a broken arm
- Situational: A parent carrying a child

While the circumstances differ, the design challenge is similar. A door that is difficult to operate with one hand excludes all three, regardless of how they arrived at that moment of need.

Therefore the Persona Spectrum acts as both a lens and a prompt, a way for designers to ask, “Who else might benefit from this solution?” It encourages us not just to solve for edge cases, but to see the “edges” as a source of widespread innovation.

In practice, incorporating the Persona Spectrum should help teams move beyond gestures of inclusion. It shifts the conversation from compliance and minimum standards, toward creative, user-driven design, where difference is a resource, not a problem.

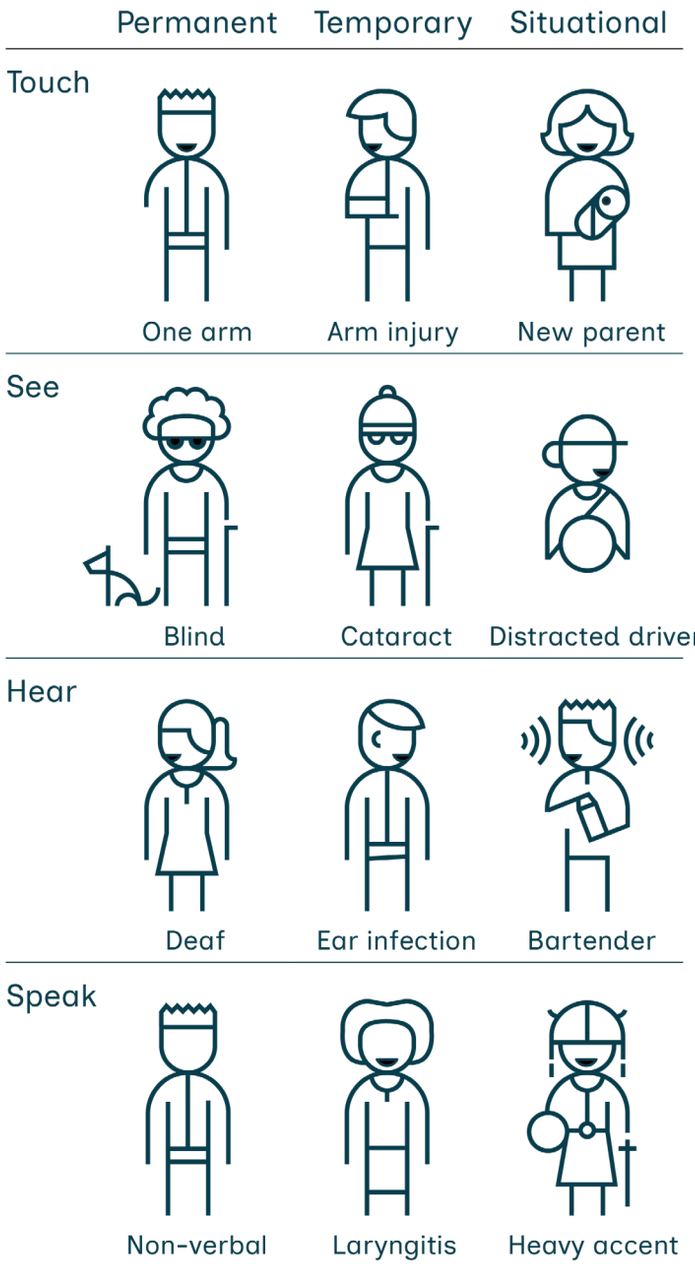



*Fig. 4: The Persona Spectrum by Microsoft (2015)*

## 2.5 Interim Conclusion

The review of accessibility, exclusion, and the closely related concepts of Universal Design, Design for All, and Inclusive Design has shown that designing for the broadest possible range of users remains a complex and evolving task. Standardization has historically played a crucial role in improving affordability and access to products and environments, but it has also led to design practices that center the needs of a supposed “average” user, often defined by gender, ability, and other norms. As a result, significant groups have routinely been excluded, either intentionally or by omission.

The emergence of Universal Design and Design for All, marked an important shift by placing greater emphasis on creating environments and products that are usable by as many people as possible, from the outset and without the need for special adaptations. However, critical perspectives have underlined the limitations of universal solutions, noting that the diversity of human needs cannot always be captured by even the most well-intentioned standards.

Inclusive Design responds to these challenges by focusing on the process and methodology of design rather than only the final product. As Holmes (2018) and Microsoft (2015) emphasize, inclusive design is grounded in recognizing exclusion, learning from the full spectrum of human diversity, and pursuing design solutions that solve for one user and extend to many. This approach is exemplified by the Persona Spectrum, which challenges static demographic categories and instead considers ability as a continuum, including permanent, temporary, and situational limitations (Microsoft, 2015).

It can thus be stated that a meaningful distinction exists between the finality of universal solutions and the ongoing, participatory nature of inclusive design. While the former aspires to create barrier-free conditions for all, the latter acknowledges the necessity of engaging with users throughout the design process, in order to uncover mismatches and generate innovative, context-sensitive solutions. Both approaches have contributed to expanding social participation and reducing exclusion, yet it remains clear from the literature that design must continually evolve to address persistent and emerging gaps.

In summary, this chapter has established the theoretical foundation for my work by clarifying the historical context, key definitions, and methodological differences between major frameworks in accessibility-related design.

By comparing Universal Design, Design for All, Inclusive Design, and emerging critical perspectives, I identified recurring tensions between compliance, usability, and belonging.

These insights give me the conceptual tools to recognise exclusion, analyse mismatches, and design for inclusion in ways that go beyond technical standards.

Now that I have established the theoretical foundation, I will turn to understanding accessibility in the specific context of TU Delft.

In the next section, I examine which organisations and initiatives are active, and explore the related issues of social safety, that shares structural or cultural similarities with accessibility. This will help me identify my starting points and underlying criteria for analysing the TU Delft context.

## → Key Take-aways from Chapter 2

- Accessibility is both a technical and an emotional matter. It involves removing mismatches between people and environments, and ensuring that participation is possible for everyone.

- Exclusion can be physical, digital, institutional, or symbolic. Recognising this spectrum is essential for understanding how barriers operate in practice.

- The three main design frameworks, Universal Design, Design for All, and Inclusive Design, share the aim of broad usability but differ in focus. Inclusive Design, with its emphasis on process and “solve for one, extend to many,” provides guiding principles for this project.

- Critical Access Studies reveal the limits of universal approaches and highlight the need to address intersectionality, cultural context, and the lived experience of exclusion.

- The Inclusive Design Toolkit, and especially the Persona Spectrum, offers practical methods for considering temporary, situational, and permanent barriers.

- Understanding the distinction between compliance and belonging is crucial for moving from a “minimum standards” mindset toward proactive, hospitality-driven accessibility.

- Meaningful change in accessibility requires aligning understanding and agency — bridging bottom-up, lived-experience-driven insight with top-down, resource-backed authority.

# 03 Understanding Accessibility & Inclusion at TU Delft

This chapter aims to build a contextual understanding of accessibility and inclusion at TU Delft. I outline the main organisations, initiatives, and policies that shape accessibility on campus, and explore the related issue of social safety, which shares structural or cultural similarities. I examine how these different approaches operate, where they succeed, and where gaps remain. Finally, I summarise the key contextual insights that will inform my analysis of lived experiences, institutional processes, and barriers in the following chapters.

## → 3.1 Overview of Initiatives & Organizations

In 2006 the United Nations adopted the Convention on the Rights of Persons with Disabilities, which's purpose is to "promote, protect and ensure the full and equal enjoyment of all human rights and fundamental freedoms by all persons with disabilities, and to promote respect for their inherent dignity" (United Nations, 2006). The convention came into effect in 2008, with the Netherlands ratifying the convention in 2016 (United Nations, 2006; ECIO, n.d.).

The TU Delft signed the convention in 2018 and started working on a new policy plan on studying with a disability shortly after (Delft University of Technology, n.d. b).

This commitment to disability rights led to several different initiatives at TU Delft. These initiatives range from student-driven advocacy groups to formal institutional policies. Understanding these various approaches provides essential context for how accessibility efforts operate within the university.

### → StudAble

In the context of the policy plan on studying with a disability, a student focus group was set up by Education and Student Affairs, which later on build the basis for StudAble, formally known as Student Onbeperkt (Delft University of Technology, n.d. b).

StudAble developed as a student-driven platform focusing on representing and connecting students with disabilities and support needs at TU Delft. In the beginning, the group primarily served as a sounding board for university policy, relaying student feedback and experiences to inform institutional decisions around accessibility. However StudAble's role evolved and broadened. Over the years, StudAble moved from being an informal advisory group to a student platform, providing both a sense of belonging and a channel through which student perspectives are represented in ongoing university policy processes.
StudAble's members also took on the role of student assistants for the central university services, such as Horizon, enabling them to actively participate in activities like open days, workshops, and focus groups. This involvement ensured the student experience was not only heard but was actively shaping the events and services being offered.

StudAble has been instrumental in organizing events such as the yearly Accessibility Week and has contributed to practical initiatives, including campus accessibility assessment and awareness campaigns. Currently, StudAble is transitioning into an independent, officially recognized student association. This new structure will allow it to act autonomously, with its own board and access to university funding, while continuing its collaboration with Horizon to promote accessibility and inclusion across campus. While StudAble represents a grassroots, student-driven approach to accessibility advocacy, the university also developed more formalized support structures to address student needs systematically.

### → Horizon

Horizon was established by the Central Student Counsellors at TU Delft in 2021 as part of a growing awareness of the need for accessible and easily navigable support structures for students with disabilities. Rather than acting as a provider of all accommodations, Horizon serves primarily as a central information expert point of contact for students with disabilities and support needs. Managed by the team of central student counsellors within the department of Student Development, Horizon offers guidance on available facilities, processes requests for centrally administered accommodations such as extra exam time, and organizes events aimed at raising awareness and

fostering inclusion.

Horizon operates at the intersection of centralized coordination and decentralized service provision. While it manages certain university-wide accommodations and information, more individualized, “tailor-made” solutions continue to be offered at the faculty level by academic counsellors. Horizon thus adopts both a mediating and an advisory role, guiding students towards the appropriate support structures and sharing best practices across faculties to promote consistency and efficiency. In addition to these core functions, Horizon coordinates support groups and a buddy program, while also advising staff members on educational accessibility when needed. Its collaboration with StudAble and other university departments, including the Diversity & Inclusion Office, ensures that the lived experience of students remains central to ongoing policy and awareness work.

Beyond student-specific support services like Horizon, TU Delft also established broader institutional structures to address diversity and inclusion across all university operations.

### → Diversity & Inclusion Office

TU Delft created its Diversity & Inclusion (D&I) Office in 2017. The Executive Board made this decision on February 16th to improve campus culture as part of the Strategic Framework 2018-2024 (Benschop, 2019). This showed TU Delft‘s move toward a more comprehensive approach to institutional inclusion and diversity. The D&I Office embraces an intersectional approach to diversity and inclusion, recognizing that identities such as gender, race, neurodiversity, chronic illness, and (dis)ability intersect to shape experiences of inclusion and exclusion on campus. It is emphasized that fostering a sense of belonging is the true end goal of accessibility and inclusion efforts.



The D&I Office was designed to address several organizational challenges (Benschop, 2019). These include responding to millennials entering the workforce, addressing low representation of women and marginalized groups in leadership positions, and managing a multi-generational workforce (Benschop, 2019). Almost all Dutch universities have established D&I offices on campus, so this initiative aligned with broader trends in Dutch academia (Benschop, 2019).

The mission statement of the office is: It „strives to understand and connect with the TU Delft‘s community to grasp the experiences and needs of the university‘s individuals and groups“ (Benschop, 2019, p.9). These insights are used to suggest and offer solutions to decision-making entities (Benschop, 2019).

The vision recognizes that a diverse TU Delft community provides the foundation for achieving knowledge. It creates conditions for meaningful exploration and exchange of ideas. Research shows that organizations embracing diversity and inclusion values perform better. They attract top talent, develop stronger relationships with stakeholders, and improve efficiency in research, education, and innovation (Benschop, 2019).

The D&I Office focuses on seven key thematic areas. These themes include gender equality, gendered research and innovation, study success and representation, institutional support and wellbeing for students and staff, professionalizing recruitment practices, religion and spirituality, and disability support services (Benschop, 2019).

Each thematic area includes specific activities, deliverables, and deadlines. These are outlined in the office‘s work plan for 2019-2024 (Benschop, 2019). For example, the gender equality theme involves creating Gender Equality Plans per faculty. It also includes

evaluating staff policy initiatives aimed at reducing career breaks due to maternity and paternity leave. The disability support services theme specifically addresses creating support services for staff and students. This includes implementing the Participation Act and promoting access and equity for students with disabilities. The D&I Office is small relative to its broad mandate, having only recently expanded staff to focus on students and education. A multi-year plan is in development to set strategic outcomes for students, staff, education, research, and the inclusive campus. The office's primary function is systemic, policy-level change rather than resolving individual complaints. Individual accessibility concerns are referred to other bodies (e.g., ombudsperson, reporting point). The office uses insights from these cases to inform broader policy and advocacy, but does not intervene directly in specific incidents.

The office operates alongside other initiatives on campus. Its emphasis on strategic planning, measurable outcomes, and institutional integration shows how diversity and inclusion efforts get structured through official university channels. This contrasts with more grassroots community-led approaches while working to support comprehensive accessibility across the institution. There is ongoing ambiguity and debate about the D&I Office's precise role, whether it should act primarily as an advocate, connector, or policy advisor. The office acknowledges the need for a clearer mandate and sufficient resources to effectively coordinate and drive systemic accessibility initiatives.

TU Delft's approach to inclusion also extends to employment practices through national legislation. The Participation Act represents how external policy requirements shape institutional inclusion efforts.



## → 3.2 Participation Act at TU Delft

The Participation Act came into force in 2015 to help people with occupational disabilities find employment. The act is designed to help more people into employment, including people with disabilities who can work but cannot participate in the labor market without support (TU Delft Intranet, n.d. a). The Dutch government created a national Job Agreement that requires 125,000 additional jobs for people with occupational disabilities by 2026. This includes 100,000 jobs in the business sector and 25,000 jobs in government institutions (TU Delft Intranet, n.d. b).
The collective Dutch Universities reached agreements on their contributions to this national target. In June 2019, they drew up the 2019-2024 Work Agenda, which states that the legally binding quota is the starting point for these contributions (TU Delft Intranet, n.d. b). This creates a policy-driven, top-down approach to inclusion that operates through specific targets and formal processes.

Based on the legally binding quota, TU Delft aims to employ 286 people with occupational disabilities by 2024. Currently the TU Delft employs more than 100 people (Wijnands, 2025). Creating jobs for this target group is a joint responsibility, and all departments and faculties have their own targets. TU Delft has developed a comprehensive scheme where faculties and departments launch campaigns to recruit participation colleagues (TU Delft Intranet, n.d. a).

These colleagues are employed in existing positions where possible, but more often they receive made-to-measure jobs. The positions are adapted to match the capacities of each candidate. Besides giving employees under the participation scheme a chance at TU Delft, their deployment also helps reduce workload for existing employees by working as extra hands. An additional advantage is that participation employees are paid from a central budget (TU Delft Intranet, n.d. a).

The university provides support structures for both teams and new employees. Every new employee under the scheme receives an external job coach and a buddy from their own team. This demonstrates how employment inclusion requires both structural changes and support systems (TU Delft Intranet, n.d. a).
The Participation Act represents a formal, policy-driven approach to inclusion. This contrasts with grassroots initiatives on campus. Employment inclusion focuses on workplace participation, but it connects to broader campus accessibility efforts. The act shows how national legislation becomes institutional practice. It demonstrates the „business-side“ of accessibility through quota systems, targets, and budget allocation.

While the Participation Act focuses on employment inclusion, broader organizational culture issues also affect how accessibility and inclusion function at TU Delft.

The next section will go into the social safety challenges at TU Delft and how  they have revealed systemic problems that impact all inclusion efforts, including accessibility initiatives.



## → 3.3 Social Safety Crisis at the TU Delft

Although social safety is not an accessibility initiative in itself, it plays a critical role in shaping the environment in which accessibility work happens. The recent social safety crisis at TU Delft revealed systemic issues, such as power imbalances, unclear reporting processes, and cultural resistance, that also affect how accessibility concerns are raised and addressed. This section aims to provide essential context for understanding the institutional conditions, risks, and opportunities that influence current accessibility initiatives.

### → Background

The TU Delft faced a major social safety crisis that led to formal investigation by the Education Inspectorate in 2023. The investigation examined 148 reports covering intimidation, racism, sexism, bullying, and other forms of social unsafety (Erasmus Magazine, 2024). The Inspectorate found that TU Delft “neglects” and “mismanages” employee care, creating increased risk of social insecurity (Erasmus Magazine, 2024).

In an self-conducted interview with a Social Safety Advisor, Social safety was defined as the ability to express yourself, even when uncomfortable to do so, without fearing organizational or social repercussions. This includes protection from social consequences like exclusion or bullying, as well as organizational consequences such as missed promotions, unjust treatment by supervisors, or negative impacts on projects and career progression.

### → Hierarchical Problems Affecting Vulnerable Groups

The investigation revealed that hierarchical problems and power imbalances create vulnerabilities for certain groups (De Bruijn & Van der Veldt, 2024). Research shows that “nearly all people with a higher position, for example, professors or people in management”

were identified as perpetrators, while victims are usually lower in the hierarchy (De Bruijn & Van der Veldt, 2024). PhD candidates, women, and international staff are disproportionately affected due to their vulnerable positions (Delft University of Technology, 2024).

These same groups often overlap with those who require accessibility accommodations, creating compounded vulnerabilities. The same power imbalances that enable social safety violations also influence how accessibility requests are received, prioritised, and acted upon. Understanding who is most affected is therefore critical to addressing both social safety and accessibility.

### → Organizational Response Structure

The crisis led to significant institutional restructuring and resource allocation. The previously small Integrity Office was substantially expanded to manage the social safety program, which launched in summer 2023 and has now been operational for over a year. New infrastructure includes:

- Expanded Integrity Office – significant staff increases to manage the program.
- New Reporting Point – dedicated systems for handling social safety reports.
- Social Safety Sounding Board – representative body including diverse stakeholders.
- Clarifying Table – coordination mechanism to determine appropriate handling of complex cases.

While these changes were aimed at social safety, they created precedents for institutional reform that could, in theory, also be applied to accessibility. The response operates separately from but in coordination with the D&I Office, with the Integrity Office leading social safety initiatives while maintaining links to broader inclusion efforts.

### → External Pressure as Catalyst

The transformation was driven primarily by external pressure from government oversight. The Education Inspectorate's formal investigation created regulatory requirements and ongoing monitoring that fundamentally changed institutional priorities. This external accountability continues through periodic assessments, with the July 2024 evaluation finding 14 out of 19 points inadequate, particularly regarding hierarchy and power dynamics (Bakker, 2024).

The scale of required change demanded significant resource allocation, with the social safety program receiving protected funding even amid broader budget constraints affecting other university initiatives. This demonstrates that when external oversight is strong, the university is capable of rapid, large-scale institutional change, an important lesson for advancing accessibility.

### → Reporting System Failures

Despite high awareness of social safety barriers, few formal reports are submitted through official channels. Those who do report often face negative consequences, while perpetrators typically remain in their positions (De Bruijn & Van der Veldt, 2024).

The failure of reporting systems to protect those who come forward creates a culture where speaking up about any barrier, whether social safety or accessibility, carries personal risk. This discourages vulnerable individuals from raising accessibility concerns, even when policies nominally guarantee their rights.

### → Connection to Broader Inclusion Framework

Social safety and inclusion operate as separate but interconnected institutional priorities. Social safety is framed as a universal concern that benefits everyone, while inclusion efforts, such as accessibility, are often perceived as targeted initiatives serving specific populations. This framing influences organisational receptiveness: social safety tends to encounter less resistance, whereas accessibility and equity initiatives may face pushback when viewed as benefiting only certain groups.

The relationship between the two is reinforced by their shared focus on creating environments where all community members can participate fully without fear of negative consequences.

### → Connection to Accessibility Challenges

The patterns revealed in the social safety crisis mirror many of the institutional dynamics that hinder accessibility progress. Formal systems often prioritise higher-ranking individuals over complainants, certain groups remain disproportionately vulnerable, and there is a persistent gap between policy and practice.

Both areas require sustained external pressure, dedicated resources, and recognition that culture change is a long-term process requiring both systematic and policy interventions. The TU Delft experience with social safety demonstrates that meaningful institutional change is possible, but it requires mechanisms that directly address power imbalances, protect those who speak up, and ensure accountability at the highest levels. These same mechanisms are essential if accessibility initiatives are to move from formal commitments to genuine, lived inclusion.



## → 3.4 Interim Conclusion

Chapter 3 reveals a complex landscape of accessibility and inclusion efforts at TU Delft.  Multiple approaches operate simultaneously across the university. Each approach has different strengths and limitations that shape how accessibility issues are addressed.

Student-driven initiatives like StudAble provide grassroots advocacy and lived experience perspectives. They focus on community building and representing student voices in university policy processes. Institutional support services like Horizon offer systematic coordination and guidance. They serve as central information points while connecting students to appropriate resources. Policy structures like the D&I Office create formal frameworks for institutional change through strategic planning and measurable outcomes. Legislative requirements like the Participation Act drive employment inclusion through external mandates and quota systems.

These different approaches represent varying philosophies about how to achieve accessibility and inclusion. Some emphasize community, belonging, and user-centered support. Others operate through formal procedures, compliance requirements, and institutional frameworks. Both approaches exist simultaneously at TU Delft, sometimes working together and sometimes operating independently.

The social safety crisis illuminates broader institutional challenges that affect all inclusion efforts. Hierarchical power imbalances create vulnerabilities for certain groups. Reporting system failures discourage people from coming forward with concerns. Cultural resistance prevents meaningful implementation of formal policies. These same patterns likely affect how accessibility concerns are handled across the university.

Understanding this institutional context is essential for my project, as it reveals the structural and cultural conditions in which accessibility at TU Delft is shaped. My aim is not only to map existing initiatives, but to identify where gaps, overlaps, and systemic barriers limit their effectiveness. By situating accessibility within this wider landscape, including the lessons from the social safety crisis, I can analyse how institutional factors influence user experiences, and design interventions that connect policy frameworks with lived realities.

The following chapters build on this premise, moving from context-mapping to in-depth investigation of processes, barriers, and opportunities for change.



## → Key Take-aways from Chapter 3

- TU Delft's accessibility and inclusion work is shaped by a mix of student-led, institutional, policy, and legislative approaches.
- StudAble operates as a grassroots, student-driven initiative, representing the lived experiences of students with disabilities and creating a sense of community.
- Horizon functions as a central point of contact for students with disabilities, offering coordination and guidance while connecting to faculty-level support.
- The Diversity & Inclusion Office provides a strategic framework for inclusion but has limited capacity to address accessibility as a primary focus.
- The Participation Act influences employment practices through national targets and quotas, embedding inclusion in recruitment at TU Delft.
- These approaches differ in emphasis: some focus on community and belonging, others on compliance and formal procedures.
- The social safety crisis revealed systemic issues, hierarchical power imbalances, ineffective reporting systems, and cultural resistance, that create vulnerabilities relevant to all inclusion work.

# 04 Understanding Processes and Initiatives in-depth

In order to answer my central research questions and build a detailed picture of how accessibility is understood, addressed, and experienced at TU Delft, I conducted a mixed-methods study. This combined qualitative and quantitative approaches to capture both organisational perspectives and lived experiences.

To achieve this, I carried out interviews with key stakeholders, a survey, and targeted process probes. These methods were designed to reveal how accessibility issues are identified, reported, and resolved in practice, and to uncover the attitudes and processes that shape these outcomes. Most of this work was conducted in collaboration with fellow graduation student Gechang Xu, who is also part of the CeeSAA project.

The following sections present each method in turn: first, the interviews, which provided insight into both formal structures and informal networks; second, the survey, which validated and extended these findings; and third, the probes, which tested existing reporting and resolution processes in practice.

This chapter shows where current approaches succeed, where they fall short, and which areas require further attention as the project moves toward developing design directions.

## 4.1 Interviews

### Purpose and Participants

The purpose of the interviews was to get a more in-depth understanding of accessibility from the relevant stakeholders at TU Delft and accessibility experts. The interviewees were carefully chosen to gain perspectives from both the organizational stakeholders, as well as people with lived experience. This included strategic follow-up interviews with the D&I Office and the Integrity Office to better understand institutional coordination mechanisms and policy perspectives on accessibility barriers identified in earlier interviews.

Fig. 5 shows an overview of the participants and their primary role/profession, as well as which organization they are part of, furthermore the table highlights the interview form, with 11 of the 12 interviews being semi-structured and one being informal.

| Interview | Participant | Role | Organisation | Form |
|---|---|---|---|---|
| 1 | P1 | Person with lived experience, Chair of StudAble, Student | TU Delft | Semi-structured |
| 2 | P2 | Person with lived experience, Architect & Consultant | ed. bijman | Semi-structured |
| 2 | P3 | Person with lived experience, Architect & Consultant | Stichting Accessibility | Semi-structured |
| 2 | P4 | Safety Officer for CREFM | TU Delft | Semi-structured |
| 3 | P5 | Department Deputy Head | TU Delft | Semi-structured |
| 4 | P6 | Community Officer | TU Delft | Semi-structured |
| 5 | P7 | Service Desk Employee | TU Delft | Informal |
| 6 | P8 | Person with lived experience, Diversity Officer | TU Delft | Semi-structured |
| 7 | P9 | Location Manager | TU Delft | Semi-structured |
| 8 | P10 | Student Counsellor Horizon | TU Delft | Semi-structured |
| 9 | P11 | Faculty Head of ESA | TU Delft | Semi-structured |
| 10 | P12 | Person with lived experience, Researcher Former Chair of StudAble, Student | TU Delft | Semi-structured |
| 11 | P13 | D&I Policy Advisor | TU Delft | Semi-structured |
| 12 | P14 | Social Safety Advisor | TU Delft | Semi-structured |

*Fig. 5: Overview of the Interviewees*

### → Mapping Interviewees Positions

As introduced in Chapter 2.3 (see *Understanding and Agency: Bridging Bottom-Up and Top-Down*), meaningful accessibility work requires aligning two dimensions: understanding — the depth of awareness of accessibility as a complex, cultural, and relational process, and agency — the structural capacity and willingness to act on that understanding (Dorst & Watson, 2020; Hamraie, 2020; Emirbayer & Mische, 1998).

In the context of this project understanding and agency are defined as follows:

*Understanding* — in the context of TU Delft, this refers to how deeply a stakeholder grasps accessibility as more than just meeting building codes or providing assistive technology. High understanding means recognising accessibility as a cultural, relational, and ongoing process that addresses physical, digital, institutional, and symbolic barriers across the campus. Low understanding is characterised by a narrow, compliance-focused or case-by-case view.

*Agency* — here, this refers to the structural capacity and willingness to influence accessibility at TU Delft. High agency means having the mandate, resources, and influence to shape policies, allocate budgets, or implement systemic changes across faculties or services. Low agency means having little or no formal decision-making power at the TU Delft, even if the individual is motivated or knowledgeable.

In this section, these dimensions are applied to the interview data to position each participant according to their observed level of understanding and agency. The resulting mapping, as shown in Fig. 6, highlights their position. Positions on the map were determined from the interview transcripts, drawing on how each participant described accessibility, the types of barriers they identified, and the scope of action they described within their role. For instance, P7 demonstrated high understanding through references to intersectional barriers and cultural belonging, and medium agency, as they are part of the management layer, but don‘t necessarily are part of decision-making. In contrast, P8 had medium understanding, focusing on physical space compliance and the business of running the location, but also medium agency through control over certain local infrastructure decisions.

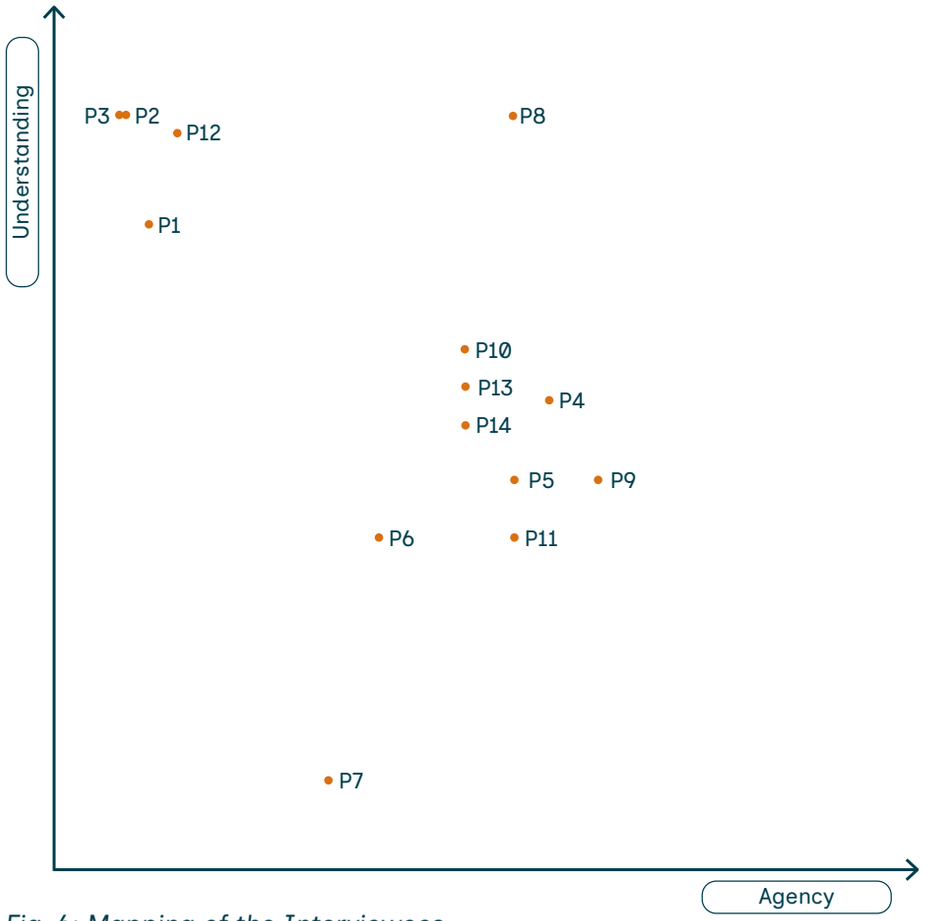



*Fig. 6: Mapping of the Interviewees*

## → Methodology

Each interview followed a semi-structured guide that was adapted for each participant, reflecting their role, expertise, and the specific focus relevant to their stakeholder position (see Appendix B). Recruitment was iterative and snowball-based: each conversation introduced new perspectives and often led to further contacts. Many participants were recommended or approached through the CeeSAA project context. Interviews took place between March and July 2025, with later conversations building on insights from earlier ones. This included follow-up interviews with the D&I Office and the Integrity Office after preliminary analysis revealed gaps in understanding of institutional coordination roles.

The interviews lasted between 30 minutes and one hour. Seven of the twelve interviews were conducted online via Microsoft Teams, and six were held in person on campus. All interviews were recorded and transcribed. For analysis, each transcript was reviewed individually, with key quotes extracted and coded. Quotes were first clustered for each interviewee, and then the most significant excerpts across all interviews were grouped by thematic similarity to identify overarching patterns. This process produced 15 key insights, which were subsequently clustered into five main themes.

## → Key Findings

The interviews revealed important insights regarding accessibility and inclusion on campus, highlighting both strengths and challenges in existing approaches. As mentioned before, the 15 key insights from the interviewees were clustered into the following 5 main themes, which are the following: Institutional Dynamics and Responsibility, Organisational Mindset, Knowledge Transfer, What to invest in, and The scope of Accessibility.

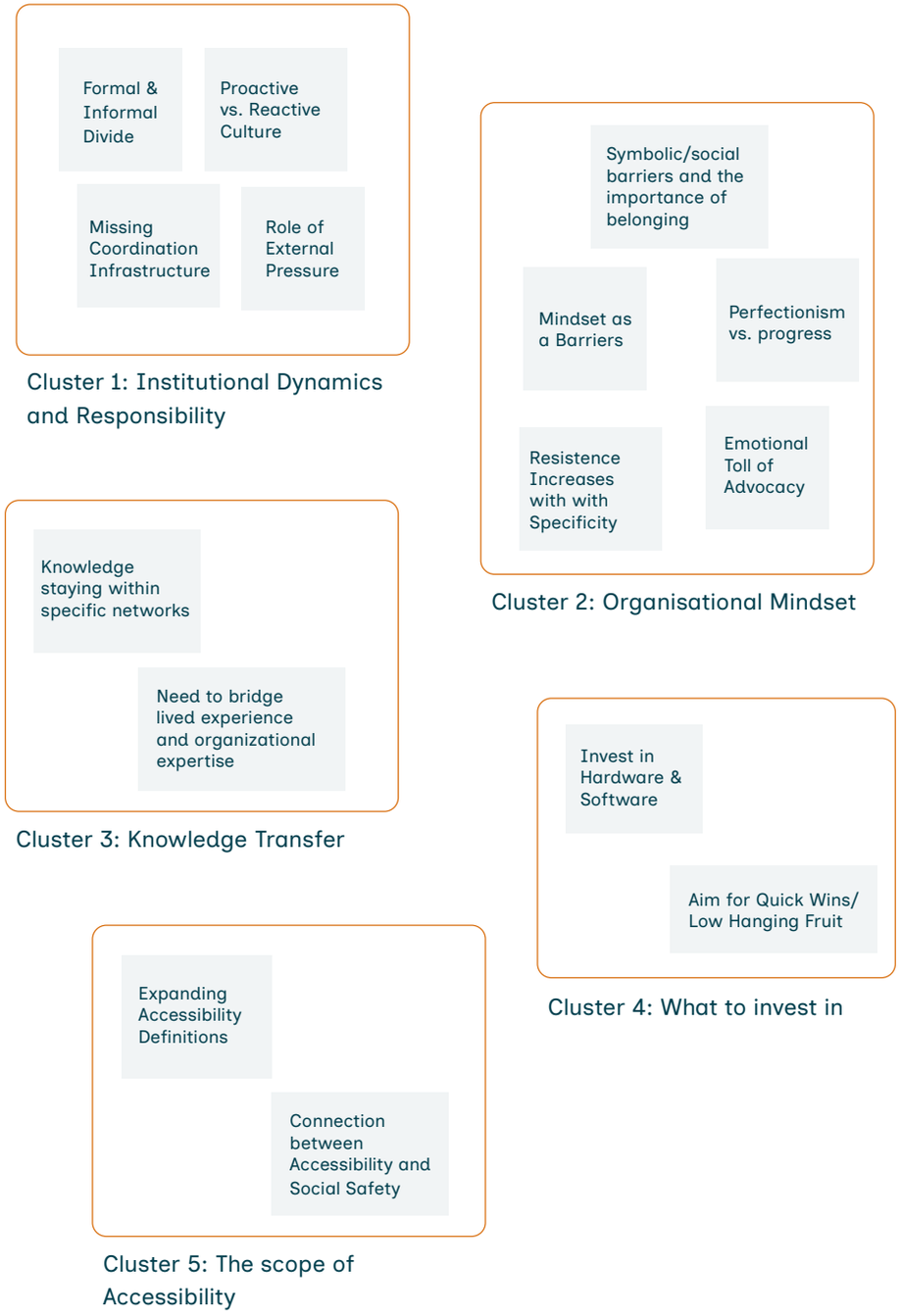



*Fig. 7: The Five Clusters of Interview Findings*

## → Cluster 1: Institutional Dynamics and Responsibility

### Formal & Informal Divide

A clear divide exists between formal, policy-driven initiatives and informal, community-led efforts. While formal reporting processes exist, practical knowledge and change initiatives often emerge through personal networks and grassroots advocacy. This gap creates missed opportunities for collaboration and shared learning, furthermore it creates confusion about responsibility, as the quotes highlight.

*„But the question of what is the role of the D&I office that will be on the table again... your conclusion that no one is taking up this role is super relevant... it might fit the D&I office and otherwise someone else needs to take that role. But it needs to be there."* - P13

*„There's a lot of confusion about... who's responsible because the, the office, for example, said like, oh, yeah, like it's kind of faults on us, but they are policy advisors. So they're not really the right people to, like, tackle it".* - P14

### Proactive vs. Reactive Culture

Multiple interviews revealed TU Delft‘s organizational culture defaults to reactive rather than proactive approaches when addressing accessibility challenges. Service desk staff handle complaints as they arise, facility managers address barriers only when reported, and even StudAble‘s building assessments often respond to identified problems rather than prevent them. This reactive approach at the TU manifests through: Complaint-driven responses: Improvements occur only after barriers are reported, Crisis-motivated change: Significant shifts require external pressure, and Maintenance over prevention: Resources fix existing problems rather than prevent future ones. While some proactive initiatives exist, these rely on individual initiative rather than systematic organizational commitment. Participant 14 also noted that the current decision-making structure means „*the Executive board themselves rarely makes decisions proactively*“ without external pressure. This systemic reactive approach explains why accessibility barriers persist until they become unavoidable problems, rather than being addressed proactively through inclusive design.

*„Generally people are reactive... You have the day to day... Something happens. There‘s an issue. OK? We need to address it... But if there are systemic issues, that‘s different. So then it really only happens when there‘s, like, a big scandal“* - P14

## Missing Coordination Infrastructure

The interviews revealed a consistent gap in institutional coordination for accessibility. While several stakeholders recognised the need for a central role, no office currently has the mandate, resources, or expertise to take it on. This gap was identified across multiple perspectives, from policy offices to service providers.

The D&I Office was most frequently mentioned as the logical home for such coordination. However, capacity limitations and competing responsibilities prevent them from fulfilling this role. This lack of a designated coordinator results in fragmented approaches: departments work in isolation. Horizon manages individual cases without systematic links to other services, the Service Desk focuses on reactive problem-solving without proactive mechanisms, Facility Management relies on bureaucratic systems without accessibility expertise, and StudAble develops grassroots initiatives without institutional support.

Perspectives on the Service Desk's role in coordination varied. Some staff saw themselves as central contact points for accessibility issues, while others considered it outside their remit.

*„There's a lot of confusion about... who's responsible because the office, for example, said like, oh, yeah, like it's kind of faults on us, but they are policy advisors."*- P14

*„Because who is responsible for solving the problem? Everybody is responsible. And that's also the problem."* - P2

*„I do think it should be the responsibility of the D&I office, but the D&I office then needs to be equipped for that. So it needs enough expertise and time."* - P13

*„We are the center. You can always come to us and we try to solve the problem."*- P7

*„[The] conclusion that no one is taking up this role is super relevant... it might fit the D&I office and otherwise someone else needs to take that role. But it needs to be there. ... I don't think we have been taking that role. And I personally understand why. But yeah, it would be the best situation."* - P13

Role of External Pressure

*The interview on social safety highlighted the role of external pressure as a catalyst for organisational transformation. In this case, the Inspectors of Education report acted as a turning point, significantly expanding the scope and capacity of the Integrity Office. This example suggests that accessibility initiatives at TU Delft could similarly benefit from external drivers to secure institutional priority, resources, and long-term structural change. The participant also reflected on how lessons from the social safety context might be applied to accessibility and inclusion.*

*„The integrity office, before the report by the Inspectors of Education, was very small. We're talking like just a few people... So it was the external pressure that really motivated [the board] to, OK. We have to... create like a big project in the university to handle this“* - P14

*„Real change takes, you know, a decade. It can take a generation. You need the systems to underpin that... But... then I'm thinking about, OK, how do we translate this [social safety] to accessibility? How do we translate this to inclusion?“* - P14

## → Cluster 2: Organisational Mindset

### Perfectionism vs. progress

Perfectionism within the institution creates a barrier to progress. The desire for complete compliance often leads to inaction, as small, achievable improvements are delayed or dismissed. This mindset stalls progress and leaves persistent barriers unaddressed.

This was also observed in the context of the social safety reporting point, there it was seen that the easier solution or the minimum requirement is what often is aimed for at the TU Delft.

*„When they talk about any way to be more accessible, it has to be completely 100% accessible or nothing. When you would like to organize everything in a perfect way, you put a lot of barriers.“- P8*

*„There was an argument very early on that... there is a minimum requirement so that‘s what we need to meet. Why are you thinking about all these bigger things? And we had to fight quite hard... It took a half a year, many delays before finally we got everyone to agree on this more ambitious version“ - P14*

### Mindset as a Barrier

*Mindset significantly impacts accessibility experiences at TU Delft. Interviewees with lived experience noted that while physical barriers persist, attitudes and reactions of colleagues and passersby can be more challenging.*

*Negative or unsupportive attitudes increase barriers and make individuals feel unwelcome. Addressing these attitudinal barriers and fostering inclusive mindsets is essential for creating environments where all university community members can thrive.*

*„If I look at my disappointments about accessibility, for me, it‘s a part of life that a lot of buildings are not accessible or not accessible enough. But how colleagues or passersby react, that‘s sometimes more hard.” - P8*

*„I found out what my rights were. And now ... I‘m a little harsher for exam commissions and everything. And they they don‘t like me whenever I ask something.“- P12*

## Resistence Increases with with Specificity

*The interview on social safety revealed an important organisational distinction in how different aspects of inclusion are received. Broad, universal issues such as social safety are generally perceived as relevant to everyone, making them easier to address and less likely to meet resistance.*

*In contrast, topics like equity, diversity, and accessibility are often framed as serving a specific population, which can trigger more targeted organisational resistance. This dynamic helps explain why accessibility initiatives may encounter greater pushback than broader inclusion efforts.*

> *„Social safety is a much safer thing, it‘s the generic thing. It‘s for everyone, so it‘s much easier to approach that way. Whereas inclusivity... becomes a niche issue... few people resist social safety. But once you bring in EDI... if you start talking about things like equity... we are suddenly facing a different kind of organisational resistance.”* - P14

## Emotional Toll of Advocacy

*The emotional and practical toll of advocacy work was a recurring theme. For those with lived experience, repeatedly raising issues and pushing for change can be exhausting, highlighting the need for greater institutional support and recognition.*

> *„If I should mention every barrier every day to every person, then I have a whole other job”* - P3

> *„I do have to fight for every single thing, even for a good chair in a room”* - P12

> *„I don‘t like to have a very big bureaucratic journey. Because that‘s for me a big energy leak.”*- P8

Symbolic/social barriers and the importance of belonging

*Beyond physical and informational barriers, interviewees emphasised the importance of addressing symbolic and social barriers. Feeling welcome and included is as crucial as physical access, and efforts to foster a sense of belonging should be prioritised alongside technical improvements. Situations that single out or separate individuals from others, even if technically accessible, like the Library Entrance, can undermine a sense of inclusion and contribute to social exclusion.*

*„Having to use a side entrance is kind of a very strange... it just creates a completely different vibe... it creates a sense of the individual being excluded from the main group or separated“* - P14

*„When they are together with friends and they want to have a cup of coffee. They have to go alone there and while the friends move up and they miss the opportunity to socialize. I think this is very problematic.“*- P13

→ **Cluster 3: Knowledge Transfer**

Knowledge staying within specific networks

Knowledge about processes and practices remains confined to particular groups rather than being shared university-wide. Insiders assume everyone shares their knowledge, while outsiders remain unaware of available resources or support.

*„I don‘t think we get a lot of complaints, but I don‘t think that‘s a good thing. Yeah. Because we see the we see the. I mean, we know this.“* - P13

*„TU Delft is very decentralized, which can sometimes be a good thing. Because academic counsellors are closer to the student. But sometimes it is confusing that there is an Horizon and people think, oh there I can find the help. And that‘s... yeah, they still sometimes have to go to the academic counselor or there‘s... yeah. There‘s not that much that we can offer. So it would be nice... maybe to see if there are more accommodations, facilities we can maybe do on a central level.“* - P10

## Need to bridge lived experience and organizational expertise

There is a clear need to better connect the lived experiences of those directly affected by accessibility barriers with the organizational expertise of facility managers and designers. Bridging this gap can ensure that solutions are both practical and meaningful. The insights suggest that while lived experience provides essential, context-rich understanding of accessibility barriers, organisational expertise is crucial for navigating systems, resources, and policy constraints. At present, the two often operate in parallel rather than in partnership, placing a disproportionate burden on those with lived experience to advocate for changes without the institutional authority or resources to enact them.

Bridging these domains would not only distribute the workload more fairly, but also preserve the agency and voice of those affected while embedding their insights into long-term structural improvements. This aligns with the need, identified earlier, to connect high understanding with high agency in order to drive meaningful change.

*„I think that we could really use some of that [experience and knowledge] in the standard process.“* - P13

*“I think it‘s important that when we… choose what to do and what not to do that we hear the different stakeholders. […] It‘s difficult to say what is needed if you don’t have the physical or non-physical impairment yourself.“* - P9

*„It‘s not that we as counsellors know everything about the topic, but that we kind of know where in the entire organization is the expertise on certain topics… and that we can then refer. [We always have] a student assistant who has, [lived] experience, which is of course very useful… I can tell from my perspective, but [their] perspective is very useful.“* - P10

*„I do notice that there‘s a difference when I‘m talking professionally versus when I‘m talking from my experiences. So you have to bring them together… and have them talk together about the same thing. And then you can find a middle ground that works for everybody.“* - P12

## → Cluster 4: What to invest in

### Invest in Hardware & Software

Stakeholders emphasized that accessibility requires both physical elements (hardware) and support systems (software) including awareness, community, and communication. Effective accessibility demands investment in both domains to create physically accessible and inclusive environments. Failures in either domain can lead to exclusion, even when other aspects are in place.

*„Sometimes you can‘t do the solution in the hardware, so you do it in the software.“*
- P3

*„Because if you invest in the software, it helps everyone. So that‘s also more of my, I try to, beside the physical things, because that‘s also important to do, is also to see how could we invest in relationships, in the community, in values, in behavior.“* - P8

### Aim for Quick Wins/Low Hanging Fruit

There was consensus that prioritizing quick wins and low-hanging fruit, so small, impactful changes that can be implemented rapidly, can build momentum and demonstrate the value of accessibility initiatives. These successes can help shift attitudes and encourage broader participation.

*“Just looking for the lower hanging fruit. But also, don‘t look at the bears on your way. People think all the barriers... yeah... they think, yeah. Look for small steps and invest in the community and invest in hospitality.“* - P8

*„If it‘s easy and if it doesn‘t cost that much money, they solve it. If it‘s bigger or more money involved, it‘s not always possible, or it is taking some time.“* - P11

## → Cluster 5: The scope of Accessibility

### Expanding Accessibility Definitions

The D&I Office advocates for an intersectional approach to accessibility that goes beyond traditional disability frameworks to include body size, chronic conditions, life circumstances, and temporal needs. This broadened perspective is echoed by multiple university stakeholders, who frame accessibility as a cultural and relational matter as well as a physical and technical one. Several participants also stressed that intersecting identities shape how accessibility is experienced, and that organisational responses can differ depending on how specific the inclusion focus becomes.

*„And for me, accessibility is more than only physical access. For me, it also has a cultural perspective. And I call it more as a form of hospitality“* - P8

*„I think accessibility is also how your body looks like. Are you tall? Are you short? [...] if you are a woman, woman of colour and maybe with neurodiversity, you have a different experience“* - P13

### Connection between Accessibility and Social Safety

The interview with Participant 14 on social safety revealed a strong potential connection between accessibility and social safety, highlighting a strategic opportunity to link accessibility improvements to the university's existing priorities. This relationship suggests that efforts to create more inclusive environments also strengthen the critical components necessary for social safety. Positioning accessibility as part of the social safety agenda could therefore provide a strategic pathway for advancing accessibility initiatives within established institutional frameworks.

*„Social safety and inclusion can reinforce each other... when you create a more inclusive environment... you should arrive at an environment that also holds the critical components necessary for social safety.“* - P14

## → 4.2 Survey

### → Purpose and approach

The survey aimed to validate and extend interview findings. The focus of the survey was on experienced barriers on the TU Delft Campus, reporting behavior in case barriers were experienced, and perceptions in general. 20 participants started the survey, with 17 participants completing the whole survey, they were primarily students (82.35%) with some staff members (17,65%). 58.82% of the participants were female, 35.29% were male, 5.88% preferred not to say. In regards to age, 52.94% were between 18-24, 35.29% were between 25-34, and 11.76% were between 35-44. The survey was distributed via existing networks, like student WhatsApp groups, as well as with posters put over the buildings. The survey was conducted from April 21st till July 23rd.

### → Survey Design and Questions

The full survey design and questions can be found in Appendix C. The survey started with an intro clarifying that barriers refer to mismatches between a person's needs and the campus environment, whether physical, digital, social, or institutional, that make it harder for someone to participate fully or feel included. The questions focused on whether participants had encountered barriers on campus before, if there was an emotional impact, if there were actions taken to address the found barriers and if addressed, what feedback was received afterwards. Furthermore the participants were asked about the perceived relevance of accessibility on campus, who benefits from accessibility facilities, and who should be responsible for campus accessibility. Lastly personal accessibility needs and experiences were explored and demographics recorded.

### → Limitations of Survey

The survey has the limitation of the low participant number, the focus on the IDE building and the surrounding buildings, as the survey was primarily promoted and shared in existing networks at the faculty and the fact that the survey was primarily answered by students.

### → Key Findings

The survey revealed the following key findings:

**01 High Barrier Occurrence**

12 of the 17 respondents encountered or observed barriers to accessibility on the TU Delft Campus.

**02 Common Barriers**

Common barriers mentioned were too heavy doors, inaccessible toilets, revolving doors, poor wayfinding systems, malfunctioning or broken elevators or too steep stairs. However, it was not only physical barriers that were frequently mentioned, but also digital barriers, like course registration systems or the campus map.

**03 Reporting Gap**

The survey showed that few participants actually reported issues through the formal channels, despite high barrier occurrences and the awareness. Students wanted to report the barriers, but often "*didn't know how or where*". In case the barriers were reported, there was limited feedback.

### 04 Accessibility Relevance & Benefits

When asked about how relevant accessibility is to the participant, from a scale of 1 to 10, with 1 being completely irrelevant, and 10 being strongly relevant, the average was 5.82. Most of the participants answered that that see accessibility as something that of course benefits students and staff with disabilities, but also everyone else on campus, whether students, staff, or visitors.

### 05 Clear Responsibility Attribution

The participants mainly identified the TU Delft Real Estate Department, the TU Delft Leadership & Administration, as well as the architects and building constructors as responsible for ensuring accessibility of the TU Delft Campus.

### 06 Emotional Impact

When asked about the emotional impact of experiencing barriers the participants showed strongly negative emotions like frustration, feeling unsupported, and feeling excluded. One participant stated: „*I'm a motivated student and really felt unsupported. I was already in a wheelchair which made me feel as if everybody was looking at me, and made me feel like a patient instead of a person*".

## → Validation of Interview Themes

The survey successfully validated the key themes found in the interviews. The barrier occurrence rate confirmed the accessibility challenges identified in the conducted interviews. The reporting gap (few formal reports despite high awareness) validated interview findings about unclear processes and disconnected formal mechanisms. Most importantly, the emotional impact data validated the interview insights about the psychological toll of barriers, extending beyond just physical inconvenience.
The survey findings validated key interview themes and revealed significant gaps between barrier awareness and formal reporting mechanisms. While the majority of respondents encountered barriers and rated accessibility relevance at 5.82/10, very few reported the barrier or knew of formal reporting channels. This disconnect highlighted the need to investigate existing processes in practice.

To understand how current reporting and resolution mechanisms actually function, from submission to outcome, two process probes were conducted to test the effectiveness and clarity of institutional procedures.

## 4.3 Probes

To better understand how formal processes at TU Delft handle accessibility issues, from initial reporting to final resolution, two probes were designed and implemented in the context of the IDE Faculty Building. These probes examined existing channels for submitting accessibility-related requests and tracked how these requests were prioritised, processed, and communicated back to the requester.

Probe 1 tested the new ‚User Requests for Modifications to the Building' process at IDE. Probe 2 explored the Service Desk as an entry point for reporting barriers, and extended this test to service desks across campus to see how they handle accessibility concerns.

Together, these probes provide insight into the practical workings, strengths, and limitations of TU Delft's formal accessibility processes, highlighting how responsibilities are interpreted, how prioritisation criteria are applied, and where potential breakdowns occur between institutional policy and lived user experience.

### Probe 1 – ‚User Requests for Modifications to Building'

This probe tested a new initiative introduced in February 2025 at the IDE Faculty for submitting "User Requests Modifications to the Building". According to the location manager and the deputy head, the process replaced a previous system where requests went directly to Campus Real Estate & Facility Management (CREFM), the building owner. The new approach was coordinated by a working group with representatives from the faculty, each IDE department, and ESA, and was designed to streamline communication and reduce the back-and-forth between the faculty and CREFM.

Employees were invited to submit requests ranging from minor changes to major adjustments. As stated in the email, each submission would be assessed on impact, feasibility, and investment given the limited budget. Requests were due by 14 April 2025 and would be discussed in a prioritisation meeting on 17 April. The form used was based on a TU Delft-wide standard format, similar to the one used in the TopDesk system. On 13 April 2025, I submitted three requests (see Appendix D for full-length requests) as part of the probe:

<u>Accessible Toilet Door and Threshold</u>

Triggered by feedback from a visiting wheelchair user (informally relayed to me by a faculty member), this request addressed difficulties in exiting the ground floor accessible toilet due to the door threshold and handle design. In my submission, I raised the following concerns:

- Safety risks from potential accidents during exit attempts.
- Non-compliance with accessibility standards.
- Broader impacts on people with walkers, strollers, or temporary mobility impairments, as described in the Persona Spectrum (Microsoft, 2015; Holmes, 2018).

<u>Main Entrance Revolving Door</u>

This door has a sliding mechanism for mobility-aid users, but is creating barriers to independent access, and sometimes malfunctions. Concerns raised included:

- Safety risks for wheelchair users.
- Reduced independence and barriers to inclusion.
- Exclusionary access for people with disabilities, who must use a back entrance.

Toilet Trash Can Placement and Design

Informed by student research shared with me, this request addressed issues for users, specifically menstruating users:

- Trash cans positioned behind toilets require an awkward twisting motion, inaccessible for some users.
- Hygiene concerns from small, potentially contaminated lid openings.
- Negative impacts on user comfort and accessibility.

The requests were submitted to the Deputy Head of one of the Department (Participant 5; interviewed before and after the 17th April meeting, and again after the second meeting on 15th May). The location manager (Participant 9) and ESA representative (Participant 11) were also interviewed in follow-up conversations.

According to the Deputy Head, a total of 26 requests were submitted, ranging from small items like napkins to large-scale studio renovations. Some were immediately disregarded if they were already being addressed or conflicted with TU Delft-wide policy.

We were informed that in the 17 April meeting, the group agreed to prioritise requests using the MoSCoW Method. As explained by the location manager (Participant 9) in our follow-up interview, their working definitions were:

- Must have – Required for building/space functionality (large group affected, no alternatives).
- Should have – Highly desirable but not essential (smaller group affected, alternatives exist).



- Could have – Desired only if time/budget allows.
- Will not have – Not necessary, may be considered later.

The location manager also confirmed that Health, Safety & Environment (HSE) criteria were applied, with the following definitions:

- HSE High – Direct, immediate safety risk requiring urgent action (preferably reported via an area supervisor or HSE staff).
- HSE Medium – No immediate risk but desirable to address (e.g., ARBO compliance).
- HSE Low – Potential future risk, tolerated for a long time, no urgent action required.

Due to time constraints, the Deputy Head reported that members ranked requests individually based on these criteria, with scores to be compared at the next meeting.

In the 15 May meeting (as described by the Deputy Head in our third interview), rankings were largely consistent, with some adjustments after discussion. The results were: 1 Must Have – Accessible Toilet request (probe), due to regulation non-compliance and high safety risk. 4 Should Haves – Main Entrance request (probe), plus studio renovations, studio acoustics, and signage. The entrance issue was downgraded because a back accessible entrance exists, thus there is no non-compliance, and the cost would be too high, but they mentioned that they will replace the door with an accessible one when the current one expires. All other requests were categorised as Could Have or Will Not Have.

According to the Deputy Head, the next stage would begin

with the group gathering more detailed information on the feasibility of each high-priority request, for example, assessing whether connecting two studios would require removing a full wall or simply adding a door. Responsibility for funding and implementation would then be determined using the CREFM–Faculty demarcation document, which, as the location manager explained, specifies whether an item falls under the building owner's area of responsibility (such as kitchen equipment) or the faculty's responsibility (such as wall damage caused by chairs). Once responsibilities were clear, budget checks would be carried out with the relevant party to determine if the request could be realised within the 2026 budget. Finally, if approval was secured, the responsible contractor would be contacted to carry out the work.

The deputy head shared with us that following the prioritisation process, the group agreed that all individuals who had submitted requests would receive an update after the next meeting in June, informing them of the decisions made regarding their proposals.

On 9 July, I received an email from the Deputy Head with feedback on the three accessibility-related requests I had submitted as part of the probe. The update stated that the accessible toilets would be modified by Campus Real Estate to improve ease of use, with the project currently in the preparation phase. Regarding the main entrance, CRE indicated that there was not yet sufficient concrete information to determine an appropriate solution. A special inspection of the building's accessibility was planned, during which the door would also be assessed, until then, this request would remain on hold. For the toilet trash cans, the email explained that these were provided and maintained by an external contractor. Because the current contract runs until October 2026, TU Delft could not mandate any changes to their placement in the interim. However, the request had been forwarded to the person responsible for negotiating the next contract so that it could be considered during future procurement discussions.

Figure 8 below shows an simplefied overview of the process from Request to Decision for Probe 1.

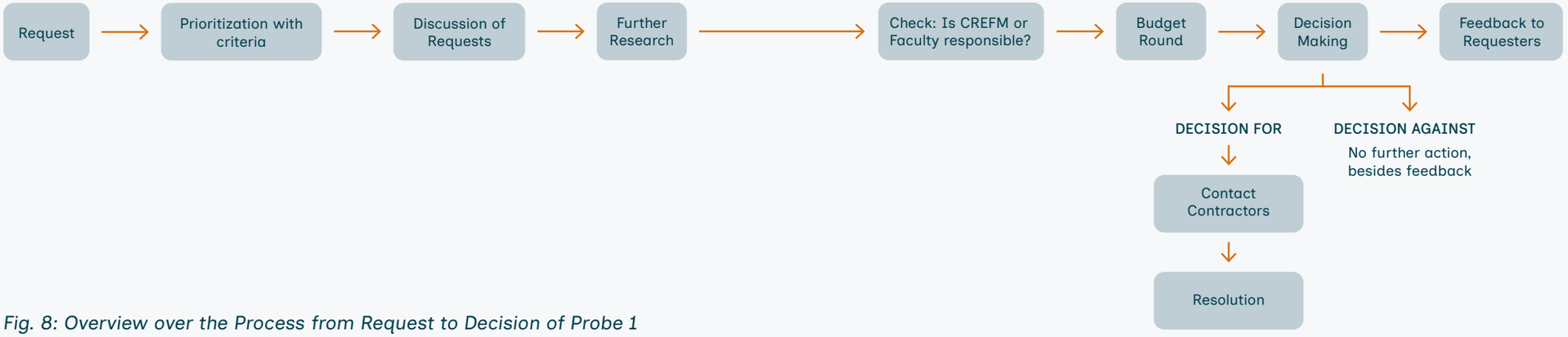



*Fig. 8: Overview over the Process from Request to Decision of Probe 1*

### → Probe 2: Request at the IDE Service Desk

The second probe was based on the insights from the interview with the employee from the Service Desk. They stated “We are the center. You can always come to us and we try to solve the problem“ (P7), explaining that if there is an issue reported in person or per email, they will register it with in Top Desk to get it solved. The probe had the form of the following email with Fig. 9-11 being the attached pictures:

> Dear Service Desk Team,
>
> I wanted to bring to your attention an accessibility issue with the ground floor accessible toilet in the IDE building (32 B-0-260). A recent visitor who uses a wheelchair pointed out that the threshold at the door makes it difficult to exit, as it requires navigating over the threshold while also pushing the door open.
>
> Additionally, feedback from a survey on accessibility for my master end project highlighted that the door itself is problematic: it opens with a standard handle and swings forward, making it very awkward and almost impossible for someone in a wheelchair to open independently.
>
> I attached pictures, please let me know if you need any more details. Thank you very much for looking into this.
>
> Kind regards,
> Viktoria Proffen

*Fig. 9: The Entrance of the Toilet from the outside*

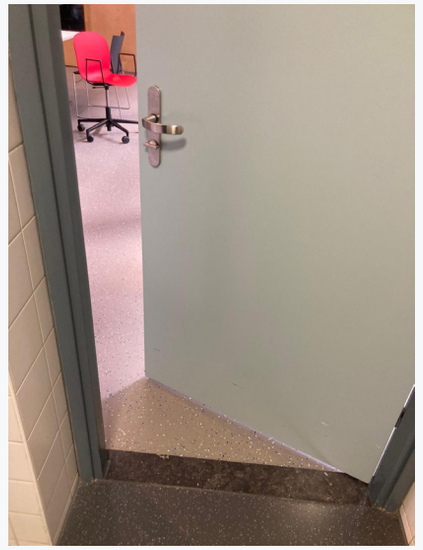


*Fig. 10: The Entrance of the Toilet from the inside*

*Fig. 11: Close-up of the Threshold*

Within ten minutes of submitting the request, it had been entered into the TopDesk system and I received an email confirmation (see Appendix E). The TopDesk record showed that the issue had been forwarded to the location manager of the IDE Faculty. The status was listed as “Processing by Operator”, with a due date of 26 May 2025, reflecting the standard seven-day deadline from Topdesk.

In a follow-up interview, the location manager explained the process in more detail. When the service desk receives a report, staff must manually assign it to the appropriate person in TopDesk. While some requests are automatically routed based on the category selected, many require manual assessment by service desk staff to determine the correct recipient.

The location manager described three main categories of requests, each with its own handling process. The first category is simple repairs and maintenance (for example a broken kitchen), which are sent directly to the building owner, CREFM, who then engages a contractor to resolve the issue. The second category is simple facility changes (for example a request for a different chair), which are handled through ESA and the faculty’s facility management. The third category is complex changes that require modifications to the building. These are forwarded to the location manager, who first checks whether the faculty agrees with the request, as such changes require a more detailed investigation.

For these complex requests, the location manager explained in the interview that they follow a three-step process:

- Initial assessment – Contacting the requester to understand the reasoning behind the request and gather additional details.
- Classification – Using the MoSCoW Method to categorise the request as a Must Have, Should Have, Could Have or Won‘t Have.
- Decision-making – Consulting the faculty secretary to make the final decision.

The location manager also noted in the interview that procedures may vary between faculties.

As of 1th of August, there was an update stating that „As soon as the thresholds are in, we will install them“, which is the first update recieved through TopDesk. It needs to be noted, that there was no notification per Mail, so I needed to manually open the TopDesk request to check for updates, as seen in Appendix E.

Figure 12 on the following pages shows an simplefied overview of the process from Request to Decision for Probe 2.

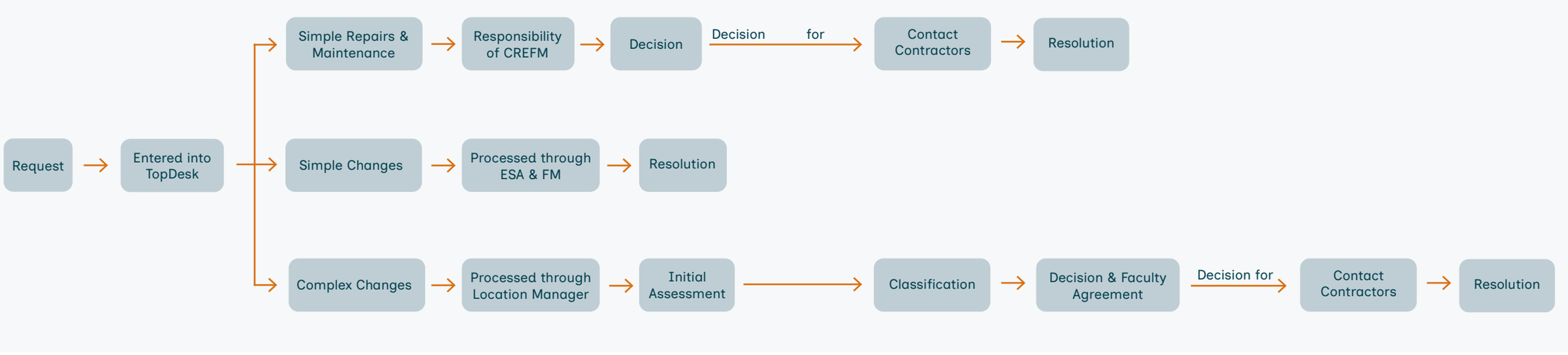



*Fig. 12: Overview over the Process from Request to Decision of Probe 2*

As the service desk at IDE was very clear that this is their responsibility, the testing was extended to 12 service desk across campus. The service desks were contacted by mail, and asked the following questions:

- Have you received any complaints or feedback about accessibility or inclusivity issues (physical, digital, or otherwise)?
- What kinds of issues have come up, if any?
- How do people usually report these kinds of concerns to your desk?

Out of the 12 Service Desks contacted, 10 replied. Figure 13 shows the Service Desk and their reply. The replies indicate that service desks in other faculties tend to regard accessibility issues as outside their reponsibility. These responses suggest differences in how accessibility is understood or defined across the university. In retrospect, the email request might have been clearer if it had included concrete examples of potential accessibility concerns.

| Service Desk | Answer |
|---|---|
| ME | The TU Delft has its own D&I (Diversity & Inclusion) Office.<br>Its best to contact this office as they will be able to assist you with your questions: Contacts & Network |
| AE | We did not receive any complaints or issues from students or employees regarding accessibility of inclusitivity. If that is the case then employees and students can reach out to the diversity team of the AE faculty. |
| CiTG | Within Civil Engineering, I've never received any complaints.<br>The accessibility seems good to everyone. In case there are any complaints, they'll come to us and we will make a call in our system to report the issue to the department that can help them further. |
| BK | For questions about the service point, it is best to contact [Name of Employee]. Her email address is: [Email address of Employee] |
| Fellowship | To answer your questions:<br>If you have received any complaints or feedback about accessibility or inclusivity issues (physical, digital, or otherwise)?<br>We haven't really received complaints or feedback about accessibility. Usually more questions like whether there is a lift in the building or if we can open the side door next to the main entrance so that the person does not have to go through the rotating door at the entrance.<br>What kinds of issues have come up, if any?<br>See above.<br>How do people usually report these kinds of concerns to your desk?<br>Questions can either be by phone e.g. asking whether there is a lift in the building or another student comes up to the desk to ask us to open the door for their friend. |
| Echo, Pulse, LIB, TNW, Drebbelweg | Thank you for your message. These questions fall outside our scope, and therefore, we can't answer your questions.<br>Perhaps you could contact the communications department. Good luck with your research! |
| TPM, EWI | No reply |

*Fig. 13: Overview of the Service Desk replies*

## → Key Findings of both probes

The probes and the accompanying interviews gave valuable insight into the current formal processes at the IDE faculty. Based on these key insights, the following key findings were formulated:

### Multiple Channels, but Lack of Coordination

TU Delft has several formal channels for reporting accessibility issues, but these channels work separately instead of together. Users can report problems through the service desks or the Faculty Group mentioned before, furthermore there are channels like the student council, student advisors, the facility management, ESA or even student associations. However, which channel works best depends on which building or faculty you‘re dealing with. The research showed that the IDE service desk is proactive and sees itself as „the center“ where users „can always come“ for help (Interview with P7). Most other service desks across campus either send accessibility complaints elsewhere or say these issues are „outside their scope“ (see Fig. 13). IDE and ME have a dedicated location manager who bridges faculty needs and building management, but most other faculties don‘t have this role. This creates a major problem because there‘s no standardized approach across the university.

### Responsibility for accessibility is unclear

Who is responsible for fixing accessibility problems at TU Delft is often unclear. A demarcation document divides duties between the building owner (CREFM) and each faculty, but this document requires expert knowledge to understand, with most people not being aware of its existence. Whether the building owner or faculty handles a repair depends on what specifically needs fixing. For example, broken kitchen equipment is the owner‘s responsibility, while wall damage from chairs is the faculty‘s responsibility. This often leads to back-and-forth discussions before anyone takes action. The process for prioritizing and funding requests involves multiple approval layers, from faculty committees to CREFM.

The location manager acts as a link between Campus Real Estate & Facility Management (CREFM) and the faculty, helping both sides understand each other’s needs and priorities. At IDE and ME this role is formalised, but similar positions exist in a few other faculties, such as Architecture and Electronics, though with different titles and responsibilities. The position began as a pilot about five years ago, but has been difficult to embed because it sits between two parts of the organisation. Without a similar role in every faculty, many staff and students lack a clear contact person and are unsure who is ultimately responsible for accessibility issues.

### Focus on Process Rather Than Outcome

The current system emphasizes following established procedures, sometimes at the expense of actually solving problems quickly. Requests are prioritized using formal methods like the MoSCoW and the HSE criteria. Each stage requires extensive documentation and committee review. While this brings structure, it can slow down solutions. For example, a request entered into the TopDesk system was acknowledged „within minutes“ but remained unresolved. In line with the interviews revealing a tension between regulatory compliance and actual user needs, contractors and facility managers often focus on meeting minimum legal standards, which may not create genuinely accessible solutions. As one interviewee put it, „the boxes are ticked, but maybe it‘s not enough“. This shows how procedural requirements can overshadow the goal of creating meaningful accessibility improvements and of feeling ackknowleged.

Business-side of Accessibility

Financial considerations dominate how accessibility requests are handled at TU Delft. Request prioritization is explicitly linked to available budgets. Larger or more costly changes, such as modifying main entrances, are often delayed or given lower priority due to financial constraints. This happens even when their importance for inclusivity is recognized. The MoSCoW method itself balances essential accessibility needs against what the institution can afford. Requests must pass through multiple budget rounds before approval. The demarcation document determines not only who pays for what but also whether a request moves forward at all. This „business-side“ approach means accessibility is frequently treated as a competing priority rather than a fundamental requirement. Improvements depend on cost-benefit calculations and available funds rather than being seen as essential infrastructure investments for inclusion.



## → 4.4 Key Findings per Research Question

### → RQ1: How do different stakeholders at TU Delft perceive and experience accessibility and inclusion on campus?

The research revealed two dominant perspectives on accessibility among stakeholders at TU Delft. The first perspective views accessibility as hospitality and belonging. As Participant 8 explained, *„Accessibility is more than only physical access. For me, it also has a cultural perspective. And I call it more as a form of hospitality“*. This perspective emphasizes the human and social aspects of inclusion. The second perspective treats accessibility as process and compliance. Stakeholders with this view focus on formal procedures and safety requirements, stating things like *„We prioritize requests based on health/safety priority list“* (P5) and *„Changes cost a lot. You want to make the right decision. It is better to be safe than sorry“* (P9).

A third theme emerged from the interviews that enriches the understanding of stakeholder experience: the emotional and symbolic impact of exclusion. Forcing someone to use side entrances or miss social activities might lead to a disconnect from the broader university community. One participant shared, *„It just creates a completely different vibe... it creates a sense of the individual being excluded from the main group or separated“* (P14). The emotional burden of navigating inaccessible systems was frequently mentioned, especially by individuals with lived experience. As one participant put it, *„If I should mention every barrier every day to every person, then I have a whole other job“ (P3).*

The stakeholder mapping exercise showed that different groups position themselves across a broad spectrum of understanding and agency in relation to accessibility. Some stakeholders have a deep conceptual understanding, informed by lived experience or critical perspectives, but limited structural power to implement change. Others hold positions with significant formal authority and

resources but approach accessibility mainly through compliance and procedural frameworks. Mapping these dimensions revealed a diverse landscape of priorities, experiences, and strategies across roles within the university, as well as gaps where understanding and agency do not align.

The findings also point to an intersectional understanding of accessibility, where gender, race, neurodiversity, and life circumstances intersect to create different experiences. One participant noted, *„If you are a woman, woman of colour and maybe with neurodiversity, you have a different experience“* (P13).

A significant finding was the perceptual gaps between stakeholder groups. There‘s a clear divide between formal, policy-driven initiatives and informal, community-led efforts. Knowledge often stays within specific networks, where insiders assume everyone shares their understanding while outsiders remain unaware of available resources. This creates a need to bridge lived experience with organizational expertise.

The gap between existing formal frameworks and stakeholder awareness became even more evident when Participant noted, *„There‘s some kind of accessibility framework within TU Delft, apparently... But it‘s very outdated.“* (P5).

→ **RQ2: What are instances of barriers and challenges, and how are these currently addressed?**

The research identified multiple categories of barriers that users encounter on campus. Physical barriers include heavy doors, inaccessible toilets, revolving doors, steep stairs, broken elevators, and door thresholds. Digital barriers affect course registration systems and campus map functionality. Informational barriers involve poor wayfinding systems and unclear processes for reporting issues. Attitudinal barriers come from colleague and passerby reactions and the minimal compliance mindset. Knowledge and awareness barriers prevent people from knowing how or where to report problems they encounter and how to do things in an inclusive way.

One example given was the wheelchair lift at the Library, which has been broken for such a long time that the service desk host “didn’t even know how long it has been out of order”. The sign that was out of order was placed on top of the stairs, instead of the starting point of the lift, with another sign added later on at the beginning of the stairs (See Figure 14). Currently wheelchair users have to go around the library to the employee entrance, ring the doorbell and wait for an employee to open the door for them and give them access to the elevator.


*Fig. 14: Signage about the Wheelchair Lift & the Accessible Entrance of the Library*

Both survey and interview data showed that many participants had either encountered or observed accessibility issues on campus. This supports the principle that „a building is as

accessible as its weakest link“ (P2). However, despite this widespread awareness of barriers, few formal reports are actually submitted through official channels.

Current response approaches are largely reactive rather than proactive. Issues get addressed after problems occur instead of being prevented. While some grassrooted approaches exist through individual advocacy and informal networks, these rely heavily on personal initiative and are often not formally supported or valued.

The emotional toll of repeatedly encountering such barriers was described by several participants. Participant 8 reflected, “*I don’t like to have a very big bureaucratic journey. Because that’s for me a big energy leak*”. Advocacy fatigue was a common theme, with some participants admitting they no longer bother to report barriers. As Participant 3 put it, “*When I mention it, it won’t be picked up. So I don’t even bother to mention the barrier*”. Survey participants also expressed strong negative emotions, most often frustration, when recounting their experiences with campus accessibility.

Some of these challenges are compounded by broader cultural attitudes. The university’s culture of perfectionism was described as a structural barrier in itself. As Participant 8 explained, “*When they talk about any way to be more accessible, it has to be completely 100% accessible or nothing*”. This mindset discourages improvements and creates barriers for change.

Participants also noted that external pressure, such as media attention or official investigations, is often necessary to prompt institutional action. This mirrors past changes in other areas, such as the university’s approach to social safety. The gap between high awareness of barriers and low levels of formal reporting continues



to hinder systematic improvement, leaving many accessibility issues unresolved and their emotional impacts unaddressed.

→ **RQ3: How do formal and informal processes function to identify, report, and resolve accessibility issues?**

The formal processes for handling accessibility concerns at TU Delft involve several structured systems. Service desk requests are managed through the TopDesk platform, requiring manual routing by staff to the appropriate person or department. Faculties also hold facility meetings where requests are prioritised using the MoSCoW method and Health, Safety & Environment criteria. Compliance checks apply relevant regulatory standards, and requests must pass through multiple approval layers, including faculty committees, CREFM reviews, and budget rounds, before any action can be taken.

Alongside these formal structures, informal processes also exist. Building assessments take place through personal observation and community feedback. Informal networks enable relationship-based problem-solving and grassroots advocacy, while community events organised by groups like StudAble provide alternative channels for raising accessibility needs.

A recurring insight from stakeholders is the institutional confusion over responsibility. For example, within the D&I Office, some staff believe the office should play a central coordinating role, but representatives acknowledge they currently lack the time, expertise, and infrastructure to do so. As Participant 13 explained: *„I do think it should be the responsibility of the D&I Office... but then it needs enough expertise and time“.*

The effectiveness of these processes varies. Formal systems, such as TopDesk, offer fast acknowledgment, requests can be entered

within minutes, but resolution is often slow, taking months in some cases, and providing little feedback to the requester. Coordination gaps persist because the different channels operate in parallel rather than as part of a unified system. Variations between faculties create further inconsistencies. At IDE, the service desk recognises accessibility as part of its area of responsibility, but in most other faculties accessibility is considered „outside their scope“. The reliance on manual routing means that service desk staff must assess and direct each request individually.

Another challenge is the limited transparency of institutional knowledge. Information about processes tends to remain within established networks, leaving newcomers and outsiders unaware of how to navigate systems or request support. Stakeholder accounts illustrate these issues: Participant 5 explained that *„requests go through faculty, campus real estate, and budget reviews. Only some make the cut based on feasibility*“. Participant 9 compared the process to a business model: „*You compare it to the business. What is the essential business that we run here in the building?*“. The bureaucratic burden was also seen as discouraging participation, with participant 8 stating, *„I don't like to have a very big bureaucratic journey. Because that's for me a big energy leak“.*

→ **RQ4: What tensions exist between different approaches to accessibility?**

Several key tensions emerged between different approaches to handling accessibility at TU Delft. One of the most significant is the tension between perfectionism and pragmatism. Institutional perfectionism demands complete solutions, as Participant 8 described: *„When they talk about any way to be more accessible, it has to be completely 100% accessible or nothing“.* This conflicts with the need for pragmatic improvements through quick wins and low-hanging fruit that can build momentum. The all-or-nothing mentality creates barriers to progress, as Participant 8 put it, *„When you would like to organize everything in a perfect way, you put a lot of barriers“.*

Another tension is between proactive and reactive approaches. Most current institutional responses are reactive, addressing issues only after they are reported. This leads to ongoing debate between waiting for complaints versus anticipating needs. Resource allocation often focuses on fixing existing problems rather than preventing them, which perpetuates a cycle of reactive action.

A further tension lies between individual effort and institutional support. Many accessibility improvements are driven by personal advocacy, yet interviewees described this as emotionally exhausting and unsustainable without institutional backing.

Responsibility tensions also affect how accountability is distributed. Diffused accountability creates confusion, as Participant 2 noted: *„Because who is responsible for solving the problem? Everybody is responsible. And that's also the problem“.* The demarcation document introduces further complexity by dividing responsibility between the building owner and the faculty. This creates an additional layer of tension between personal advocacy efforts and systematic, institution-wide change.

The tension between compliance and user needs has a strong impact on accessibility outcomes. A regulatory focus often prioritises meeting minimum legal requirements over creating genuinely accessible solutions. As Participant 9 observed, *„The boxes are ticked, but maybe it's not enough“.* This results in a gap between following procedures and actually solving the problems that users encounter daily.

Finally, there is a tension between hardware and software approaches to accessibility. Hardware approaches involve physical changes, such as ramps, elevators, and accessible toilets. Software approaches focus on support systems, community building, awareness, and communication. Balancing these priorities is essential; as Participant 3 explained, *„Sometimes you can't do the solution in the hardware, so you do it in the software".* Participants also described symbolic forms of exclusion, where individuals may be physically present on campus but socially excluded due to inaccessible routines or perceptions of difference. Addressing these invisible barriers is as important as implementing technical solutions.



## → 4.5 Interim Conclusion

### → Research Approach and Scope

This research used three different methods to understand accessibility at TU Delft. The study included 12 interviews with key stakeholders, a survey, and 2 targeted probes to text the existing processes. Stakeholders have very different approaches to accessibility. Some use informal, relationship-driven methods while others follow formal policies and procedures. The research tested how existing processes actually work and found major gaps between what policies say and what actually happens.
The research also revealed that accessibility is not only a technical or regulation issue, it is deeply connected to emotional, symbolic, and cultural experiences. These dimensions surfaced prominently in the interviews and reflect a more complex and human-centered understanding of accessibility challenges.

### → Different Views of Accessibility

The research revealed distinct ways in which stakeholders at TU Delft understand and approach accessibility, which can be positioned along the axes of understanding and agency.

One perspective frames accessibility primarily as hospitality and belonging. Stakeholders with this view focus on making people feel welcome and included, seeing accessibility as a cultural and relational practice. This position often reflects higher conceptual understanding but can vary in agency, in some cases, these stakeholders influence local environments, in others, they have limited structural power to make changes.

Another perspective treats accessibility more as a matter of process and compliance. Here, the emphasis is on following regulations and meeting safety requirements. This approach is not necessarily driven by an intent to exclude but often reflects lower understanding of accessibility as an ongoing, cultural process.

Agency levels within this group vary: some hold positions with formal authority to implement changes, while others operate mainly within procedural boundaries.

A third, emerging perspective views accessibility as a symbolic and emotional experience, linked to visibility, dignity, and belonging. This overlaps strongly with intersectional perspectives, which emphasise that experiences of accessibility are shaped by other factors such as race, gender, and neurodiversity. These views tend to indicate high understanding, but their practical impact depends on the agency of the individuals or groups advocating them.

Across all perspectives, stakeholders recognised that accessibility requires both hardware and software solutions. Physical changes such as ramps, elevators, and accessible toilets are essential, but so are community support, awareness, clear communication, and fostering an inclusive mindset. Accessibility is not a one-time fix but an ongoing process that must adapt to evolving needs, requiring both structural resources and a cultural commitment to continuous improvements.

### → Barriers, but few Reports

Both survey and interview data showed that many participants had either encountered or observed accessibility issues on campus. Despite this widespread awareness, few formal reports are submitted through official channels, indicating that accessibility barriers are significantly underreported at TU Delft.

The research identified a wide range of barriers. Physical barriers include heavy doors and inaccessible toilets. Information barriers make wayfinding difficult. Attitudinal barriers arise from colleagues' reactions and from the prevailing compliance-focused mindset. Knowledge barriers limit people's ability to report problems, either because they are unsure how or where to do so, or because they lack awareness of inclusive practices.

The gap between recognising barriers and formally reporting them is substantial. Many users do not know the correct process for submitting a report, while others have stopped trying altogether due to previous negative experiences, for example, when past reports failed to lead to any change. This underreporting prevents many issues from being addressed and keeps existing barriers in place.

### → Broken Processes and Unclear Responsibility

Multiple formal channels exist for reporting accessibility issues, but these systems do not operate in a coordinated way. Instead, they function in parallel, creating confusion for users about where to turn. Approaches also vary between faculties: at IDE, the service desk recognises accessibility as part of its remit, whereas most other service desks consider it "outside their scope."

Responsibility for resolving accessibility problems is similarly unclear. Complex demarcation documents divide duties between building owners and faculties, after which the designated party must determine whether they have the budget to act. Most faculties do not have dedicated staff to manage accessibility, resulting in inconsistent practices across the university.

The Diversity & Inclusion Office was mentioned by multiple participants, including two of its own employees, as a potential coordinating body. However, staff within the office acknowledged that they currently lack the resources, expertise, and time to take on this role effectively. This ambiguity contributes to a broader institutional gap in responsibility, leaving no single point of accountability for accessibility outcomes.

### → System Problems in Practice

The earlier tensions between perfectionism and pragmatism, compliance and user needs, and proactive versus reactive approaches are reflected in the way accessibility improvements are currently handled at TU Delft.

One example is the “100% accessible or nothing” mentality, where small but meaningful improvements are delayed or rejected because they are not considered perfect solutions. Financial considerations weigh heavily in decision-making, and accessibility is often treated as a “nice to have” rather than an essential requirement. As Participant 9 put it, *„Changes cost a lot. You want to make the right decision. It is better to be safe than sorry“*.

A case raised during the research illustrates this well. In the redesign of an accessible toilet, a person with lived experience provided input on how to make the facility more usable. While their suggestions would have made the toilet functionally more accessible, the design would have been only 80–90% compliant with current regulations. The proposal was ultimately disregarded, and the toilet was built to achieve 100% regulatory compliance.

The reactive nature of decision-making further slows progress. Current systems tend to respond to problems only after they occur, rather than anticipating and preventing them. Institutional changes are more likely to follow external pressure or crises than to emerge from proactive planning. This preference for perfect, fully compliant solutions over incremental, user-informed improvements might create a persistent mismatch between design decisions and the realities of everyday use.



### → The emotional toll of advocacy

The emotional impact on users is significant. People get tired of constantly reporting the same problems. One participant explained, „If I should mention every barrier every day to every person, then I have a whole other job.“ Knowledge stays trapped within small groups. People who know about resources assume everyone else knows too, while outsiders remain unaware.

This burden extends beyond just reporting barriers to fighting for basic accommodations in academic settings. As Participant 12 shared, *„I do have to fight for every single thing, even for a good chair in a room. That‘s it. It takes weeks to get it done“*. The institutional resistance creates a cycle where students with disabilities must become advocates to access their education, with Participant 12 noting they didn‘t finish a previous degree at another university because *„the study did not want to change a couple of small things for me so I could finish my education properly*“.

The expectation that people with disabilities should serve as accessibility experts adds another layer to this burden. Institutions often assume that lived experience equals professional expertise, as Participant 12 explained: *„There‘s a difference between being an expert and being somebody who has experience with disabilities, right?*“. This misunderstanding places unfair educational responsibilities on individuals who simply want their needs understood, not to become unpaid consultants for institutional accessibility.

These experiences suggest that TU Delft might rely too heavily on individual advocacy rather than building institutional systems that proactively support accessibility. This not only delays progress but risks perpetuating burnout and disengagement.

→ **To conclude**

The findings show several areas that need improvement. Quick wins and small changes should be prioritised to build momentum and demonstrate value. Formal and informal approaches need to work together instead of operating separately. Campus-wide awareness about accessibility is essential.

Both community-based and top-down approaches are needed. Grassroots advocacy at TU Delft brings valuable lived experience and practical insight, but without institutional support it remains uneven, exhausting, and often unsustainable. Combining these efforts with formal policy changes would distribute the burden more fairly, preserve the agency and voice of those with lived experience, and embed their insights into long-term structural improvements.

As discussed in the literature on strategic reframing and organisational transformation (Dorst & Watson, 2020) and in Critical Access Studies (Hamraie, 2020), aligning bottom-up understanding with top-down agency is key to creating meaningful change.

Accessibility should not be framed as a “nice to have” or a compliance checkbox. It must be understood as critical infrastructure integral to the university’s physical and social safety, inclusivity, and academic excellence.

The survey confirmed what interviews revealed about barrier prevalence and reporting problems. Testing existing processes showed coordination gaps and a procedural focus over actual outcomes. Different faculties across campus have inconsistent approaches and understandings of accessibility responsibilities.

TU Delft now faces a strategic opportunity: by aligning accessibility initiatives with broader institutional priorities, such as social safety and inclusive design, it can create a more resilient, proactive, and equitable environment for all.

## → Key Take-aways from Chapter 4

- Accessibility at TU Delft is shaped by formal systems and informal networks that rarely work together. Separate channels for reporting and decision-making cause delays, confusion, and inconsistent outcomes across faculties

- Responsibility is fragmented and unclear. Complex divisions between CREFM and faculties, and the absence of a central coordinating role, leave many without a clear contact point.

- Barriers exist but are underreported. Physical, digital, informational, attitudinal, and knowledge barriers persist. Reporting is rare due to low awareness, negative past experiences, and perceptions of inaction.

- Institutional culture hinders incremental progress. Perfectionism, risk aversion, and a compliance-first mindset prevent quick wins and pragmatic solutions, often requiring external pressure to drive change.

- Lived experience and organisational expertise must be better connected. Integrating lived experience into formal decision-making would distribute advocacy burdens and ensure solutions are relevant and sustainable.

- Accessibility requires both hardware and software solutions. Physical changes must be complemented by awareness, communication, and community-building to address the cultural as well as technical dimensions of inclusion.

- Linking accessibility to broader institutional priorities offers a strategic opportunity. Connections with agendas such as social safety and inclusive design could help secure long-term commitment, resources, and institutional priority for accessibility initiatives.

# 05 Defining the Systemic Challenge

In order to move from broad research findings toward a focused design direction, I first needed to clearly define the systemic challenge shaping accessibility at TU Delft. This chapter builds on the results of Chapter 4, bringing together insights from interviews, the survey, and process probes to uncover the underlying dynamics that sustain accessibility barriers.

Earlier chapters showed that, despite progress on diversity and inclusion, accessibility remains fragmented, reactive, and siloed. In this chapter, I step back to look at the bigger picture. Instead of listing problems in isolation, I map how structural, cultural, and informational factors reinforce each other and keep the current system in place.

To make these dynamics more tangible, I introduce two short case studies before presenting the problem tree. These examples serve as concrete examples of how different parts of the system respond to accessibility challenges, and they connect directly the problem tree.

This synthesis leads to a visual problem tree that lays the groundwork for co-creation and strategic design in the following chapter.

## The Systemic Challenge

### Structural Fragmentation

A main barrier to accessibility is how TU Delft is organised. Roles and responsibilities are unclear, and no one is certain who should act when an accessibility issue or request arises. Without central accountability, problems are often passed between departments instead of being resolved. Campus services like Campus Real Estate, Faculty Management, and the D&I Office often work in parallel, leading to duplicated work and missed gaps. With few, if any, embedded accessibility roles at faculty level, accessibility rarely becomes part of everyday routines.

This fragmentation blocks learning across the system. Best practices, such as the work of D&I Faculty Officers or StudAble, remain isolated and are not shared widely.

### Cultural Mindsets and Framing

Several participants, particularly those working in policy and support roles, described a compliance-oriented mindset within parts of the university. In this view, accessibility is approached as a legal requirement or a technical checklist rather than as a shared institutional value. This framing can reduce inclusion to an administrative task, limiting proactive engagement.

Participants with lived experience of disability expressed a desire for a cultural shift toward belonging, hospitality, and proactive care. They described how accessibility often becomes invisible to those who do not rely on it, and how responsibility for raising and explaining access needs is placed on individuals. This recurring burden can lead to fatigue, frustration, and disengagement.



### Reporting Channels, Feedback Gaps, and Invisible Work

While some reporting channels exist, they are poorly communicated and inconsistently used, leaving many students and staff unsure where to bring accessibility concerns. As a result, accessibility needs often remain invisible to decision-makers, reinforcing the perception that inclusion is a personal matter rather than an institutional responsibility. Some faculties, such as IDE, have introduced new structures for requesting building modifications. These developments indicate movement toward clearer channels. As part of my process probes, I submitted an accessibility-related request through the new IDE process to better understand the user experience. While the request form was functional, its structure and wording were somewhat confusing and could benefit from clearer guidance. After submitting the request, I received only one confirmation email, followed by an official response four months later. In my case, I was updated more frequently through the interviews conducted in the meantime, but other requesters would likely have been left wondering about the status of their submission in the meantime.

A significant amount of invisible work continues to take place behind the scenes, with students, faculty, and staff voluntarily advocating for or supporting accessibility, usually without much recognition or resources. While vital, this work is unsustainable without formal support and institutional integration into existing processes.

### Missed Integration Opportunities

TU Delft has made progress in areas like integrity, diversity, and social safety, but these efforts often run in parallel instead of being collaborative. This lack of integration limits the potential for shared learning and coordinated action, and means that related initiatives rarely build on each other’s momentum.

## Mapping the Systemic Challenge

To connect these findings, I made a problem tree that maps the root causes and effects of TU Delft's fragmented, reactive approach to accessibility. The problem tree method, as outlined by the European Commission (n.d.), is a tool for analysing a complex situation by identifying a core problem, its underlying causes, and its resulting effects. The focal problem is placed at the centre of the diagram, the „trunk", with causes represented as the „roots" below and effects as the „branches" above. This visual cause–effect structure helps to clarify relationships between different issues, highlight reinforcing dynamics, and establish a shared understanding of the problem.

The resulting problem tree, shown in Figure 15, illustrates how cultural, structural, informational, and governance factors interact to maintain the current state. Cultural issues such as a lack of inclusive mindset, compliance orientation, and a perfectionism-versus-progress tension combine with structural gaps like unclear responsibility to address accessibility, and informational gaps such as unclear reporting processes and outdated documentation. Governance issues, including fragmented accountability across levels and the absence of a formal accessibility policy, further reinforce the problem.

These causes lead to effects such as exclusion, inequality, emotional toll, disempowerment, reputational risk, loss of trust, stigmatisation of accessibility issues, and missed opportunities for innovation. The challenge is not a set of isolated failures but a network of reinforcing barriers. Framing the problem as a system provides a clearer starting point for strategic design and co-creation in the next chapter.

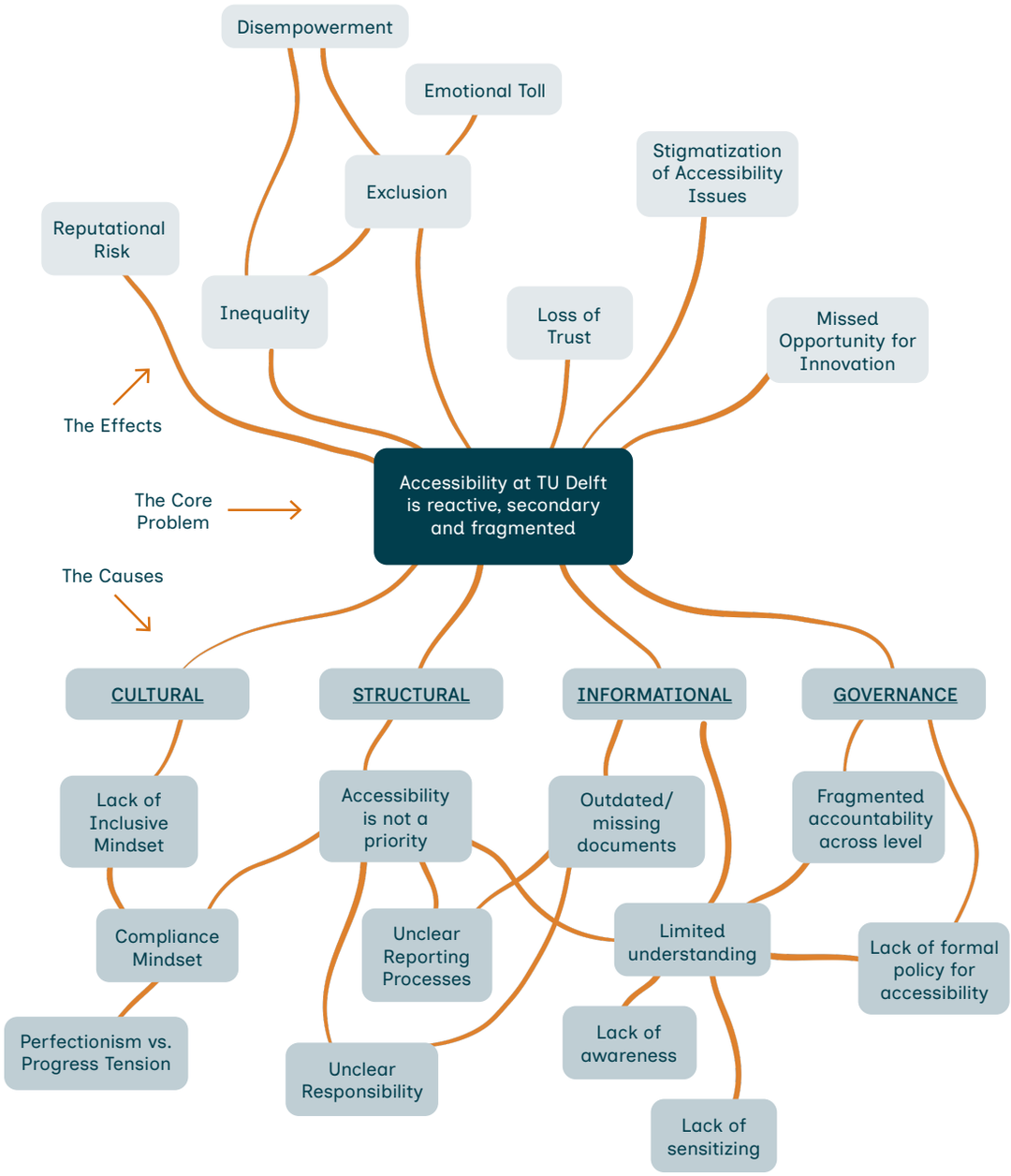



*Fig. 15: The Problem Tree*

## Case Studies

The systemic barriers identified in this chapter become clearer when viewed through specific, everyday situations on campus. The following two cases were brought to my attention as part of my research and already mentioned in Chapter 4, one concerning the TU Delft Library entrance and the other a faculty restroom, illustrate how cultural, structural, informational, and governance factors interact in practice. While both cases reveal persistent barriers, they represent different points in the system's lifecycle: the library entrance is an example of a stable situation, where a barrier has been normalised over time and is accommodated rather than removed. The faculty restroom shows a situation of change, where a barrier was actively flagged and where the resolvement of the barrier is in preparation.

These examples are not isolated incidents, they represent recurring patterns where unclear responsibilities, and secondary treatment of accessibility create barriers. By examining these cases as a whole, the physical issue, the organisational context, and the effects on users, it becomes possible to see how individual problems connect to the broader systemic challenge.

These cases will be revisited in Chapter 9, where they are placed within the stakeholder and systems framework to explore opportunities for change.



### Case 1: Library Entrance

The main entrance of the TU Delft Library is reached via a broad outdoor staircase. A wheelchair lift is installed at this location, but during the research I found out that it has been out of order for a long time, and staff could not confirm when, or if at all, it would be repaired. An alternative accessible entrance is located at the back of the building. During regular working hours, an employee working nearby usually opens this door when needed. Outside these hours, after 17:00 on weekdays and on weekends, no one is stationed there. In those cases, service desk staff from upstairs have to come down to open it, which means the person trying to enter must either call them or ask someone to let them know. A sign at the main entrance points to the alternative route to the accessible entrance.

This situation connects to multiple dimensions of the problem tree. The prolonged breakdown of the lift reflects structural issues, a barrier remains in place when maintenance and repair processes do not resolve it in a timely way. The need to depend on staff for after-hours access shows how structural arrangements can limit independence, while also touching on cultural aspects, where accessibility is treated as a special arrangement rather than the default. The location of the alternative entrance at the rear of the building reinforces this cultural framing, positioning accessibility as secondary. The response also reflects a compliance mindset: because an alternative entrance technically exists, the barrier at the main entrance is not treated as a pressing problem. Finally, while a sign is present, the extra effort required to find and use the route reflects an informational gap, the information is technically available, but not in a way that ensures smooth, independent use.

The result is that some users face longer waits, have to take less direct routes, and experience a sense of separation from the main entrance experience.

This case reflects a stable situation in which the barrier has become part of the building's ongoing operation. The alternative entrance is accepted as the "solution," and the broken lift at the main entrance is not treated as an urgent problem to resolve.

### → Case 2: Accessible Restroom

At the Industrial Design Faculty Building, the accessible restroom on the ground floor has a too high threshold, a forward-swinging door, and a non-accessible handle. These features make it difficult or impossible for some wheelchair users to open the door independently. The design also poses a safety risk, as it could lead to accidents.

The issue came to light when a wheelchair user visiting the faculty informed a faculty member about the problem. The faculty member was unsure how or where to report it, and eventually mentioned it to someone from the Real Estate department. That person responded that the service desks can always help with these kinds of things. This conversation was then relayed to me by the faculty member, after which I formally reported the barrier through the TopDesk system.

This situation connects to multiple dimensions of the problem tree. The door's physical design is a structural barrier that prevents independent use and could compromise safety. The delay in resolving the problem, even after it was officially reported, reflects further structural and governance issues, showing that it takes time to resolve the flagged issues, based on organisational constraints like planning and budget. The absence of a faculty-level role to regularly check or monitor such facilities points to a structural gap in accountability. The issue also aligns with a compliance mindset: because the restroom technically exists, there is less urgency to address the fact that it is not independently usable for everyone. The initial uncertainty about how to report the issue reveals an informational gap, where both staff and visitors lack clear guidance on where and how to raise accessibility concerns.

The result is reduced independence for wheelchair users, an ongoing safety risk, and a clear example of how resolving accessibility issues take time.

This case illustrates a situation of change, where the barrier was newly reported and entered into the formal system. Now waiting for the final resolving of the barrier through CREFM.

## Emerging Patterns

The problem tree (Figure 15) makes visible how cultural, structural, informational, and governance issues reinforce each other to keep accessibility reactive, secondary, and fragmented. When looking across the different roots and branches, three recurring patterns become especially clear: mindset, systems, and governance. These patterns cut across the case studies and the systemic mapping, and they help to clarify why individual barriers are so difficult to resolve.

### Mindset

Accessibility at TU Delft is often approached as a technical matter, a checklist to complete or a physical adjustment such as a ramp or a sign. It tends to be considered late in decision-making rather than as a priority. While most staff and students are open to improvement, many are unsure when to consider accessibility, how to identify barriers, or whether it falls within their role. The result is hesitation and inaction. A recurring theme is the influence of perfectionism: a "100% accessible or nothing" mindset that prevents smaller improvements from moving forward. This mindset is visible in the library entrance case, where the broken lift is tolerated because an accessible entrance technically exists. Shifting this culture requires seeing accessibility as a shared responsibility and addressing exclusion early, before it becomes embedded.

### Systems

Even when barriers are noticed, staff and students often do not know where or how to report them. Reporting processes differ across faculties and are inconsistently communicated. In the toilet case, even staff members were unsure where the issue should be reported. When reports are made, feedback is often delayed or absent, which discourages future reporting and keeps barriers invisible. Where issues do enter the system, they are often filtered through long decision-making chains that prioritise budgets or compliance over lived experience. For systems to support accessibility, they must be simple, consistent, and responsive, ensuring that concerns are acknowledged, tracked, and acted upon. Making systems accessible means more than building better forms or faster feedback loops. It also means designing expectations: Who raises an issue? How is it heard? What kind of resolution is possible? Feedback should not disappear into a empty space. It should be acknowledged, tracked, and acted upon where possible.

### Responsibility & Governance

No single role or office at TU Delft is clearly accountable for accessibility. Many staff assume responsibility for accessibility lies elsewhere, which creates gaps and delays. The toilet case illustrates this: the issue moved between multiple people before it was formally reported. This lack of clear responsibility also places emotional strain on those with lived experience, who are often expected to raise awareness and follow up without mandate or recognition. Embedding responsibility does not mean centralising everything, but it does require visible roles and structures that ensure accessibility is carried by the institution rather than by individuals alone.

## Interim Conclusion

This chapter has defined the systemic challenge shaping accessibility at TU Delft. Structural gaps, cultural mindsets, informational barriers, and governance shortcomings interact to maintain a fragmented, reactive, and secondary approach to accessibility. The problem tree visualises how these factors reinforce each other, leading to exclusion, inequality, disempowerment, and missed opportunities. The two case studies, the library entrance and the faculty restroom, illustrate how these patterns manifest in practice, showing both stable situations where barriers are normalised and situations of change. The emerging patters highlight opportunities for action.

The patterns highlighted in this chapter can be understood in terms of pathways. Following Bos-de Vos, Deken, and Kleinsmann (2022), pathways are emergent trajectories that unfold across multiple contexts, shaped by how actors respond to tensions, breakdowns, and opportunities. At TU Delft, accessibility pathways range from formal processes such as reporting through TopDesk, to informal routes such as personal advocacy or staff taking initiative. At present, these pathways are fragmented and poorly aligned, often breaking down or running in parallel without integration.

Framing accessibility in terms of pathways clarifies that the systemic challenge is not only the presence of barriers, but the lack of a coordinated structure to connect and sustain different trajectories. This insight provides the foundation for the next chapter, where the design challenge is defined and criteria for building a more inclusive and integrated approach are set out.

## Key Take-aways from Chapter 5

- Accessibility at TU Delft is shaped by interconnected structural, cultural, informational, and governance factors, resulting in a fragmented, reactive, and secondary approach.
- Structural barriers: unclear roles, no central accountability, and no embedded faculty roles limit integration into daily operations.
- Cultural mindsets: accessibility seen as compliance rather than a shared value, placing the burden on individuals.
- Informational gaps: unclear reporting channels, limited feedback, and poor visibility of needs.
- Governance gaps: fragmented accountability and no formal accessibility policy weaken prioritisation.
- Significant invisible work by students and staff remains unsustainable without support.
- The problem tree maps how these causes lead to exclusion, inequality, emotional toll, disempowerment, reputational risk, and missed opportunities.

# 06 The Design Challenge

In order to move from understanding the systemic barriers to shaping a meaningful design direction, it is necessary to clearly articulate the design challenge. Building on the problem tree and case studies from the previous chapter, this section translates the complex, interconnected issues of accessibility at TU Delft into a focused and actionable question for design. The aim is to capture both the scale of the systemic problem and the lived realities of those affected, ensuring that the challenge addresses root causes rather than only symptoms.

This chapter outlines the core design challenge, defines its scope, and positions it within the wider institutional context. It serves as a bridge between the analytical work of earlier chapters and the development of strategic, co-created solutions in the chapters that follow.

## → The Design Challenge

At the start of this project, my goal was to design evidence-based interventions to address accessibility challenges for students, staff, and visitors on the TU Delft campus. My inital assumption was that the focus would be on identifying and resolving physical barriers.

The research findings from Chapters 4 and 5 showed that while these barriers are important, many of the most persistent issues are systemic. Accessibility at TU Delft is shaped by structural gaps, cultural mindsets, informational barriers, and governance shortcomings. Together, these factors maintain a fragmented and reactive approach that cannot be solved through isolated fixes alone.

As a result, the scope shifted toward strategically framing and enabling accessibility at TU Delft by revealing systemic barriers, co-designing a future vision, and offering tools and entry points to support long-term cultural change. The design challenge moves from solving individual problems to designing a proactive, coordinated system that clarifies responsibilities, and embeds accessibility as a collective and institutionally supported commitment.

There is a clear opportunity to move from a reactive, fragmented accessibility approach toward a proactive and coordinated system that aligns institutional processes with the lived experience of users. While structures such as Horizon, StudAble, the D&I Office, and Real Estate Management exist, the absence of a unifying framework results in duplicated efforts, knowledge silos, and slow response times. By connecting these efforts, this project addresses the need for integration, transparency, and proactive design, contributing to a more inclusive campus environment where accessibility is enabling belonging, inclusion, and both physical and social safety.

## → Adjusted Design Brief

### → Problem Statement

TU Delft has introduced various structures, services, and policies to support diversity, inclusion, and social safety, but there is no clear structure in place for accessibility. Significant barriers remain in how accessibility issues are experienced and navigated by students, staff, and visitors. The current approach is fragmented, with unclear responsibilities, disconnected reporting mechanisms, and limited feedback. As a result, improvements depend on individual initiative rather than coordinated institutional support. This leads to emotional fatigue, advocacy burden, and exclusion from decision-making.

Across stakeholder groups, there is a clear need for well-defined and connected accessibility pathways with clear reporting systems, coordinated leadership, proactive communication, and a sense of emotional safety when engaging with accessibility systems.

### → Design Statement

This project responds to these challenges by proposing the development of an evidence-based intervention that enables TU Delft to shift from a reactive, fragmented approach to a proactive, coordinated accessibility system.

The initial design brief framed accessibility as a spatial and service design challenge. However, as explained in the Design Challenge, the research showed that the most persistent barriers are systemic. This led to a refinement of the scope toward a more strategic, systemic approach, one that connects formal and informal practices, clarifies responsibilities, and embeds accessibility as a shared institutional commitment.

The design statement was therefore adjusted from:

> “Design an evidence-based intervention to address accessibility challenges for students, staff, and visitors in the context of TU Delft‘s campus by identifying barriers, capturing real human experiences, and translating them into actionable service and environmental solutions.”

↓ to

> “Design an evidence-based intervention for TU Delft and its internal stakeholders that strategically guides the university in building an inclusive, coordinated pathway to accessibility, enabling the transition from a reactive, fragmented approach to a proactive, integrated system.”

## Updated Stakeholder Map

The stakeholder map, shown in Figure 16, was updated to reflect the refined scope and insights from the research stage. It organises stakeholders into three concentric groups based on their proximity to, and influence over, accessibility at TU Delft.

Core stakeholders are those directly affected by accessibility barriers on campus: students, staff, and visitors with disabilities. Their lived experience is central to defining priorities, shaping solutions, and evaluating impact.

Direct stakeholders are those who interact regularly with core stakeholders or hold operational responsibilities for accessibility. This includes service desk staff, faculty management, facility managers, location managers, the D&I Office, Horizon, StudAble, CREFM, ESA, CeeSAA, and the Integrity Office. Their actions and decisions directly influence accessibility outcomes.

Indirect stakeholders influence accessibility more indirectly through policy, regulation, infrastructure, or organisational governance. This group includes the TU Delft Executive Board, all staff and students, prospective staff and students, educators, policymakers, legal bodies, the Dutch Inspectorate of Education, architects, building contractors, and accessibility consultants.

The updated map recognises that effective change requires coordinated action across all three groups. Core stakeholders bring essential insights from lived experience; direct stakeholders have the capacity to implement and sustain change; and indirect stakeholders create the broader conditions, regulatory, financial, and cultural, that enable or constrain progress.

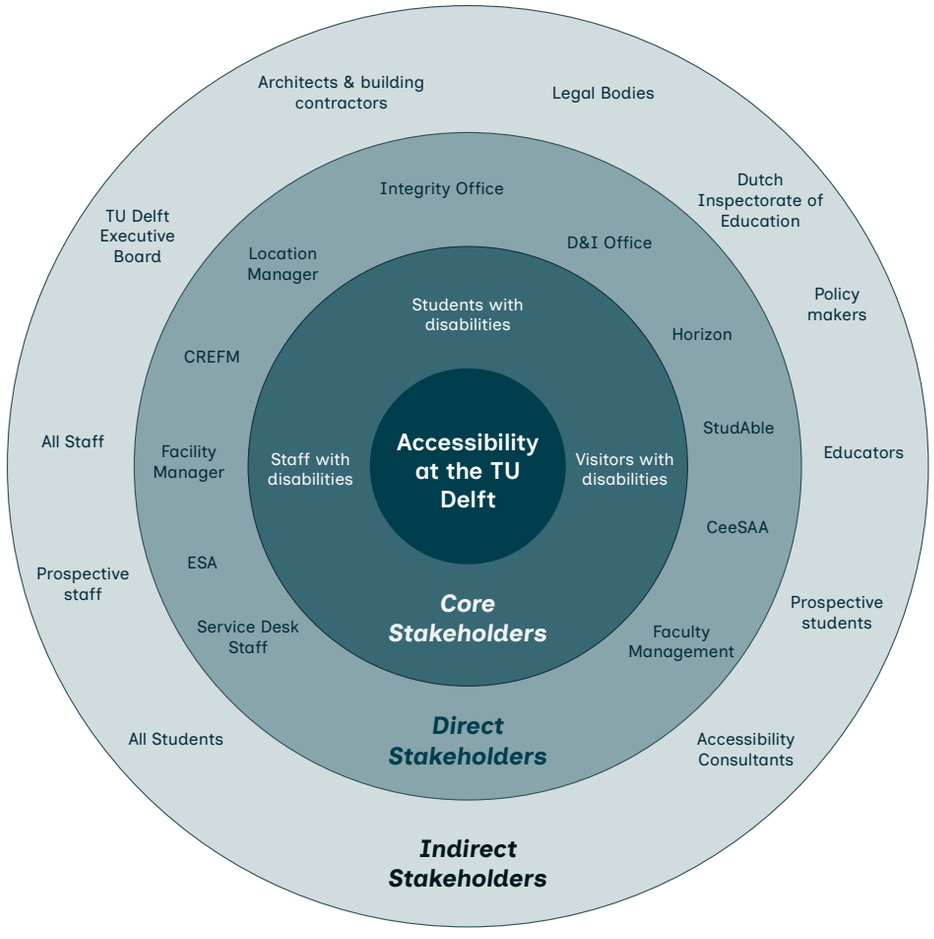



*Fig. 16: Updated Stakeholder Map*

## → Setting Design Criteria

In order to translate the research insights and refined scope into an actionable design approach, I developed a set of design criteria. These criteria capture the core qualities the intervention must have to effectively address the systemic accessibility challenge at TU Delft. They are grounded in the literature review and the findings from the interviews, survey, process probes, and case studies, and reflect both lived experience and institutional realities. The criteria serve as a bridge between research and design, ensuring that the solutions developed align with the project's strategic goals. They also provide a consistent reference point for me for evaluating ideas, guiding decisions, and shaping the final concept.

**→ 01 – Design with, not for**

Co-create with stakeholders who have lived experience of accessibility barriers. Involve them from the very start through brainstorming, testing, and decision-making so solutions reflect real needs. Where co-creation is not possible, ensure user needs are well understood and not based on biased assumptions.

**→ 02 – Start with lived experience**

Base design decisions on the real contexts and daily experiences of users. Observe barriers, note workarounds, and listen to those who navigate the campus to ensure solutions respond to actual needs rather than assumptions or policy alone.

**→ 03 – Make people feel they belong**

Accessibility is not only a functional matter but a cultural and relational one. Design should embody a culture of hospitality, where spaces, interactions, and systems signal that everyone is welcome, expected, and valued. This means going beyond technical compliance to address the symbolic and emotional dimensions of access, ensuring that people are not merely accommodated but feel a genuine sense of belonging.

**→ 04 – Navigate complexity**

When designing, work with the realities of TU Delft's systems, where formal structures and informal practices coexist. Connect efforts across silos and integrate solutions into existing processes where this supports long-term change, while recognising that some initiatives or interventions may at times need to work outside these structures to create pressure for change.

**→ 05 – Make systems visible and responsive**

Ensure reporting and feedback processes are clear, easy to use, and consistent. People should know where to go, what will happen next, and see that their input leads to action, building trust in the system.

**→ 06 – One-size-fits-one**

Different buildings, faculties, and users have different needs. Don't create one solution and expect it to work everywhere. Design flexible systems that can adapt to different situations. Keep the core principles the same but allow for local variation.

**→ 07 – Embed inclusion from the start**

Treat diversity and inclusion as the default condition and design systems, materials, and routines so they are inherently accessible. Embedding inclusion in this way shifts accessibility from a reactive fix to a proactive, ongoing practice that shapes culture, processes, and decision-making.

## Interim Conclusion

Chapter 6 translated the research findings and refined scope into a clear design challenge, supported by an updated detailed stakeholder map and a set of design criteria. These elements provide the foundation for developing interventions that are both strategically aligned and grounded in lived experience. Together, they frame the direction for the next chapter on Design Futuring, where these criteria will be applied to explore future possibilities, define strategic directions, and shape the tools and entry points that can drive systemic change at TU Delft.

## Key Take-aways from Chapter 6

- The design challenge shifted to strategically framing accessibility as a systemic, institutional issue at TU Delft and is reframed as coordinating fragmented accessibility pathways into a clear, inclusive system that integrates both formal and informal practices.
- The refined scope focuses on revealing systemic barriers, co-designing a shared future vision, and providing tools and entry points that support long-term cultural change.
- The final stakeholder map clarifies the roles and influence of core, direct, and indirect stakeholders, underlining the need for coordinated action across these groups.
- Seven integrated design criteria translate research insights into actionable guidance for the design process
- The criteria emphasise co-creation, grounding decisions in lived experience, emotional and symbolic inclusion, working with institutional complexity, transparency and feedback, contextual adaptability, and embedding inclusion as a default condition.

# 07 Designing Futures of Accessibility at TU Delft

In order to move from a defined design challenge toward actionable directions, this chapter applies the lens of design futuring to imagine how accessibility at TU Delft could be strategically developed over time. Building on the earlier chapters, this stage explores plausible and desirable futures that respond to the systemic barriers identified in earlier research.

The aim is not to predict a single outcome, but to open up a range of possibilities that can guide long-term thinking and inform strategic decisions. By envisioning different pathways, this chapter identifies where interventions can have the most leverage, how they can align with institutional realities, and which steps are needed to transition from the present situation to a more inclusive future.

## Designing Futures

This chapter applies the Design Futuring Process as described in the book ‚Designing Futures‘ by Benedikt Groß and Eileen Mandir (2024) to translate the systemic accessibility challenge at TU Delft into strategic, forward-looking possibilities.

Rather than responding to isolated issues, the focus here is on imagining coordinated futures that address cultural, structural, and procedural change across the university. The method is designed to work with institutional complexity, using creative and inclusive thinking to envision multiple pathways and identify where interventions can have the most leverage.

The Design Futuring process works through three main stages: Exploration, Imagination and Strategy, as shown in Figure 17.

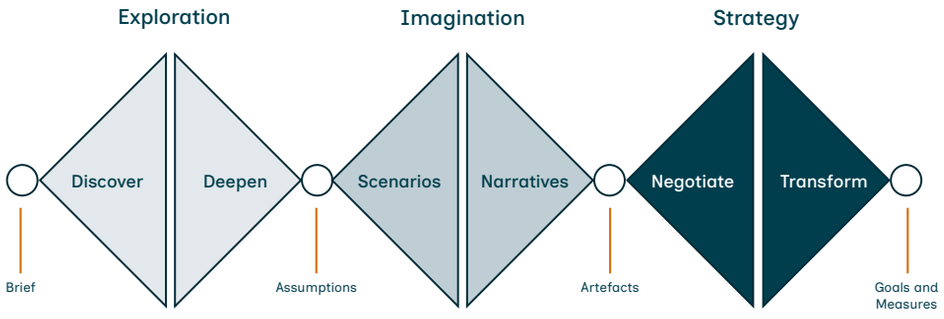



*Fig. 17: Overview of the Three Stages of the Design Futuring Process*

Exploration is about mapping out the current landscape, spotting what drives change, and surfacing tensions in the system. In this project, much of this work was carried out in the earlier research phases (Chapters 4–6), which uncovered key trends, stakeholder tensions, systemic gaps, and lived experiences. This existing foundation made it possible for me to move directly into the imagination phase.

The Imagination stage focuses on creating future scenarios and stories based on trends, contradictions, and what matters to stakeholders. This includes tools like the Futures Cone and scenario matrices, plus storytelling to make possible futures feel real.

Lastly the Strategy stage concentrates on turning these imagined futures into concrete plans through co-creation with stakeholders. This means prototyping, aligning visions, and building step-by-step roadmaps that fit the reality.

This method helps TU Delft move away from short-term fixes and compliance-driven responses. Instead, it supports a long-term, systemic approach to accessibility, one where stakeholders are not just consulted, but actively shape both the vision and the path forward.

## → Envisioning Futures

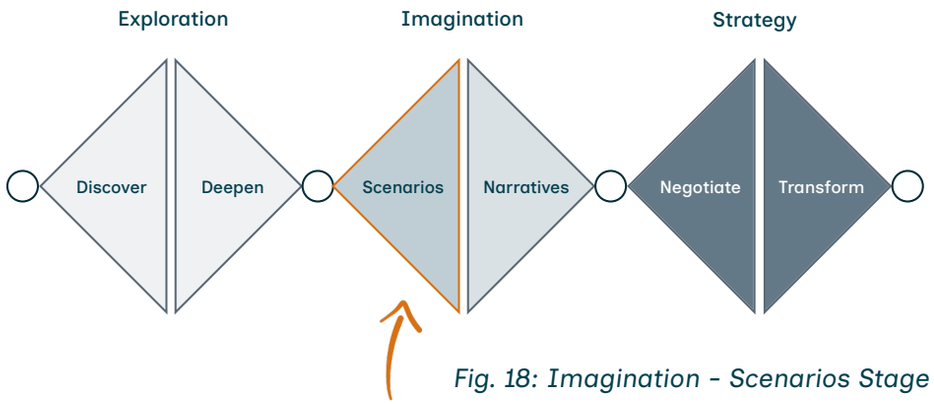



*Fig. 18: Imagination - Scenarios Stage*

This section enters the Imagination - Scenarios stage of the Designing Futures approach. The aim is not to predict the future of accessibility at TU Delft, but to imagine a range of plausible and preferable futures that can help guide institutional decisions and inspire strategic interventions.

To explore these futures, two speculative design tools were used:

1. **The Futures Cone**, which helps distinguish between what is probable, plausible, possible, and preferable.

2. **A 2x2 Scenario Matrix**, which maps out four distinct institutional futures based on two critical uncertainties that emerged from the research.

Together, these tools provide a framework to analyze risk, opportunity, resistance, and ambition in shaping a more inclusive TU Delft.



### → The Future Cone

The Futures Cone is a tool developed by Joseph Voros (2003)as part of his ‚Generic Foresight Process Framework'. It uses the metaphor of a cone of light to show how different futures fan out from the present, with each segment representing a different degree of likelihood or desirability. Over the years, the cone has become a well-known method in futures and design work, helping to structure thinking about alternative futures in a simple yet flexible way (Groß & Mandir, 2024).

As shown in Figure 19, the cone illustrates the different types of futures, which are sorted by their likelihood and desirability. There are the following four segments in the cone.

**Probable futures**

These are developments that are highly likely to occur if current trends continue. They include events that are almost certain, such as technological progress or demographic shifts, and are often used in forecasting.

**Plausible futures**

These are futures that could reasonably unfold because they are logically consistent and align with what we know about how systems work. They are not certain, but they are credible.

**Possible futures**

These stretch beyond what is likely or even currently plausible, but remain within the boundaries of what is physically conceivable. They invite us to think about futures that may seem far-fetched now, but are not impossible in principle.

Preferable futures

This perspective adds a normative dimension by asking what kinds of futures are desirable. After identifying what is probable, plausible, or possible, we step back and reflect: would this be preferable? This lens highlights values, ethics, and goals, making futures thinking not only an analytic exercise but also a discussion about direction and priorities.

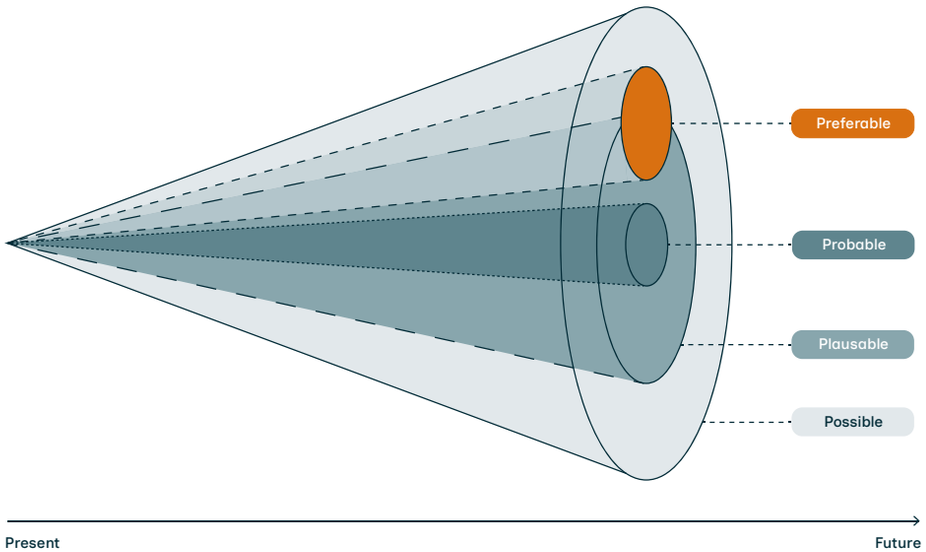



*Fig. 19: The Future Cone*

→ **The Future Cone in the context of this thesis**

In this project, I used the Futures Cone to explore how accessibility at TU Delft could develop in the years ahead. I shaped the scenarios by what's happening now, patterns in the organization, and what different stakeholders value most.

These futures do not predict what will happen, but instead provide structured ways to imagine what could happen, and what should be actively pursued or avoided. This method helped with translating the findings from the research phase into concrete scenarios that could inform strategic and design decisions.

Probable Future

**Business as Usual**

In this future, TU Delft continues to treat accessibility as a compliance-driven concern. Minor improvements are made when issues are flagged, but systemic change does not occur. Responsibility remains unclear, and initiatives continue to be fragmented across departments and services. While some progress happens at the local level, accessibility is not embedded into university-wide strategy. This future reflects the current state identified during the research phase.

Plausible Future

**1. Small Fixes**

In this future, some faculties and services introduce small-scale improvements, such as clearer signage, improved door mechanisms, or some awareness sessions for time to time. These efforts are often initiated by individuals or specific teams, but without broader institutional coordination. The improvements improve local conditions but remain disconnected and depend on individual initiative.

Plausible Future

### 2. Fragmented Coordination

A more structured approach begins to take shape, for example through a team within the D&I Office. This group sets internal guidelines and attempts to align efforts across the university. However, the initiative lacks sufficient resources, time and authority. While progress is made in certain areas, systemic barriers, such as unclear accountability and reactive culture, remain in place. The result is partial improvement without deep transformation.

Possible Future

### Crisis-Driven Reform

In this scenario, external pressure, such as a media investigation, government inquiry, or coordinated advocacy campaign, draws attention to the way accessibility is handled at the TU. The situation mirrors the recent social safety crisis. In response, the university initiates a rapid, large-scale reform process. While this may lead to visible improvements, the change is reactive and occurs only after reputational damage and emotional harm have been done to members of the university community.



Possible Future, but very unlikely future

### Inclusive Innovation above everything

TU Delft proactively reframes accessibility as a strategic priority and opportunity for innovation. Inclusive design is embedded across education, research, operations, and governance. Accessibility is no longer treated as a compliance issue but becomes a defining feature of the university's identity. This transformation is supported by leadership commitment, sustained investment, and a cultural shift towards proactive inclusion. TU Delft becomes a leading example in inclusive campus design and accessibility innovation worldwide.

Preferable Future

### An Accessible and Welcoming University

In this future, accessibility is treated as part of both physical and social safety, and as an expression of hospitality. It is embedded in systems, processes, and everyday practices. Reporting is transparent, with clear follow-up. Responsibilities are well-defined and coordinated across departments.

Accessibility is not seen as compliance but as a way of welcoming. Students, staff, and visitors feel they belong and trust their needs will be met with competence and care. This aligns with TU Delft's values of Inclusion, Diversity, Integrity, and hospitality.

### → 2x2 Scenarios: Finding Critical Uncertainties

To build on the perspective of the Futures Cone method, a 2x2 Scenario Matrix was created to map out four different futures for accessibility at TU Delft. The 2x2 approach has its roots in the Shell method of scenario planning and was developed further by Peter Schwartz, who introduced the idea of critical uncertainties in his book ‚The Art of the Long View' (1996). Since then, it has become one of the most widely used tools in strategic foresight for structuring possible futures (Groß & Mandir, 2024). This design step extrapolates from the earlier stakeholder mapping along the axes of understanding and agency. The scenario matrix reformulates these dynamics as two broader critical uncertainties:

- *How is accessibility framed?* Is it seen mainly as a matter of following the rules, or as a way to create real inclusion?
- *Who takes responsibility?* Should accessibility be something individuals must push for, or should it be a shared, collective effort?

These two questions form the axes of the matrix (Fig. 20):

- X-Axis: Framing of Accessibility
  - → Compliance-Oriented: Accessibility is about meeting legal minimums and following rules
  - → Inclusion-Oriented: Accessibility is about belonging, equity, and inclusion
- Y-Axis: Responsibility for Accessibility
  - → Individual Responsibility: People with disabilities must advocate, report, and navigate systems themselves
  - → Collective Responsibility: Everyone at TU Delft is involved in advocating, reporting and improving the systems

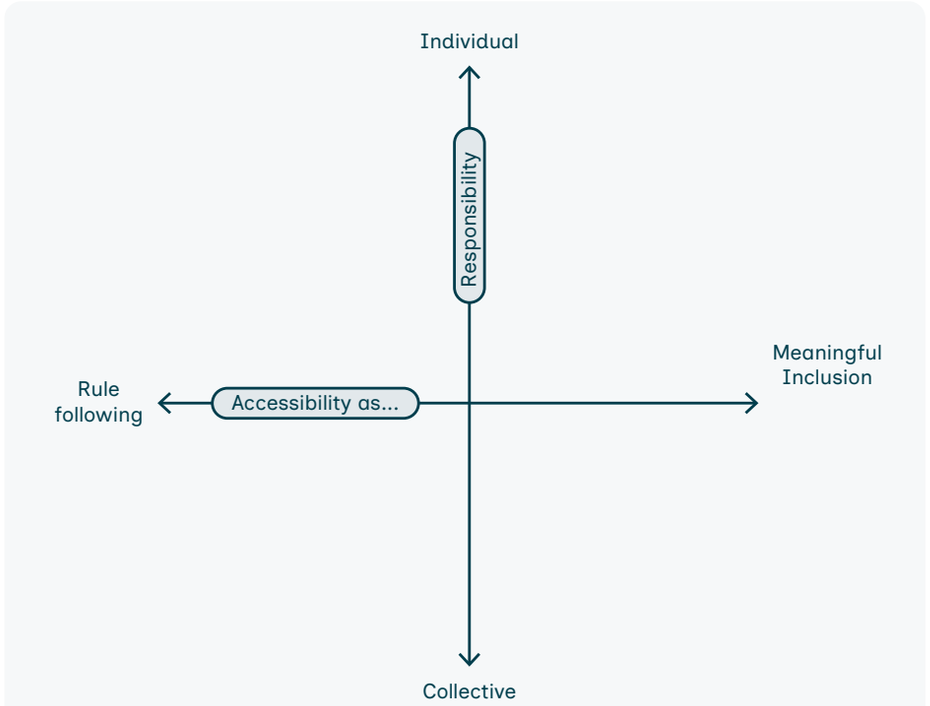



*Fig. 20: The 2x2 Scenario Matrix*

### → The Four Future Scenarios

Where the axes cross, they create four distinct scenarios, as shown in Figure 21. Each scenario shows a different mix of cultural attitudes, institutional priorities, and how much agency different groups have. The scenarios are not predictions. Instead, they are designed to spark conversation, surface tensions, and help guide strategic thinking about the future of accessibility at TU Delft.

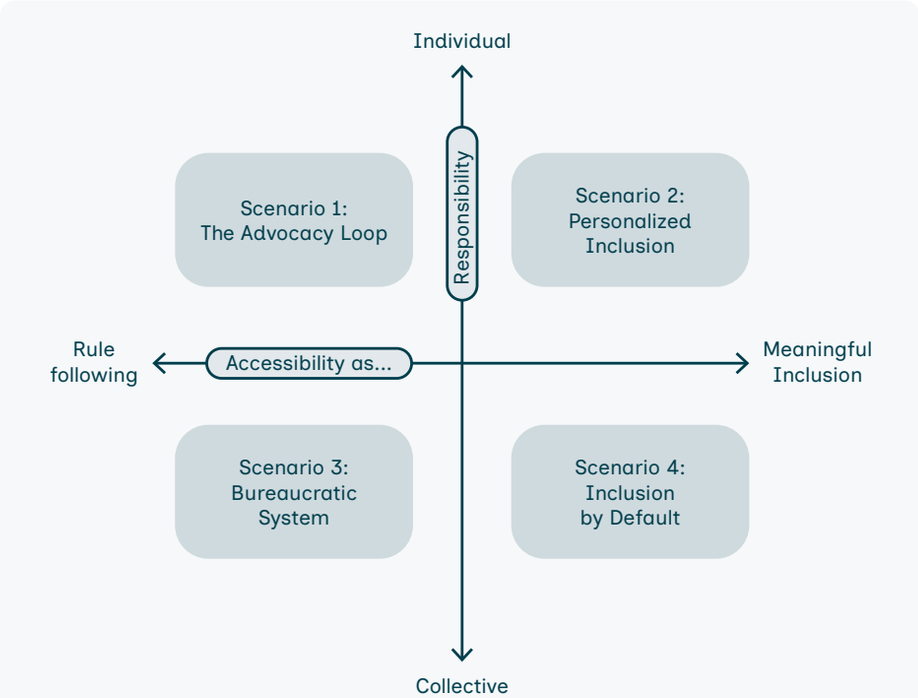



*Fig. 21: The 2x2 Scenario Matrix with the four scenarios*

## Scenario 1: The Advocacy Loop

*Individual Responsibility × Rule-Following*

In this future, accessibility is mainly about following the rules. The responsibility for finding and navigating barriers lands on the people who face them. Students and staff with disabilities have to spot issues, fill out forms, and chase answers through formal channels. The system moves slowly. Each case is treated as a one-off, never as part of a bigger pattern. Change happens, but only after a lot of emotional effort, repeated emails, and long waits. A handful of determined people keep things moving, but burnout is always close. Accessibility is technically there, but only for those willing to fight for it.



## Scenario 2: Personalized Inclusion

*Individual Responsibility × Meaningful Inclusion*

In this future, TU Delft values lived experience and wants to do the right thing, but there's no shared system behind it. Inclusion becomes individual. Faculty and staff are caring, and student advisors try to help, but every department does things differently. People with disabilities are treated as experts, and their needs are met with care. Still, the work of asking for and maintaining support always falls on them. The campus celebrates diversity and invites feedback, but without a common structure, every solution is a one-off.

## Scenario 3: Bureaucratic System

*Collective Responsibility × Rule-Following*

In this scenario, TU Delft builds a compliance-based accessibility system. There are clear policies and top-down checks to make sure every building meets the standards. Requests are processed, budgets follow standard formulas, and deadlines are usually met. Barriers get removed, but the experience and the culture doesn't change. Users feel like their needs become "checklist cases." Forms replace real conversations. Accessibility is steady and predictable, but it feels distant. For many, inclusion works on paper, but not in daily life.

## Scenario 4: Inclusion by Default

*Collective Responsibility × Meaningful Inclusion*

In this future, accessibility is recognised as a shared responsibility across the TU Delft community. Every group, from leadership and facility managers to lecturers, students, and service staff, plays a clear role in creating and maintaining an inclusive environment.

Diversity of bodies, minds, and circumstances is assumed as the starting point, not the exception, so that planning, teaching, and operations begin with variability in mind. Accessibility assessments are conducted collectively, ensuring that no individual carries the burden alone. Buildings, services, and digital systems are proactively co-designed, with both “hardware” and “software” addressed together. Feedback is always acknowledged, and lived experience is valued without being overburdened. Responsibility is distributed across the institution, making accessibility part of everyday practice rather than an optional add-on.

### → Concluding Envisioning Futures

These future scenarios show both what can go wrong if nothing changes and what’s possible when people work together through inclusive designed systems.

Looking at the cone and the matrix, a clear pattern appears: real progress comes when we move from scattered, individual efforts to shared responsibility and a stronger, more inclusive culture. These scenarios aren’t final answers. They are tools to help with spotting tensions, make choices, and guide the next steps in the design process. The lessons from this stage help turning the key insights into a practical roadmap for lasting change.

In the next section, one of these scenarios, Inclusion by Default, is expanded into a narrative prototype. Using the Experiential Futures Ladder, it is explored what this future could look and feel like at TU Delft, through the lens of everyday experiences and institutional routines.

## → Bringing the Future to life

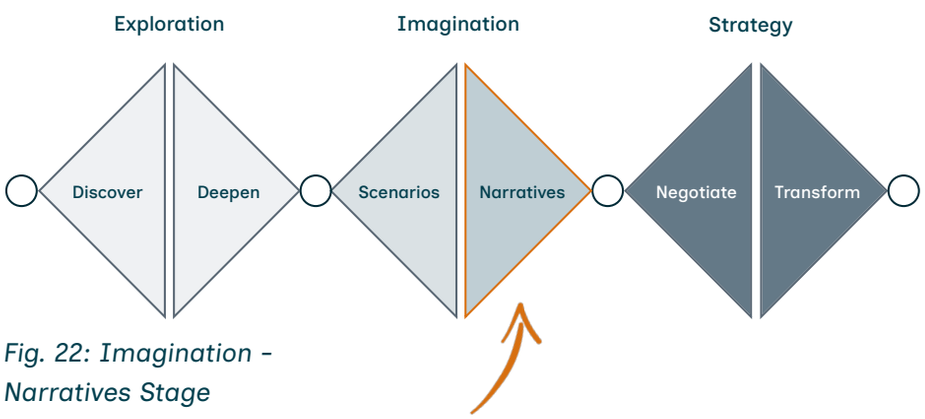



*Fig. 22: Imagination - Narratives Stage*

In the Imagination - Narratives space, the goal is to bridge the gap between imagined futures and the present reality. To help stakeholders see and feel what a future scenario could look like, the approach is to build a “futures stairway” (Fig. 23), a way to make the narrative concrete and engaging (Groß & Mandir, 2024).

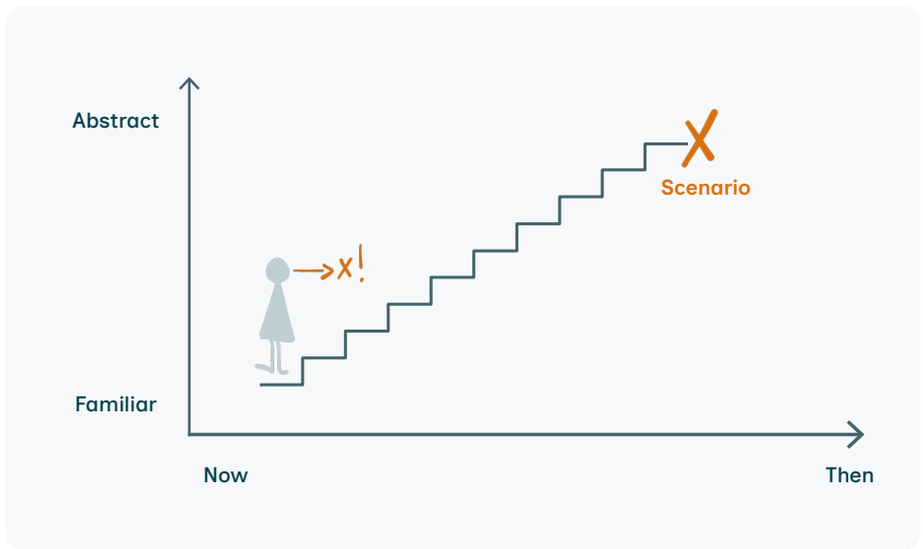



*Fig. 23: The Future Stairway*

The most effective way to do this is through strong storytelling and hands-on examples.

The tool chosen for this step is ‚Experiential Futures Ladder: Setting, Scenario, Situation, Stuff‘ after Stuart Candy and Jake Dunagan (2017). The approach starts broad and then gets specific, moving from big-picture worldbuilding down to everyday details.

It does this by breaking the future into five layers (Groß & Mandir, 2024), as shown in Figure 24:

- Setting: The world and institutional context in which the future unfolds
- Scenario: The systemic conditions and policy shifts that shape this future
- Situation: A snapshot of everyday life within this future
- People: The users, actors, and institutional roles that animate it
- Stuff: The tools, signs, systems, and materials that bring it to life

This method was chosen because it connects strategic thinking with real lived experience. It helps stakeholders not just imagine, but actually feel what an inclusive future at TU Delft could be like. By turning big, systemic ideas into relatable moments, it makes things like belonging and accessibility visible and tangible, using stories and concrete artefacts.

The ladder works as both a storytelling tool and a way to build prototypes within the futures stairway. It helps to create vivid, concrete scenes from the imagined future, making it easier to see how those ideas could shape what happens at TU Delft today.

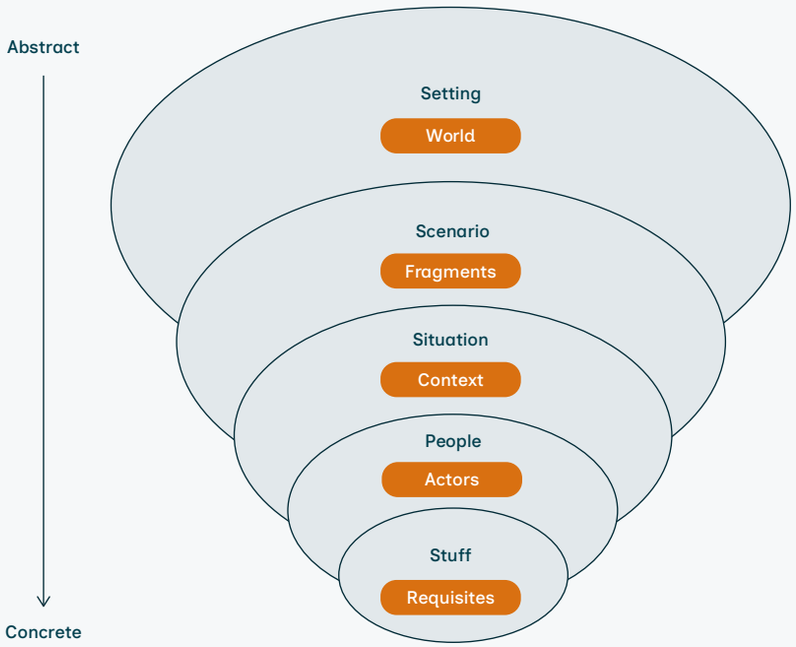



*Fig. 24: The Experiential Futures Ladder*

Scenario 4 „Inclusion by Default“ was chosen for this stage because it stands out as the most strategically relevant and emotionally meaningful future from the imagination phase. Unlike other options that focus on reacting to problems or treating accessibility as an add-on, this scenario imagines accessibility as something integrated in daily campus life. It’s not an afterthought, it’s just how things are done.

This vision addresses the problems uncovered in the research: gaps in the system, lack of coordination, and the emotional exhaustion that comes from having to fight for access. At the same time, it paints a positive, forward-looking picture that people across the university can see themselves in and work toward together.

This scenario is intentionally ambitious, it isn’t meant as a promise or a prediction. Instead, it points the way forward, a vision to start conversation, highlight challenges, and help guide choices. Its real purpose is to show what’s possible if there’ is true commitment, real coordination, and a shift in culture. It’s about making the future feel within reach, not set in stone.

Because this scenario is both detailed and relevant to how TU Delft actually works, it’s a strong foundation for the next steps. The future ladder approach will help to make the idea of Inclusion by Default not just an aspiration, but something concrete and achievable on campus.

→ **Setting -** *What kind of world is this?*

Imagine TU Delft in the future as a place where inclusion  isn’t an add-on, but the foundation. Accessibility is built into everything the university does, from buildings to culture to daily routines. It’s not just about ramps or lifts; it’s about how people feel, how safe they are, and how easy it is to belong.

Key Characteristics include:

- Accessibility, safety, and innovation go hand in hand.
- Belonging is something the TU Delft is actively working on.
- Feedback loops are quick, visible, and part of everyday life.
- Inclusive design is the norm for every project and renovation.

- No one has to fight for access alone, responsibility is shared across the community.
- Accountability for Accessibility: clear roles and responsibilities are defined
- The mindset has shifted: instead of reacting to problems, the university looks for mismatches before they become barriers. Everyone understands that accessibility benefits everyone.

→ **Scenario** - *What events/processes shape this future?*

A few key changes have shaped this future at TU Delft:

- The university has adopted an accessibility-by-default charter. This applies to everything, architecture, policies, and education.
- Every student and staff member completes training in inclusive practices.
- There is a Accessibility Office and each faculty has an Accessibility Officer
- There's a single, unified system for reporting and responding to barriers, digital and in person. Anyone can flag a problem, whether it's a broken lift or a gap in the curriculum.
- Every new project, includes an accessibility check right from the start.

This isn't a perfect world, barriers still exist, but the improved system catches barriers early and makes it easy to fix them.



People don't have to push for change alone.

→ **Situation** - *What specific moment illustrates the scenario?*

Sam, a new Master's student, encounters a barrier at the faculty entrance. In the past, such barriers often left students unsure where to turn. In the new system, the service desk still acts as the first point of contact, but this is clearly communicated across all channels. The Service Desk Staff are trained to register accessibility issues, link them to a central dashboard, and connect them with the local Accessibility Officer. Within a few days, Sam receives an update on the status of the request and who is responsible for resolving it. This predictable and transparent process helps to reduce the uncertainty and frustration that previously accompanied reporting.

At the same time, Bo, a faculty member in the Faculty of Architecture, attends a community event jointly organised by the Accessibility Office and the D&I Office. These events provide a structured forum where staff, students, and facility managers can share experiences and feed them directly into planning and decision-making. For Bo, who has experienced exclusion in the past, the difference is clear: accessibility is no longer addressed informally or as an afterthought, but systematically integrated into institutional processes.

The D&I Office ensures that accessibility remains aligned with TU Delft's broader inclusion agenda, while the Accessibility Office coordinates follow-up on specific issues. Service desks handle everyday access questions, and CREFM works with the Accessibility Office to address technical feasibility. This distribution of responsibilities reduces the burden on individuals to repeatedly advocate for themselves. Grassroots perspectives remain central, but they are supported by institutional mechanisms that provide

continuity and resources.

Together, these developments illustrate a shift from fragmented and reactive approaches toward a more coherent and collective system of responsibility. Accessibility becomes part of how the university operates, not an exception or an additional task.

→ **People** - *Who is involved in this scene?*

- **Sam**
  A new Master's student at TU Delft. Sam might have a permanent, a situational, or a temporary disability, based on the Persona Spectrum by Microsoft (2015) and Kat Holmes (2018). Their experience illustrates how students now encounter clearer, more predictable processes and proactive support.

- **Bo**
  A faculty member in the Faculty of Architecture. Having faced exclusion in the past, Bo now benefits from a campus culture where accessibility is systematically addressed and integrated into institutional routines.

- **Accessibility Office Team**
  A small, dedicated group that manages inclusive infrastructure and communication. They provide continuity and structure so that lived experiences are translated into concrete outcomes.

- **Accessibility Officers**
  Located across faculties, they act as local contact persons, follow up on issues, and ensure that feedback from students and staff is integrated into faculty-level decision-making.



- **Diversity & Inclusion Office**
  Ensures that accessibility remains connected to TU Delft's broader inclusion agenda. By convening events and linking accessibility to equity and diversity, the office embeds accessibility within a wider cultural and strategic framework.

- **Service Desks**
  Often the first point of contact for students and staff. Service desk staff are trained to register accessibility issues, link them to the central system, and ensure they are directed to the appropriate responsible actor.

- **Campus Real Estate & Facility Management**
  Works with the Accessibility Office to address the technical and infrastructural aspects of accessibility, ensuring both existing and new buildings meet evolving needs.

- **TU Delft Community**
  Staff and students contribute through participation in training, events, and forums, ensuring that accessibility is treated as a shared responsibility rather than the task of a few individuals.

→ **Stuff** - *What tangible things bring this future to life?*

Accessibility at TU Delft is no longer left to fragmented or ad hoc measures. Instead, a set of interconnected tools and infrastructures provide both the technical backbone and the cultural support needed.

- **Accessibility Dashboard**
  A central platform where accessibility issues are logged, tracked, and made visible. Students and staff can see the

status of requests, creating transparency and reducing uncertainty.

- **Unified Reporting Point**
  Accessibility concerns are now part of TU Delft's Integrity Reporting Point, creating a single, visible entry point for the whole community. Students and staff can submit issues through one platform, where accessibility is treated with the same priority as other integrity and social safety concerns. This signals that accessibility is not an optional add-on, but a core condition of a safe and just university environment.

- **Faculty Service Desks**
  Serve as physical and digital entry points where accessibility concerns can be reported. They are now trained and equipped to handle accessibility requests as part of their daily work.

- **Community Events and Forums**
  Organised jointly by the Accessibility Office and D&I Office, these provide spaces for lived experiences to be shared, ensuring grassroots perspectives feed into planning and decision-making.

- **Accessibility Officers' Network**
  A distributed structure across faculties that connects local insights with central coordination, ensuring consistency across the campus.

- **CREFM Design and Maintenance Processes**
  The technical processes that govern building adaptations and new projects. Now directly linked with accessibility coordination to embed user needs into design and renovation work.

- **Training and Awareness Materials**
  Mandatory training modules and guidelines for staff, ensuring accessibility is not just handled through infrastructure but also through culture, awareness, and everyday practices.

These tools and objects make this future feel real and reachable. They are most advanced, yet acceptable, making everyone feel welcome and included.

## Interim Conclusion

The scenario “Inclusion by Default” was chosen because it addresses the core problems found in the research: disconnected systems, advocacy fatigue, and unclear responsibility. Instead of treating accessibility as an afterthought, this scenario imagines inclusion as part of daily life on campus.

The Experiential Futures Ladder helped turn this vision into concrete, relatable moments, moving from broad ideas to everyday details. This approach makes the future easier to picture and discuss.

This scenario now sets the stage for the next step: two co-creation workshops where stakeholders will use this imagined future to spark discussion and help shape what accessibility could look like at TU Delft.

## Key Take-aways from Chapter 7

- Design futuring tools (Futures Cone and 2x2 Matrix) structured the exploration of possible futures.
- Four scenarios show how different framings and responsibilities shape accessibility at TU Delft.
- Progress depends on shifting from individual advocacy to collective responsibility.
- “Inclusion by Default” represents the preferred future, assuming diversity as the norm.
- The Experiential Futures Ladder makes abstract scenarios tangible in everyday situations.
- TU Delft can proactively embed accessibility into culture and governance instead of waiting for crises.

# 08 From Vision to Negotiation: Co-Creation Sessions

In order to move from future scenarios toward actionable directions, I conducted a series of co-creation sessions with key stakeholders. These sessions provided a space to test first ideas, explore tensions, and collaboratively shape what a coordinated accessibility system at TU Delft could look like. Building on the futures exploration of the previous chapter, the co-creation activities helped translate abstract scenarios into grounded discussions that connected institutional structures with lived experience.

This chapter presents the set-up, process, and outcomes of the sessions. It shows how different perspectives were brought together, which themes and design opportunities emerged, and how these insights informed the development of the final design concept.

## → The Set-Up

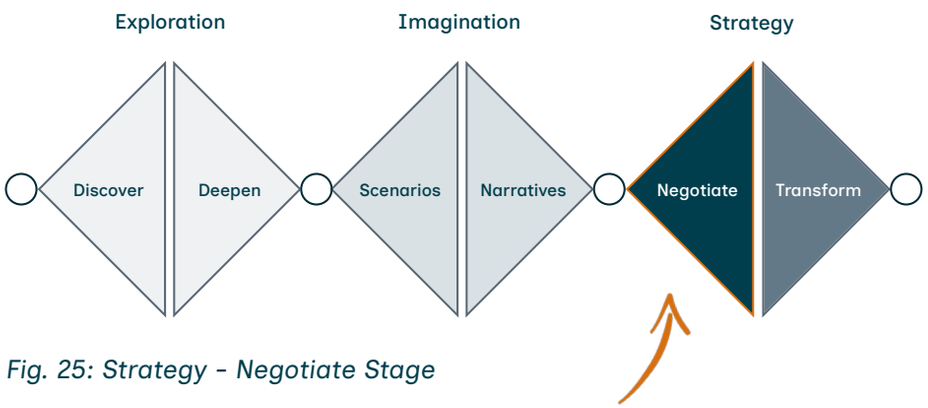



*Fig. 25: Strategy - Negotiate Stage*

Building on Design Futuring process, the co-creation sessions represent the transition into the Strategy stage. While earlier steps explored trends, scenarios, and a future vision for accessibility at TU Delft, this stage focused on turning those insights into practical directions. The aim was to move beyond imagining futures toward negotiating what they could mean in practice for different stakeholders across the university.

To do so, two co-creation workshops were held in July 2025 by Gechang and me. A diverse group of participants joined: students, faculty, design researchers, staff from the Diversity & Inclusion Office, and staff from Campus Real Estate & Facility Management. The workshops were structured to test the vision “Inclusion by Default” and the accompanying ideas.  Participants were invited to question whether such a vision could realistically work within TU Delft, and to define what values, priorities, and actions would be required to bring it to life.

The sessions began with a short introduction to the project and session goals, followed by a presentation of research findings to set the stage. Participants then engaged with speculative design ideas generated through the Futures Cone, 2x2 Matrix, and narrative scenarios, the idea cards can be found in Appendix F. Their task was to map these ideas from the current situation toward possible futures, and to contribute new ones based on their own perspectives. This structured and participatory process shifted the conversation from abstract aspirations to concrete possibilities, aligning stakeholders around what change could look like in practice.

## Workshop 1

The first co-creation workshop was held on the 8th of July 2025 and brought together 5 participants. Attendees included students, faculty members, design researchers, and staff from both the Diversity & Inclusion Office and Campus Real Estate & Facility Management. This diverse composition ensured that both institutional perspectives and lived experiences of accessibility were represented. A full list of participants and their roles is shown in Figure 26. Figures 27-29 give a deeper insight into the workshop.

| Participant Co-Creation | Role | Organisation |
|---|---|---|
| P-CC1 | Person with lived experience, Diversity Officer | TU Delft |
| P-CC2 | Safety Officer for CREFM | TU Delft |
| P-CC3 | Faculty Member IDE & Design Researcher | TU Delft |
| P-CC4 | Master Student at IDE | TU Delft |
| P-CC5 | Master Student at IDE | TU Delft |
| | | |

*Fig. 26: Overview of Participants from the first Co-Creation Workshop*

*Fig. 27: Explaining the Task*

*Fig. 28: Discussing and adding new ideas*

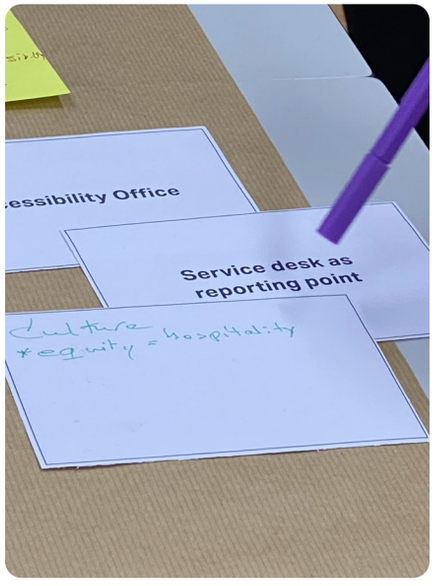



*Fig. 29: One of the ideas added*

## → Key Themes of Workshop 1

### 01 Accessibility as a Systemic Challenge

Participants described accessibility as a complex, layered problem. It is shaped not just by physical spaces, but also by fragmented bureaucracy, cultural blind spots, and a lack of coordination. Many pointed out that the university often avoids taking responsibility, which leads to stalled progress and invisible extra work for those who care.

→ "*They are just busy to organize that they are not busy.*" – P-CC1

→ "*They organize themselves out of any responsibility.*" – P-CC3

The main obstacles were seen as structural and relational, rooted in unclear governance and siloed roles rather than technical difficulties. Participants emphasized the lack of bridging roles that can connect faculties with service departments:

→ "*We need somebody who can communicate both with our real estate and FM organization and with the faculties… and know both tongues to communicate with them.*" – P-CC2



### 02 Accessibility as a Right, Not a Burden

A recurring theme was that accessibility should be understood as a basic institutional obligation, not as a favor or an extra service. Several participants expressed frustration that the responsibility to ask for and justify access falls on individuals, leaving them dependent on those with resources and authority.

→ "*The university should provide. That's not a question. They have the obligation.*" – P-CC2

→ "*I'm dependent on the organization, those who have the budgets, those who have the time, those who have the power to make a change. And that feels like I have to look up. Yeah. Because I'm dependent on others and that feels like you are on the bottom [of the ladder].*" – P-CC1

### 03 Culture of Compliance vs. Culture of Belonging

There was a strong desire to move beyond a compliance mindset, where actions are taken only to meet legal requirements, toward a culture built on belonging, hospitality, and care.

→ "*If you frame it as a problem, something to be solved, that's a totally different way of handling it than when you say it's part of hospitality.*" – P-CC2

Participants criticized how checklists and legalistic approaches often miss the larger purpose of inclusion. Some stressed that accessibility is currently only considered when it appears in regulations, and that relying on legislation can create new pitfalls rather than clarity:

→ "*Accessibility doesn't play a role at all right now, unless it's covered by the regulations.*" – P-CC2

→ "*But I think the solution, and we don't find it in the legislation. No. Because I think even the legislation is even a pitfall. Because we think that legislation gives us clarity, but it doesn't give us clarity.*" – P-CC2



### 04 Accessibility as Social Safety

Accessibility was also framed as an integral part of TU Delft's social safety infrastructure. This link was seen as both conceptually sound and strategically important for driving institutional change.

→ "*It's not comparable. It's the same. [...] You are in a vulnerable position if you have to ask for something.*" – P-CC3

→ "*If you focus on equity, diversity and inclusion, it will be social safe. So I think it's more community-driven than social safety-driven.*" – P-CC1

## → Strategic Implications of Workshop 1

### 01 Clarify Responsibility and Foster Coordination

The fragmented structure of accessibility at TU Delft highlights the need for a clear, empowered body to oversee accessibility. Current practices often depend on individual champions, but this is inconsistent and unsustainable. A central office or coordinating role is needed to bridge faculties and service departments, ensuring accountability and communication across silos.

### 02 Institutionalize Accessibility as a Right

Participants stressed that accessibility must be treated as a non-negotiable institutional responsibility, not something individuals must repeatedly ask for. Embedding accessibility as a right requires proactive systems that anticipate needs, rather than reactive responses. This shift would relieve the advocacy burden currently carried by students and staff, and position accessibility as an institutional duty.

### 03 Shift from Compliance to Belonging

The university's current compliance-driven approach often results in technical fixes and checklists, which risk obscuring the deeper purpose of inclusion. To move forward, accessibility must be reframed as a matter of belonging, hospitality, and care. This implies embedding inclusive thinking into decision-making frameworks and making accessibility a standard consideration, alongside finance, sustainability, and safety.

### 04 Link Accessibility to Social Safety Reform

The ongoing institutional reforms around social safety offer an important opportunity to integrate accessibility into broader structural change. By aligning accessibility efforts with the momentum of social safety initiatives, the university can strengthen its systemic response and demonstrate that inclusion and safety are mutually reinforcing.

### → Reflection on Workshop 1

The fragmented structure of accessibility at TU Delft highlights the need for a clear, empowered body to oversee accessibility. Thus I introduced a central office or coordinating role to bridge faculties and service departments, ensuring accountability and communication across silos on one of the idea cards.

During the workshop, participants questioned whether having separate offices for accessibility, diversity, integrity, and safety actually helps, or whether it reinforces siloed approaches. One proposal was to combine these areas under a single Equity Office, where accessibility, diversity, inclusion, and integrity would be managed together.

Such a model would:

- Position accessibility as part of a broader equity and justice mission, rather than as a specialized or technical issue.
- Reduce the risk of parallel efforts competing for attention or resources.
- Signal that accessibility is relevant for everyone at the university, not just a select group.
- Build on existing informal collaboration between these areas to improve institutional learning.

However, participants also emphasized that reframing accessibility in this way would require clear leadership, defined responsibility, and long-term investment.



## → Changes Made for Workshop 2

Based on the insights of the first workshop the future vision was slightly changed to:

“Accessibility as the Norm - Accessibility at TU Delft is a priority, not an afterthought. Responsibility is shared and supported by clear accountability, with transparent systems and a proactive culture that makes inclusion standard, not the exception.“

Furthermore the following three ideas were added to the idea cards:

- Accountability for Accessibility
- Accessibility as a Social Safety Issue
- The Equity Office

Each of the card also got a small explanation of the idea, so that the stakeholders directly know what is meant, without having to clarify.

## Workshop 2

The second co-creation workshop was held on the 10th of July 2025 and brought together 5 participants. This workshop brought together stakeholders from Horizon, the location management, StudAble, the IDE Faculty and students, as shown in Figure 30. Building on the first co-creation session, participants focused on how accessibility efforts at TU Delft could be prioritized, institutionalized, and scaled up. The group voted on their favorite ideas, added their own ideas and mapped them out for both the short and long term and identified key structural barriers and enablers (Figures 31-33).

| Participant Co-Creation | Role | Organisation |
|---|---|---|
| P-CC6 | Location Manager | TU Delft |
| P-CC7 | Department Deputy Head | TU Delft |
| P-CC8 | Student Counsellor Horizon | TU Delft |
| P-CC9 | Master Student at BK, Person with lived experience, Member of StudAble | TU Delft |
| P-CC10 | Master Student at IDE | TU Delft |

*Fig. 30: Overview of Participants from the second Co-Creation Workshop*


*Fig. 31: Mapping the Ideas on the timeline, while discussing barriers and enablers*

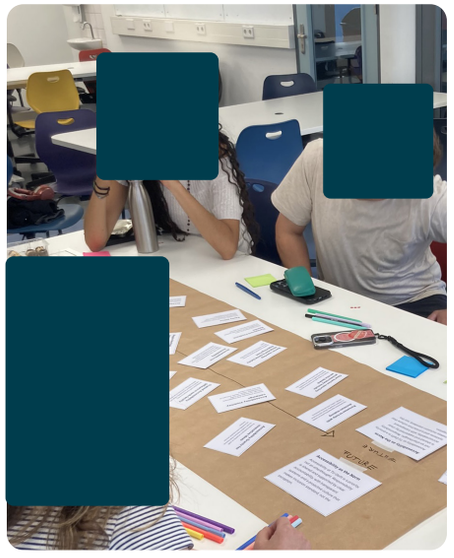


*Fig. 32: Participants reading the first ideas*

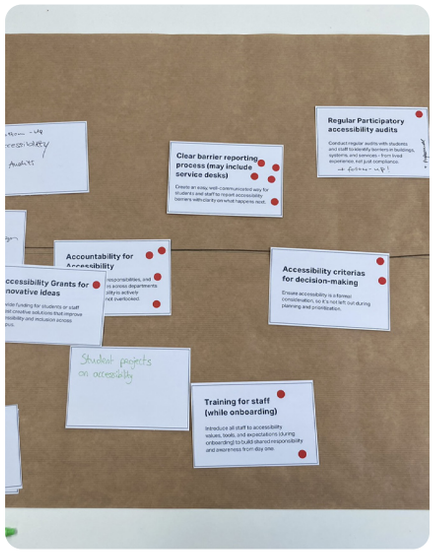



*Fig. 33: Some of the voted on ideas on the timeline*

## → Key Themes of Workshop 2

### 01 Fragmented Responsibility

Responsibility for accessibility remains unclear, even for those in mid-level roles. Participants described how issues are often “passed around” rather than resolved, making it hard for students and staff to know where to report barriers or trust that anything will be done. Outdated internal documents and unclear processes add to the confusion.

→ *“If you ask whether the service desk is responsible for anything, they will always say no.”* – P-CC7

→ *“They referred to very old documents, but there are not, I think, now documents who say: in this process, this actor is taking over.”* - P-CC8

### 02 Lack of Clear Feedback Channels

Some feedback tools exist, like ID Educations’s feedback cards, but many students are believe they are only about education or never get a response. This creates a sense that the system is neither transparent nor effective.

→ *“I wouldn‘t have known [that one can complain about accessibility] unless you told me.”* – P-CC10

→ “*One of my friends filled it out as well but she never got feedback [...] so she was not quite sure how that would [work].”* – Gechang

### 03 Training Needs Clear Ownership

Targeted accessibility training was seen as valuable, but only if roles are clearly defined and responsibility is mandated. Without ownership, training risks having little effect. Participants emphasized the need for role-specific rather than generic sessions.

→ “*If you are in a position that you can expect to get questions about from people who have an issue, then you should be trained. That would be very relevant.*“ – P-CC6

→ *“If you train staff, you really need something that‘s tailored to the specific position.”* – P-CC7

### 04 Accessibility in the Curriculum

Another recurring theme was the importance of education in shaping cultural change. Assignments on accessibility, or integrating the topic into bachelor and master programs, were proposed as ways to raise awareness and encourage new solutions.

→ “*And maybe it‘s [...] the students, the future of our world, who learn during those projects about accessibility. So also having student projects on accessibility more often*.” – P-CC8

→ “*It’s a great idea to create awareness and creativity about the topic, make people think about it who normally don’t.*” – P-CC7

### 05 The Role of Culture and Institutional Will

While technical fixes like reporting systems or audits are possible, participants described TU Delft's culture as slow to act without central pressure or a clear mandate.

→ *"In principle, it's not that difficult. Except that there is a TU Delft-wise culture thing against having clear reporting procedures. I mean, it took a year and a half to create a social safety helpdesk, so it's [...] You know, it's based on those kind of things. But in principle, it's allocating resources, have a communication plan. It could be done in six months."* – P-CC7

→ *"Without a decision of the board, there's no money, there's no reason to get an organization that goes."* – P-CC6

### 06 Decentralization over Centralization

Instead of one central accessibility office or equity office, participants favored embedding accessibility officers in each UD (Universiteitsdienst/Corporate Office) and faculty, with decision-making power, budget, and access to the right contacts. These officers could still coordinate through regular meetings, but responsibility would remain close to daily operations.

→ *"Every UD needs to have somebody who is dedicated or has knowledge on that area, who meets within that group, but has the right access to the right people and a budget in their own department."* – P-CC6



→ *"Things might happen, but very, very locally. If you want to have a uniform culture throughout TU Delft, you need to go for it."* – P-CC7

### 07 Centralized Reporting Point

Participants stressed the need for a clear, visible, and well-publicized reporting system for accessibility issues. Current service desk structures were seen as not as effective and poorly communicated. The meldpunt model from the University of Groningen was mentioned as a promising example.

→ *"In Groningen they have like this meldpunt, a place where you can get with your questions on physical disability."* – P-CC8

→ *"The line to go to the service desk is one with less communication, and it's not the best way to tackle [barriers]."* – P-CC6

### 08 Accessibility Audits

Regular, structured audits were seen as a concrete way to make accessibility part of TU Delft's ongoing operations. Participants emphasized that audits must not only be carried out regularly but also lead to visible follow-up, otherwise they risk becoming symbolic.

→ *"Regular, once in two years. That is regular, right? It's not too much of a burden."* – P-CC6

→ *"The most important thing is follow-up after that. Does it lead to a report that no one reads?"* – P-CC8

## → Strategic Implications of Workshop 2

### 01 Clarify Responsibility through Embedded Roles

The unclear distribution of responsibility requires embedding accessibility leads within each UD and faculty. These roles need real authority, budget, and access to decision-making processes, while still connecting through a central coordination structure.

### 02 Strengthen Feedback and Reporting Systems

A clear and trusted reporting channel is essential. Building on examples like Groningen's meldpunt, TU Delft could implement a visible, easy-to-use system that goes beyond the current service desks and ensures timely feedback.

### 03 Institutionalize Accessibility Audits

Regular audits should be established as a structural practice, with clear follow-up and accountability mechanisms. Current grassrooted initiatives provide a foundation but lack the consistency and institutional backing needed for lasting change.

### 04 Develop Role-Specific Training

Training should be tied to defined responsibilities and adapted to specific roles rather than delivered as generic workshops. This ensures that staff in relevant positions are equipped to respond effectively to accessibility concerns.

### 05 Address Cultural and Institutional Resistance

Technical fixes alone will not succeed without cultural change. Central leadership, particularly from the Executive Board, must signal accessibility as a priority and allocate resources. Without this support, local initiatives risk stalling.

### 06 Support Decentralized Action with Central Coordination

Decentralization was seen as the most effective structure, but it requires mechanisms for knowledge exchange and consistency across units. A hybrid model, local responsibility combined with central guidance, would balance flexibility with coherence.

### 07 Leverage Education as a Driver of Change

Integrating accessibility into the curriculum can build long-term cultural change. Embedding it in bachelor and master programs raises awareness among students and fosters future professionals who see accessibility as a standard part of design and engineering practice.

### 08 Use Incentives to Spark Innovation

Small grants or funding opportunities can encourage creative, bottom-up initiatives among students and staff. These not only generate new ideas but also raise awareness and contribute to embedding accessibility in TU Delft's broader innovation culture.

### → Reflection on Workshop 2

During the discussion, participants favored placing accessibility officers within each Universiteitsdienst (UD)/Corporate Office of the TU Delft instead of creating a single, centralized office. This decentralized approach was seen as more effective for making sure accessibility gets implemented and tracked within each department or service. Officers would still meet regularly to share knowledge, coordinate efforts, and raise concerns, but the main focus was on giving each unit direct support and responsibility, backed up by a central system.

This reflects a broader lesson from the session and the general research: accessibility shouldn't sit in its own silo. Instead, it needs to be part of the daily work of every service and faculty.

Another idea that stood out was bringing accessibility into the curriculum. Participants saw this as a way to raise awareness among students, spark cultural change over the long term, and encourage new solutions.

## → Implications for the Design Process

The workshops reinforced several key principles for the design and the roadmap  towards lasting change:

**1. Put accessibility in every team, not in a separate office**

Each faculty or service should have someone responsible for accessibility, so it becomes part of everyday work.

**2. Make roles and responsibilities clear**

Everyone should know who to go to with accessibility problems, and who is expected to solve them.

**3. Set up systems that give feedback**

If someone reports a barrier, they should hear back, this builds trust and keeps people involved.

**4. Connect accessibility to bigger university goals**

Link accessibility to things like social safety, diversity, and integrity so it gets more support.

**5. Train people based on their role**

Staff and teachers should get training that fits their job, not one-size-fits-all workshops.

**6. Start with small actions that show change is possible**

Things like audits, student projects, or visibility campaigns are easy to begin and can inspire bigger change.

**7. Include accessibility in how students learn**

Add accessibility to course content so future architects, engineers and designers grow up with it as a normal part of their thinking.

**8. Balance fixing buildings with changing culture**

Physical improvements matter, but so does changing how people think, talk, and care about accessibility.

**9. Keep listening and adjusting over time**

Accessibility isn't a one-time fix, the system should allow for updates, feedback, and co-creation in the future.

## → Key Take-aways from Chapter 8

- Accessibility at TU Delft is shaped not only by physical barriers but also by structural fragmentation, unclear responsibilities, and siloed practices.

- Participants expressed a strong wish to move beyond a compliance mindset toward a culture of belonging, hospitality, and care.

- Accessibility was repeatedly linked to TU Delft's broader work on social safety, underlining its role as essential infrastructure

- The workshops highlighted the absence of clear accountability and transparent reporting processes, with accessibility often experienced as an individual burden.

- A decentralized model of responsibility was seen as most effective, provided it is supported by central coordination and knowledge sharing.

- Education emerged as an important driver of cultural change, with calls to integrate accessibility into teaching and student projects.

- Practical measures such as regular audits, visible reporting points (meldpunt), and small grants were identified as ways to build momentum and trust.

- Sustained change will require clear commitment and resources from TU Delft's leadership.

# 09 Shaping the Path Forward: Focus Areas & Framework

In order to move from insights toward actionable directions, this chapter brings together the main findings of the research and co-creation sessions into a shared structure. Earlier chapters showed how fragmented responsibilities, compliance-oriented mindsets, and unclear processes interact to keep accessibility reactive and difficult to change. Here, these patterns are synthesised into three focus areas for transformation: mindset, systems, and responsibility. To connect them, the framework adds a fourth pillar, Inclusive Design, not only as a method but as a way of keeping accessibility present as an ongoing process. The framework forms one part of the wider Strategic Pathways to a Culture of Hospitality and Justice Concept. Alongside the matrix, roadmap, and entry points, which will be introduced in the following chapters, it contributes to a shared structure for reflection and action.

Chapter 9 provides a foundation for action by reframing the barriers and synthesising them into an interconnected framework. The following chapter builds on this by introducing the Agency X Understanding Matrix, which offers a way to understand how different stakeholders are positioned to act within this framework. Together, the framework and matrix set the stage for Chapter 11, where they are translated into a roadmap towards lasting change.

## The Three Focus Areas

Chapter 5 mapped how accessibility at TU Delft is sustained by systemic barriers across culture, processes, and governance. Three recurring patterns were identified: the persistence of a compliance-driven mindset, the absence of clear and transparent systems, and the lack of embedded responsibility and governance. Each case story and probe illustrated how these dynamics reinforce one another and keep accessibility fragmented and reactive.

After the systems mapping, interviews, co-creation sessions, and process probes, I saw three interconnected areas for change, as shown in Figure 34. Each of these speaks to different layers of the institutional landscape at TU Delft, from mindset and culture, to systems and processes, to responsibility and governance. While distinct, these areas often reinforce each other. When left unaddressed, they form a loop that keeps accessibility reactive, fragmented, and marginalised.

These focus areas are not solutions in themselves. They are structural entry points where meaningful shifts could begin. This chapter reframes the barriers identified in Chapter 5 as opportunities for transformation, laying the foundation for the framework that follows.

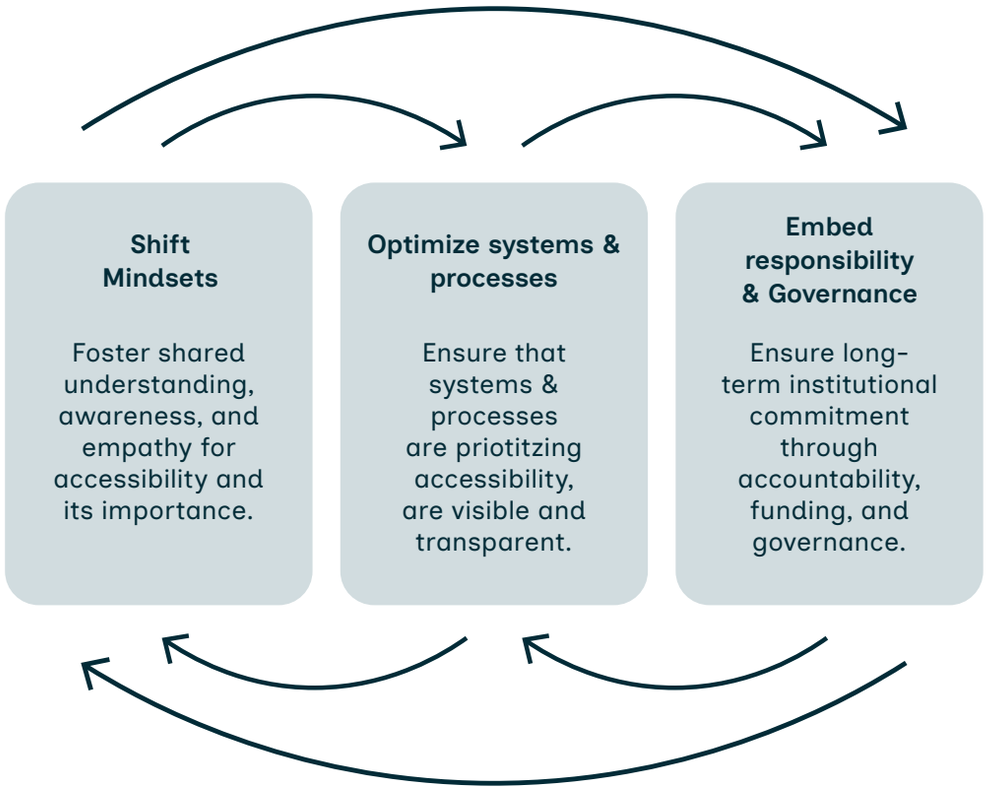



*Fig. 34: The three focus areas*

### → Inclusive Mindset

Lasting cultural change begins with awareness. At TU Delft, accessibility can become a shared value when it is framed not as a checklist or afterthought, but as part of everyday decision-making. Enabling this shift means making exclusion visible early, embedding reflection into daily routines, and fostering a culture where inclusion is a natural choice.

Rather than focusing on perfection or compliance, accessibility can be understood as an ongoing practice, one where small, low-barrier actions accumulate into lasting impact. Sensitizing and communication play a key role here, helping staff and students recognise their role and see accessibility as relevant to everyone.

### → Clear & Transparent Systems and Processes

Systems are most effective when they are visible, easy to use, and responsive. For accessibility, this means ensuring that people know where to go, what will happen next, and that their input leads to tangible follow-up.

TU Delft has the opportunity to create such clarity by centralising reporting points, embedding transparent feedback loops, and designing procedures that reflect lived experience as well as formal requirements. By making expectations explicit, who raises an issue, who responds, and what outcomes are possible, accessibility can move from uncertainty and silence to a culture of openness and trust.

### → Embedded Responsibility & Governance

Institutional change depends on clear ownership. Embedding responsibility for accessibility across faculties and services ensures that it is not left to individual initiative but carried by the organisation as a whole.

Dedicated roles with mandate, resources, and connections can make accessibility part of daily practice while still being supported by central coordination and knowledge sharing. This distributed yet connected model creates both accountability and sustainability, allowing accessibility to become an integrated part of governance rather than a marginal concern.

## → The Framework

Building on these three focus areas, the framework brings them together into a single structure that shows how they depend on and reinforce each other. To this, a fourth pillar was added: Inclusive Design. While the focus areas represent where change is needed, the framework, as shown in Figure 35 on the following pages, demonstrates how change can be connected and sustained. It highlights not only the barriers and enablers, but also the relationships between mindsets, systems, institutional responsibility, and design practices. Together, these elements provide TU Delft with a way to see accessibility not as separate initiatives, but as an interconnected system.

### → The Four Pillars

The following four pillars are included in the framework that I developed, and mutually strengthen each other:

- Inclusive Mindset: fostering awareness, empathy, and shared understanding, so that exclusion becomes visible and inclusion becomes a natural choice.

- Accessible Systems, Processes & Services: ensuring that structures are easy to use, transparent, and responsive, so that reporting and follow-up build trust rather than frustration.

- Embedded Responsibility & Governance: assigning clear roles, resources, and accountability across faculties and services, ensuring that accessibility is carried by the organisation rather than left to individuals.

- Inclusive Design: shaping how things are built, chosen, and changed from the start, guided by lived experience and the principle “solve for one, extend to many.”

These four pillars are not separate goals but deeply interconnected foundations. An inclusive mindset is essential: without it, accessible services might remain underused, responsibility is not truly upheld, and inclusive design risks being treated as a technical fix rather than a cultural shift. Yet the other pillars also help create and sustain that mindset. Inclusive design makes exclusion tangible and visible, accessible services build trust and reinforce responsibility, and governance structures embed expectations that gradually shape culture. Responsibility and Governance itself enables and strengthens the three others, ensuring accessibility is not left to goodwill but structurally supported. In practice, this creates a web of reciprocity. Each pillar both depends on and produces the others: mindset motivates the creation of transparent systems and meaningful governance, while those same systems and structures reinforce values and shift culture, inclusive design draws on empathy but also generates it, and governance sustains inclusive design while also translating its insights into policy. It is this interconnectedness that allows accessibility to become resilient and embedded, rather than reactive or fragmented.

The framework ultimately points toward the future vision. This vision is not an additional pillar but the direction toward which all four pillars contribute. Earlier in the process, this vision was described as “Inclusion as Default”. Looking back at the critical access literature, I reframed it as “A transformative culture of hospitality and justice”. The change reflects a broader ambition: not only to make inclusion the baseline expectation, but to root accessibility in values of equity, accountability, and care. While Inclusion as Default emphasised accessibility as a standard to be achieved, the reframed vision highlights accessibility as an ongoing cultural practice, one sustained through mindset, systems, responsibility, and design.

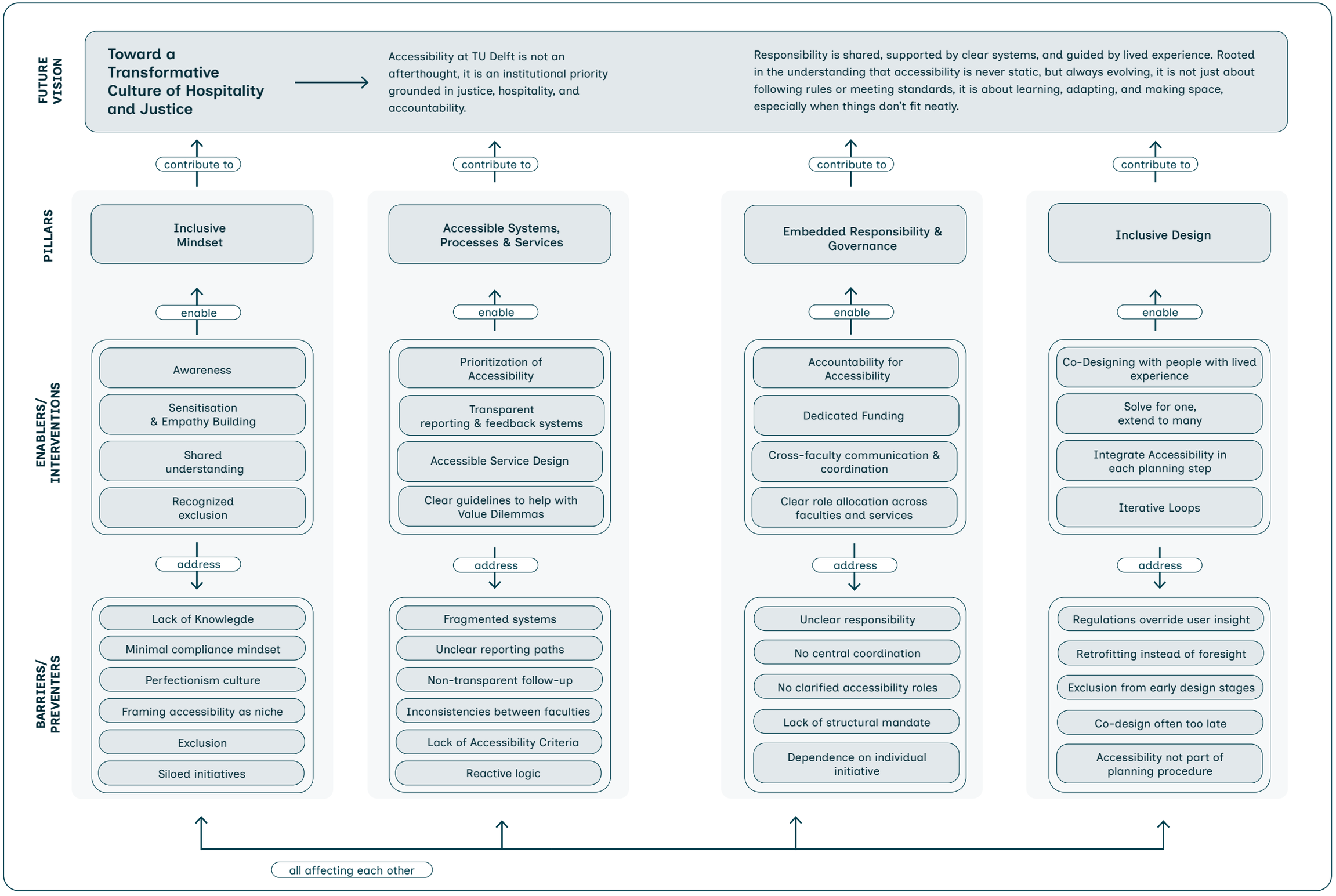



*Fig. 35: The Framework*

### → Case Studies through the lens of the Framework

Placing the case studies from Chapter 5 within the framework shows how the pillars and enablers can change both how barriers are seen and how they are addressed.

In the library entrance case, the broken lift is tolerated for years because the back entrance offered a workaround. This is more than a technical fault. It shows how a compliance-based mindset can normalise exclusion and frame it as a minor inconvenience rather than a structural barrier. Through the framework, the case looks different. At the cultural level, an inclusive mindset would have made the exclusion visible, shifting the perception from “the back entrance is sufficient” to “the main entrance must be accessible to all”. At the procedural level, prioritisation criteria within accessible systems would have placed the repair above other maintenance, recognising accessibility as urgent. At the institutional level, dedicated funding and clear governance would have ensured the lift was repaired without delay or confusion about ownership. Finally, an inclusive design approach would have questioned why the entrance depended on a single lift in the first place, anticipating redundancy and resilience instead of allowing exclusion to be built in. Rather than a tolerated inconvenience, the case becomes visible as a systemic failure, one the framework shows could have been prevented or resolved far earlier.

The accessible restroom case reveals a different but equally telling pattern. A visitor and a faculty member identified a barrier and tried to report it, but found no clear channel. This reflects procedural fragmentation and institutional ambiguity: reporting systems were unclear, and responsibility for action was diffused. Seen through the framework, each pillar points to ways forward. Transparent reporting and feedback systems would have given the staff member clarity and reassurance, turning a frustrating experience into a constructive one. Accountability structures and governance models would have made ownership clear, ensuring the issue was addressed rather than bounced informally between people. At the cultural level, a stronger inclusive mindset would have helped everyone to see the exclusion as a shared concern rather than an individual problem, leading to it being reported early on. And at the anticipatory level, co-design and iterative loops would have involved staff and students with lived experience before the design was finalised, preventing the door handle design to be used or ensuring the threshold would be low enough. The case shows how cultural, systemic, and institutional gaps interact, and how their absence leaves individuals carrying the weight of institutional inaction.

Together, these examples show that the framework is not abstract. It offers a practical lens to revisit real situations, making visible why barriers persist and how they could be handled differently. The library case highlights the interdependence of mindset, systems, and governance, while the restroom case shows the risks of fragmented responsibility. Both underline the role of inclusive design as a proactive, anticipatory practice. In this way, the framework does more than analyse barriers: it helps TU Delft learn how to prevent them from becoming normalised in the first place.

At the same time, the framework does not provide ready-made solutions. Its strength lies in making relationships visible and guiding reflection, rather than prescribing exact measures. Further steps are required to translate the enablers into concrete actions and responsibilities, which Chapter 11 and 12 begin to explore.

## Interim Conclusion

This chapter has synthesised the earlier findings into three focus areas, mindset, systems, and governance, and connected them in a framework that includes Inclusive Design as both method and mindset. Together, these pillars make visible how accessibility is held in place by culture, processes, and responsibility, and how these can reinforce or undermine each other. The framework shows that accessibility cannot be approached through single fixes, but requires awareness, transparent systems, embedded roles, and design practices that anticipate needs.

Placing the case studies within the framework revealed how barriers that appeared as isolated technical issues are in fact symptoms of deeper structural dynamics. The library entrance case showed how compliance-driven thinking and lack of prioritisation can normalise exclusion, while the restroom case exposed how fragmented systems and unclear responsibility leave individuals carrying the weight of inaction. Both also highlighted the anticipatory role of Inclusive Design, which could have prevented such barriers from being built in.

In this way, the chapter demonstrates that accessibility at TU Delft is not just a matter of solving incidents, but of addressing interconnected cultural, procedural, and institutional dimensions. The framework provides a shared structure to analyse these interdependencies and to guide future decisions. This sets the stage for the following chapter, which examines how different stakeholders are positioned in relation to the system, based on their agency and understanding.

## Key Take-aways from Chapter 9

- The analysis revealed three focus areas for change: mindset and culture, systems and processes, and responsibility and governance.
- The framework connects these areas with Inclusive Design, showing how they reinforce each other rather than stand alone.
- Accessibility is framed not only as compliance, but as a matter of belonging, accountability, and equity.
- Revisiting the case studies through the framework demonstrates how cultural, systemic, and institutional gaps sustain barriers, and how they could be prevented or resolved earlier.
- The framework provides a shared structure for reflection and decision-making, preparing the ground for the matrix and roadmap that follow.

# 10 The Agency X Understanding Matrix

In order to understand how different stakeholders are positioned within the system, this chapter introduces the Agency × Understanding Matrix. Where the framework showed how mindset, systems, governance, and design interact, the matrix shifts the focus to the people within this system: their level of understanding of accessibility, and their capacity and willingness to act on it.

This builds on perspectives from the literature (Hamraie, 2020; Dorst & Watson, 2020), which emphasise that progress depends on connecting lived experience and contextual insight with formal authority and resources. In Chapter 4, the stakeholder mapping revealed that these dimensions are unevenly distributed across TU Delft. Some stakeholders demonstrated deep understanding but limited power to act, while others held formal authority but only a compliance-oriented view of accessibility. This misalignment highlighted both the potential and the risks in the current landscape.

The matrix makes these dynamics visible by mapping stakeholders along two dimensions: understanding of accessibility and agency to act. Instead of dividing actors into simple categories, it creates a 3×3 grid of nine zones. Each zone represents a different constellation of understanding and agency, and each suggests a different kind of strategic intervention, from awareness raising and capacity building to allyship, integration, and co-design.

The chapter first explains the reasoning behind these two dimensions and applies the matrix to stakeholder groups identified through interviews, probes, and co-creation sessions. It then interprets the resulting map, highlights areas of opportunity, and develops two targeted interventions in response. Finally, it reflects on how the matrix can be used iteratively to identify leverage points and tailor interventions to the realities of different groups.

In this way, the matrix provides a bridge between the framework (what needs to change) and the roadmap (how change could unfold), by clarifying who is positioned where, and what kinds of movement are needed to advance a culture of hospitality and justice.

## → Why the Matrix?

As I identified the main focus areas for change in the framework, it became clear to me that awareness and shared understanding are essential starting points for transformation. Accessibility at TU Delft does not suffer from a complete absence of effort, there are grassroots initiatives, but rather from a very confusing and fragmented landscape of responsibility and insight.

I observed that some stakeholders hold formal authority, yet frame accessibility mainly as a matter of compliance. Others have a deep recognition of exclusion but lack the mandate or resources to act. Many fall somewhere in between: somewhat aware and partly motivated, but uncertain whether accessibility belongs to their role or what concrete steps to take next.

This uneven readiness reflects the two dimensions that I had already identified earlier in the research: understanding and agency. In Chapter 4, the stakeholder mapping showed how unevenly these dimensions are distributed across the university. Some actors demonstrated strong insight but little decision-making power, while others had formal mandate but limited awareness beyond legal obligations. In Chapter 9, I confirmed that progress requires both: a cultural recognition of exclusion (understanding) and an institutional capacity to act (agency).

To bring these insights together, I developed the Agency × Understanding Matrix. This tool positions stakeholders within a 3 × 3 grid of nine zones, based on their current level of understanding and agency. Rather than fixing actors into categories, the matrix makes visible where they are starting from and what kinds of interventions could support a meaningful shift toward inclusion.

## → The Matrix

The Agency × Understanding Matrix (Figure 36) was developed in the context of accessibility at TU Delft as a tool to make sense of uneven readiness across stakeholders and to guide tailored interventions. It maps actors according to two dimensions:

- Agency: the ability, willingness, or mandate to act on accessibility, shaped by formal authority, informal influence, motivation, and barriers.
- Understanding: the level of awareness and insight into accessibility, ranging from surface-level knowledge to deep systemic recognition.

Together these two dimensions create a 3 × 3 grid of nine zones. Each zone represents a different constellation of agency and understanding, and each suggests a different type of intervention. For instance, actors with high agency but low understanding may benefit from exposure to lived experiences or targeted awareness-raising, while those with high understanding but low agency may require structures that amplify their voice. Actors in medium positions often need translation, tools, or shared ownership to progress.

The strength of the matrix lies in its ability to show that there is no single pathway to change. Instead, it recognises the plurality of positions within a large institution and makes visible what kind of support, framing, or pressure may be most effective in each case. In this way, the matrix moves beyond diagnosing gaps to illuminating possible strategies for enabling change.



## → How it works

I designed the matrix not just to describe where stakeholders currently stand, but to support their movement toward deeper understanding and stronger agency. Its goal is to help identify leverage points and design interventions that can turn fragmented efforts into more coordinated shifts. I applied the matrix through a six-step process:

01 **Define the issue** – Clarify what accessibility means in the TU Delft context, and how “agency” and “understanding” are interpreted.

02 **Map stakeholders** – Place groups and individuals within the matrix, based on their observed or reported engagement with accessibility.

03 **Interpret zones** – Understand what each position reveals, and which forms of awareness or support are most relevant.

04 **Highlight opportunities** – Identify where most stakeholders are located, and where interventions may be most impactful.

05 **Design interventions** – Match strategies to positions: from awareness-raising and storytelling, to co-design, allyship, or enabling structures.

06 **Use iteratively** – Revisit the map over time to track how stakeholders move, and adjust approaches accordingly.

To support this process, I developed worksheets that translate abstract dimensions into practical tools for mapping, reflection, and design conversations (see Appendix G).

**High Understanding**
Deep comprehension of the issue and its systemic impact

**Medium Understanding**
Recognizes relevance but lacks depth

**Low Understanding**
Detached or Unaware of Issue

### Allyship & Support for grassrooted initiatives

Recognise and back individuals or groups who understand the issue but lack formal power. Help them gain visibility, credibility, and influence within the system.

Motivated actors exist but need validation, resources, or protection to act meaningfully.

### Co-Design & Shared Ownership

Engage actors in co-creating solutions and sharing responsibility for long-term change.

Use when awareness and agency are present, but stronger collaboration could increase impact.

### Enablement & Support

Provide resources, flexibility, or coordination to help committed actors continue or scale their efforts.

Use when the conditions for change are already in place and need only to be maintained or expanded.

### Platforming Voices/ Narrative Activism

Share narratives, stories and lived experiences to build understanding and empathy, especially among low-agency actors.

Use when awareness is emerging but there's little confidence or capacity to intervene.

### Turning insight into action

Use workshops or dialogue to strengthen actors' understanding, their ability to respond meaningfully and to find action spaces.

Use when people are interested but unsure how to contribute or where to start.

### Strategic Integration

Connect the issue to current strategies or workflows, making it easier for actors to act without starting from scratch.

Use when actors are active but the issue is not yet integrated into their everyday work.

### Activism & External Pressure

Use external pressure or public engagement to make the issue visible to those who are unaware and unlikely to act.

Use when the issue is ignored or invisible, and internal motivation is absent.

### Awareness Raising

Introduce the issue in ways that resonate, build urgency, and invite reflection from actors who could become allies. In short: make the issue visible.

Use when there's potential to engage, but the issue is still seen as distant or irrelevant.

### Strategic Reframing

Help powerful actors connect the issue to their existing values or responsibilities, creating space for ownership. Challenge assumptions and prompt recognition of responsibility.

Use when influential stakeholders don't yet see the issue as part of their role.

**Low Agency**
Low formal power or not willing to act

**Medium Agency**
Some influence or initiative and some interest

**High Agency**
Decision-making power and willing to act

*Fig. 36: The Agengy X Understanding Matrix*

## Application to this context

In this chapter, I apply the Matrix to the context of this thesis. My aim is to translate the abstract dimensions of agency and understanding into concrete stakeholder positions, to reveal patterns in how accessibility is currently approached, and to identify where targeted interventions could best support meaningful change.

To do this, I followed the six-step process I designed for the matrix and completed the accompanying worksheets (see Appendix H). The following pages present the synthesised results of this process.

### Step 1: Define the Issue

As I introduced in Chapters 2 and 4, the Agency × Understanding Matrix is structured around two dimensions: agency and understanding. These already appeared in the stakeholder mapping, where some actors held power but little awareness, and others had deep knowledge but little influence. In this step, I clarified these dimensions further to establish the basis for positioning stakeholders at TU Delft.

Agency refers to a stakeholder's ability, mandate, and willingness to act on accessibility. It combines structural elements such as authority, resources, and institutional position with personal ones such as motivation and initiative. Emirbayer and Mische (1998) expand this view by showing that agency also involves intentionality, emotional engagement, and the capacity to imagine and pursue alternative futures. This means that even actors without formal authority can still play a meaningful role, for example, by initiating conversations or challenging norms.

Understanding refers to how accessibility is perceived and prioritised. Drawing on critical access studies (Hamraie, 2020; Pineda, 2020) and inclusive design literature (Holmes, 2018; Steiner & Zeller, 2024), I define it here as awareness of the invisible, emotional, and systemic dimensions of access. High understanding sees accessibility as an ongoing, relational process requiring reflection and systemic thinking, while low understanding reduces it to compliance or isolated technical fixes.

By defining these dimensions, I laid the foundation for applying the matrix. Together, they help explain why accessibility at TU Delft often remains fragmented, and they guide the next step: positioning stakeholder groups on the matrix.

### Step 2: Map the Stakeholders

Based on the definitions from Step 1, I positioned stakeholder groups on the Matrix (Figure 37). Placement was informed by evidence from interviews, co-creation sessions, and probes, and was never determined by job title alone. Instead, I considered how actors spoke about accessibility, how they acted in practice, and how they were situated within the wider institutional system. To support consistency, I developed a set of placement criteria from research insights (see Appendix I). These criteria clarified how stakeholders recognised accessibility, responded to barriers, and enacted their role in relation to it. The placement of each stakeholder is explained in Figure 38.

The resulting map highlights the uneven distribution of awareness and capacity across the university. Some actors with high formal power, showed little engagement with accessibility and were placed in the low agency × low understanding zone. Others, such as students and staff with lived experience, had deep knowledge but little institutional power, placing them in the high understanding × low agency zone. A larger group occupied the medium × medium zone, with partial insight and some influence

but little clarity on responsibility.
These placements do not represent fixed categories, but starting positions. They form the basis for identifying which interventions are most relevant for each group and where movement could be supported. The value of the matrix lies not only in showing where actors are, but in revealing what kinds of awareness-raising or engagement strategies may be most effective.

In the next step, I synthesise the main insights that emerged from this mapping.

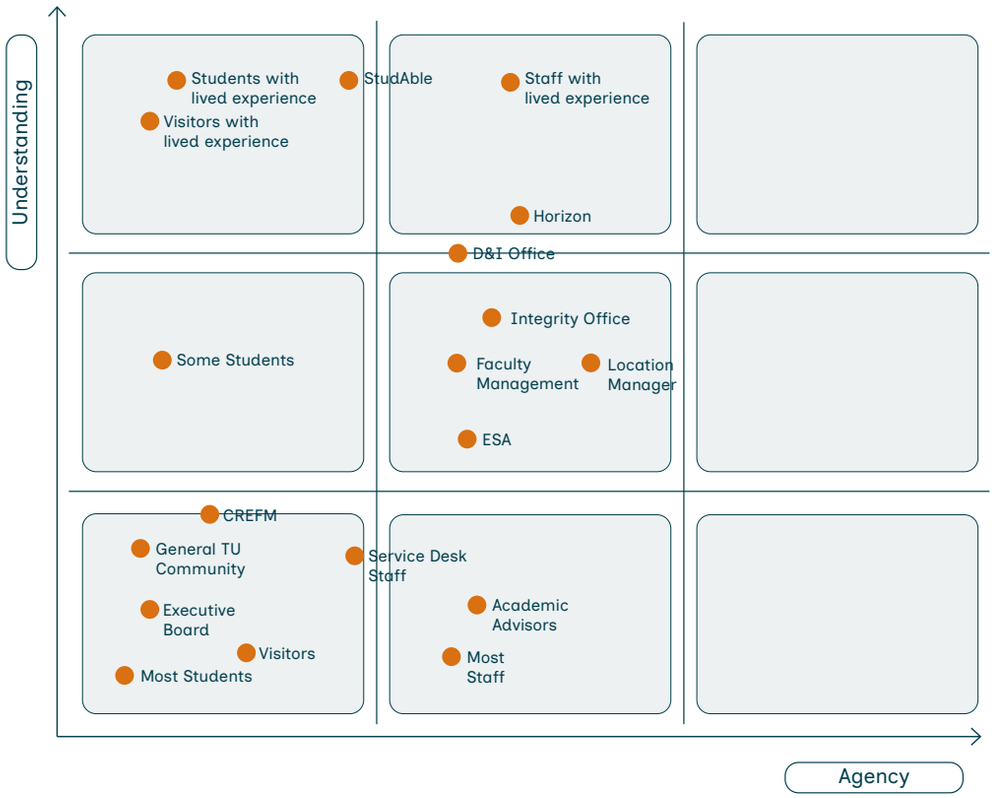



*Fig. 37: The Stakeholder Mapping in the Matrix*

| Stakeholder | Placement | Justification |
|---|---|---|
| Executive Board | Low Agengy x Low Understanding | Described as reactive, only responds to external pressure. Does not prioritise accessibility unless it becomes a liability or demand. |
| CREFM | Low Agengy x Low Understanding | Focus on safety and compliance, lacks proactive engagement with accessibility. |
| Service Desks | Low/Medium Agengy x Low Understanding | Unaware of issues unless reported, mainly operates reactively. |
| Location Manager | Medium Agency x Medium Understanding | Involved in the barrier resolving process and aware of practical access gaps, but works within project boundaries and budget limits. |
| Faculty Management | Medium Agency x Medium Understanding | Demonstrate awareness and interest, but access remains secondary to other faculty priorities. |
| Integrity Office | Medium Agency x Medium Understanding | Aware of institutional power dynamics and compliance structures. Supportive, but not directly engaged in accessibility strategy or infrastructure. Role of Advisors rather than bringing active change. |
| D&I Office | Medium Agency x Medium/High Understanding | Embraces intersectionality and DE&I, but accessibility is not a primary focus. Limited capacity and formal influence. Role of Advisors rather than bringing active change. |
| ESA | Medium Agency x Medium Understanding | Aware of access issues and willing to help, but frame problems administratively and limited systems understanding. |
| Staff with lived experience | Medium Agency x High Understanding | High understanding based on lived experience, might initiate grassroots initiatives but lacks strategic support or resources. |
| Students with lived experience | Low Agency x High Understanding | High understanding based on lived experience. Lacks institutional power as an individual. |
| StudAble | Low/Medium Agency x High Understanding | Advocates for change with strong lived knowledge, but structurally excluded from decision-making and under-supported. |
| Horizon | Medium Agency x High Understanding | Deep understanding of emotional and logistical access issues. Offers direct support, but limited in structural influence. Role of Advisors. |

*Fig. 38: The Stakeholder Placements Explained*

### → Step 3: Interpreting the Mapping

From the stakeholder mapping, I identified four main insights into how accessibility is currently positioned at TU Delft:

**01 A structural absence at the core**

I placed no stakeholders in the high-agency × high-understanding zone. This absence reflects a systemic vulnerability: without central actors who both prioritise and understand accessibility, efforts remain dependent on informal initiatives or individual motivation.

**02 Disengagement is not neutral**

Key actors with formal decision-making power were positioned in the low × low zone. Their lack of engagement contributes to the marginalisation of accessibility and indicates that it is treated as secondary rather than a shared institutional responsibility.

**03 Middle actors show readiness but little support**

A significant group appeared in the medium × medium zone. These actors demonstrate willingness and partial insight, but lack clear responsibilities, sufficient time, or institutional guidance to act effectively.

**04 Lived experience is over-relied on but under-supported**

Students and staff with lived experience carry vital knowledge of barriers, yet often face fatigue, emotional labour, and lack of structural backing. Their insight is present but not embedded institutionally.

These insights reveal both absence and potential. Step 4 identifies which areas of the matrix offer the most leverage for intervention.



### → Step 4: Highlight Areas of Opportunity

The mapping pointed to two zones where targeted interventions could have the greatest impact. Rather than restating placements, this step focuses on the kinds of change each zone requires.

Medium agency × medium understanding
Actors in this zone already show willingness and partial insight, but their involvement often stalls due to uncertainty about role, mandate, or next steps. This is where dialogue, workshops, and practical tools can help translate awareness into concrete action. The need is not to raise awareness, but to provide support and guidance that strengthens responsibility and builds confidence to act.

Low agency × low understanding
Actors in this zone hold authority but remain distant from accessibility. The matrix points to activism, narrative work, and external pressure as the most relevant interventions here. The challenge is not a lack of resources but a lack of visibility and accountability. Efforts should therefore disrupt indifference, make exclusion harder to ignore, and link accessibility to institutional responsibility.

Together, these zones highlight two complementary strategies: turning insight into action for those who are willing but unsupported, and activism and pressure for those whose disengagement currently blocks systemic change. Step 5 translates these strategies into concrete interventions.

### → Step 5: Designing Strategic Interventions

The previous step highlighted two zones of the Agency × Understanding Matrix where interventions could have the most leverage. Following the logic of the matrix, I developed one intervention for each zone, drawing on the suggested strategies in the worksheet and grounding them in evidence from interviews, probes, and co-creation sessions.

#### 01 Low agency × low understanding — Activism and external pressure

Actors in this zone, such as the Executive Board, CREFM, and service desks, hold formal authority but remain disengaged from accessibility. The matrix points to activism and visibility as relevant strategies here. To address this, I designed an awareness campaign titled Access Follows Who?, which makes exclusion visible through spatial cues, narratives, and subtle disruptions. Its purpose is to challenge passive assumptions and link accessibility to shared responsibility at the institutional level.

#### 02 Medium agency × medium understanding — Turning insight into action

Actors in this zone, including faculty management, ESA, and location managers, showed willingness and partial insight but lacked clear responsibilities or support. The matrix suggests interventions that help turn insight into action. To respond to this, I developed a workshop format titled Pathways of Access. The workshop uses lived experience scenarios to connect accessibility directly to participants' roles and responsibilities, clarifying where they have agency, influence, or encounter systemic barriers.

Together, these interventions represent two complementary strategies: visibility for those whose disengagement currently blocks systemic change, and enablement for those who are willing but unsupported. Step 6 explains how these strategies can be revisited over time, while the following chapter goes into each intervention in more detail as entry points for change.

### Step 6: Iterative Application

In this thesis, I used the matrix to identify areas of opportunity for intervention and to support movement. Once the first interventions, such as the awareness campaign and the workshop, have been implemented, the matrix should be revisited.

Remapping at that stage can help reveal what has shifted, where new forms of engagement have emerged, and where gaps remain. This is not about measuring success, but about staying responsive, recognising where new forms of support, coordination, or pressure might be needed.

In this way, the matrix becomes a working structure: not to fix actors in place, but to track what kinds of movement are possible, and where further alignment is still required.

## → Interim Conclusion

The Agency × Understanding Matrix is not a solution. It is a way to pay attention. Its purpose is not to define people or prescribe what the organisation should do. Instead, it helps frame a more honest question: where are people actually positioned, and what might they need in order to move?

In this thesis, I used the matrix in a dual role: analytically, to reveal the uneven distribution of understanding and agency across TU Delft, and strategically, to identify leverage points for targeted interventions.

In doing so, the matrix shifts the focus away from uniform awareness-building and toward situated responsibility. Not everyone needs more information. Not everyone is ready to act. Some actors are already trying, but without enough support. Others hold power, but remain disconnected.

By surfacing this unevenness, not to assign blame, but to design more carefully around it, the matrix creates a basis for more deliberate forms of institutional change at TU Delft.

## → Key Take-aways from Chapter 10

- The matrix bridges the framework and the roadmap by showing how stakeholders differ in understanding and agency.
- Mapping revealed systemic gaps: powerful actors remain disengaged, lived experience is over-relied on but unsupported, and many middle actors lack clarity.
- Two leverage zones stand out: low × low (needs activism and visibility) and medium × medium (needs support to turn insight into action).
- In response, I developed two interventions: the Access Follows *Who?* campaign and the Pathways of Access workshop.
- The matrix is an iterative tool, highlighting movement and adaptation rather than fixed categories.

# 11 Entry Points for Change

In the previous chapter, I applied the Agency × Understanding Matrix to stakeholder groups at TU Delft. This analysis highlighted two leverage zones where targeted action could have the most impact: actors in the low agency × low understanding zone, who require visibility and external pressure, and actors in the medium agency × medium understanding zone, who need support to turn partial insight into concrete action.

To respond to these dynamics, I developed two entry points for change. The first is the Access Follows *Who?* campaign, an intervention designed to make exclusion visible and to challenge passive disengagement. The second is the Pathways of Access workshop, a format that grounds reflection in lived experience and helps institutional actors clarify their role and responsibility.

This chapter describes these two entry points in more detail: their design, aims, and intended contribution to shifting accessibility at TU Delft. They are not final solutions, but targeted starting points that connect directly to the gaps and opportunities surfaced in the matrix. In the next chapter, these interventions are positioned within a broader roadmap to show how change could be sequenced and sustained over time.

## The *Access Follows Who?* Campaign

### Rationale and Position in the Matrix

The Access follows *who*? campaign responds to the disengagement of actors in the low agency × low understanding zone. In the matrix, this zone is associated with activism and external pressure: interventions that do not rely on building knowledge alone, but on making absence and exclusion harder to ignore.

Actors such as the Executive Board, CREFM, and some of the service desks hold formal authority, yet often treat accessibility as a secondary or optional concern. Here, the challenge is not a lack of resources, but a lack of visibility and accountability. For this reason, the campaign does not offer explanations or technical guidance. Instead, it makes accessibility present in everyday spaces and routines, introducing moments of friction that disrupt passive assumptions.

In this way, the campaign takes up the role defined by the matrix: to shift actors who are disengaged by confronting them with what has been invisible, and by linking accessibility to a shared institutional responsibility.

### Authorship and Co-leadership

The authenticity of this campaign depends on who leads it. If presented as a centrally organised communication effort, it risks being received as a marketing initiative rather than as a call to responsibility. To avoid this, the campaign should be co-led or led by groups such as StudAble, who carry lived experience and legitimacy in raising these questions.

TU Delft's role is supportive rather than directive: providing resources, space, and visibility, but not controlling the message. In this way, the campaign amplifies voices that are often under-



acknowledged, instead of replacing them with institutional framing. This emphasis on co-leadership aligns with the principle of the matrix, which highlights that actors with high understanding but low formal agency require recognition and support rather than substitution.

By situating authorship with those who know exclusion first-hand, the campaign remains credible. It speaks from lived experience, rather than about it, and turns visibility into a shared act of accountability.

### Aim of the Campaign

At the centre of the campaign is a question: Access follows *who*? It is not rhetorical. It asks the viewer to notice who is routinely included in how the university is organised, and who is not. Who enters spaces without hesitation, and who must ask, explain, or negotiate their presence?

The campaign was developed to make exclusion visible, not by instruction, but by presence. Its aim is to surface the ways accessibility is structured quietly into routines, spaces, and assumptions. Rather than delivering explanations, it introduces small disruptions that invite recognition.

The focus is on creating moments of friction, where something usually unnoticed becomes visible. In doing so, the campaign shifts accessibility away from abstract policy language and brings it into lived experience, encountered physically, socially, and emotionally.

## → Core Elements of the Campaign

The campaign consists of a set of interventions designed to interrupt routines, surface lived experiences, and question institutional assumptions around access. Each element builds on a central aim: to make exclusion visible without relying on explanation alone.

### 01 Visual Identity and Posters

A visual language of ramps and stairs, repeated and abstracted, asks: who is infrastructure built for? Posters carry bold typographic fragments such as “Being included shouldn’t feel like a favour” or “I don’t even bother mentioning the barrier.” Placed in high-traffic yet unexpected spots, elevator doors, windows, faculty entrances, they interrupt movement briefly but deliberately. QR codes connect to a digital page for reporting issues, sharing stories, or learning how to get involved.

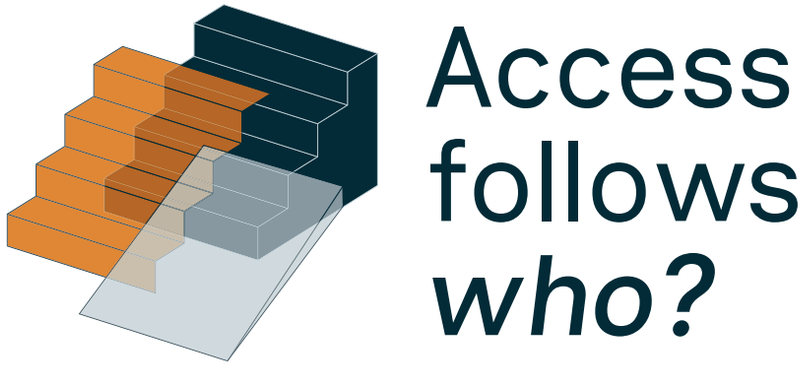



*Fig. 39: The Access follows who? Logo*

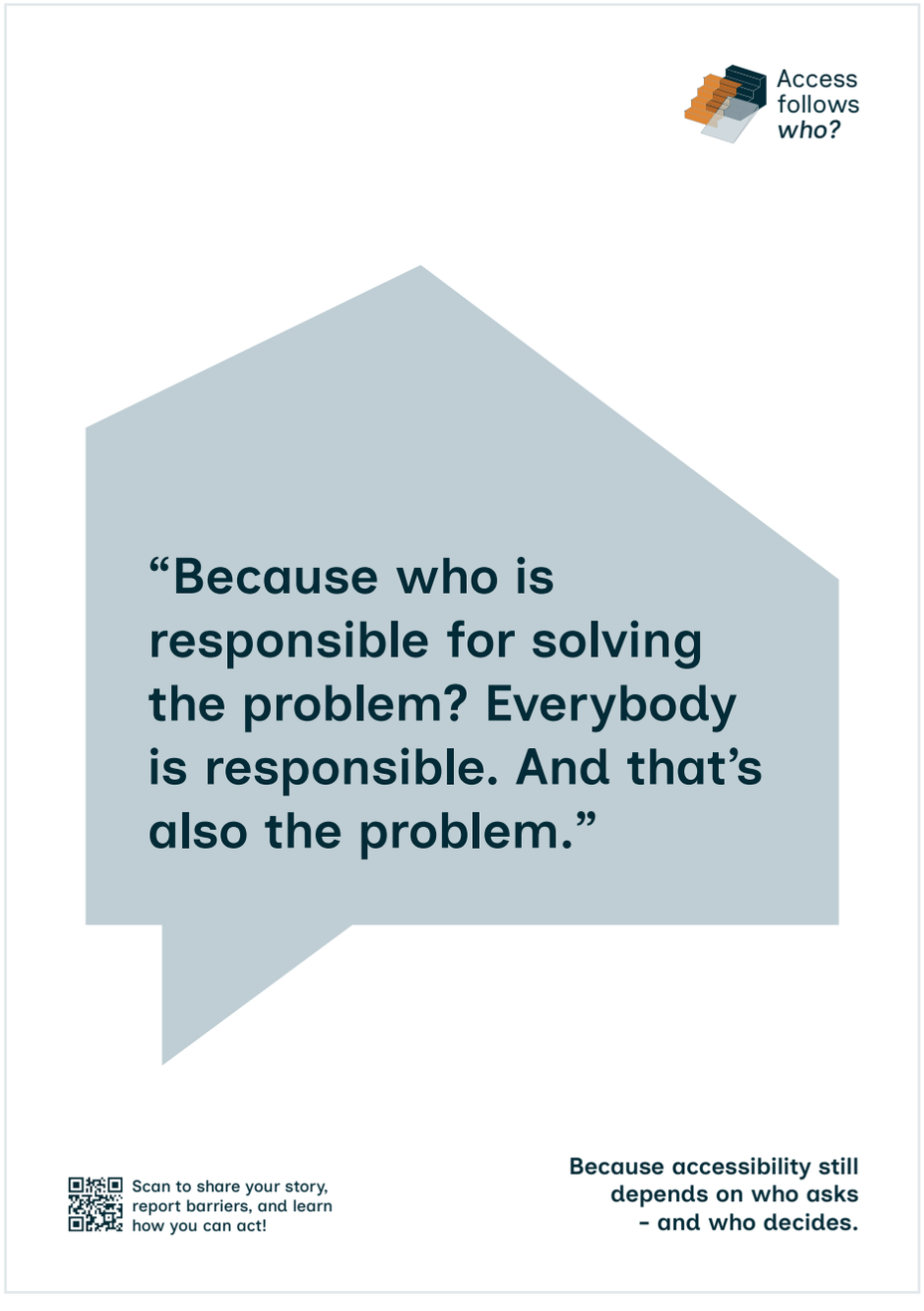



*Fig. 40: Access follows who? Poster 1*


*Fig. 41: Access follows who? Poster 2*

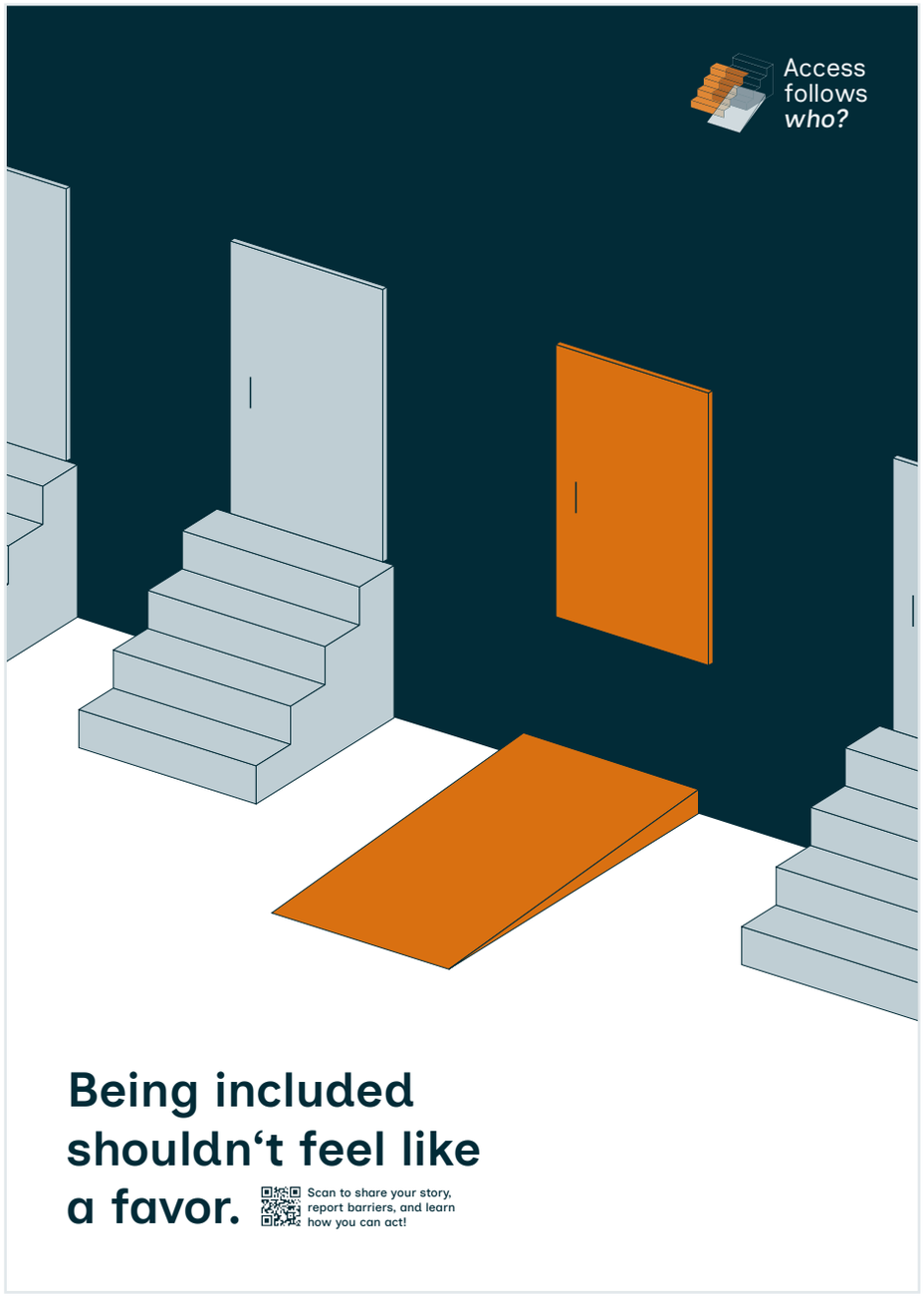



*Fig. 42: Access follows who? Poster 3*


*Fig. 43: Access follows who? Poster 4*


*Fig. 44: Access follows who? Poster 5*


*Fig. 45: Access follows who? Poster 6*


*Fig. 46: Mock-Up Website - The Intro*


*Fig. 47: Mock-Up Website - The Problem*

Scan the QR Code
to take a look at the
Website!

## Stories from Our Community

These voices from our TU Delft community reveal the real impact of accessibility mismatches— and why change is urgently needed.

Physical Access

"When my friends walk in the front door, I have to go around the back."

Separate entrances don't just change the route — they separate people from shared moments and make inclusion feel like an afterthought.

Information Gaps

"My class was moved to another building, but no one told me if it was accessible."

Lack of access information creates stress and uncertainty, even before you arrive.

Reporting Fatigue

"When I mention it, it won't be picked up. So I don't even bother."

The emotional cost of repeatedly asking for basic access shouldn't fall on those who need it most.

Design & Belonging

"Being included shouldn't feel like a favour."

True accessibility means designing for everyone from the start — not retrofitting for a few.

### Your Story Matters

Every experience shared helps us understand the full picture of accessibility at TU Delft. Whether it's a daily frustration, a moment of exclusion, or an idea for improvement—we want to hear from you.

Share Your Experience | Learn More About the Campaign

*Fig. 48: Mock-Up Website - Stories from Our Community*

## Report Barriers

Help identify and address accessibility barriers at TU Delft. Every report helps us understand where mismatches occur and how to remove them — whether they're physical, digital, informational, attitudinal, or systemic. This is part of building a clearer, more responsive reporting and feedback system for the whole university.

### Tell us about the barrier:

Name (Optional): Your name

Email (Optional): your.email@tudelft.n

Category: Select the type of barrier

Location: Building, room, or area where the issue occurs

Description: Describe the accessibility barrier or mismatch you've experienced...

Impact: How does this barrier affect you or others? What are the consequences?

Submit Report

We are working to improve the speed and clarity of follow-up. Your report will be reviewed, categorised, and routed to the responsible team. We'll update you on progress as soon as possible.

**Why Report?**

- Help identify barriers that might not be obvious to others
- Contribute to data-driven accessibility improvements
- Advocate for systemic change at TU Delft
- Create awareness and understanding

**What Happens Next?**

1. Your report is reviewed by our accessibility team
2. Issue is categorized and prioritized
3. Relevant departments are notified
4. Follow-up (if contact information provided)

**Need Immediate Help?**

For urgent accessibility needs, contact the Reporting Points at the Service Desks

Contact the Service Desk

*Fig. 49: Mock-Up Website - Report Barriers*


*Fig. 50: Mock-Up Website - Get Involved*

## 02 Uncomfortable Campus Tours

Instead of highlighting the sights of the university, these tours expose its barriers. Guided walks take participants along routes that students and staff with disabilities navigate daily, pointing out mismatches that often go unnoticed: inaccessible entrances, broken lifts, detours, or inaccessible ‚accessible‘ restrooms. A poster for this can be seen in Figure 51.

The format is deliberately unsettling. By walking the campus through the lens of exclusion, participants are invited to confront how the built environment, policies, and routines structure who belongs and who does not. The experience is not framed as a simulation, but as a critical re-reading of familiar spaces.

Tours are short, visible, and situated. They invite managers, staff, or decision-makers to encounter exclusion as part of their own campus, not as an abstract issue. In this way, they embody the activist principle of the matrix: making absence visible and unavoidable, turning the campus itself into a site of accountability.

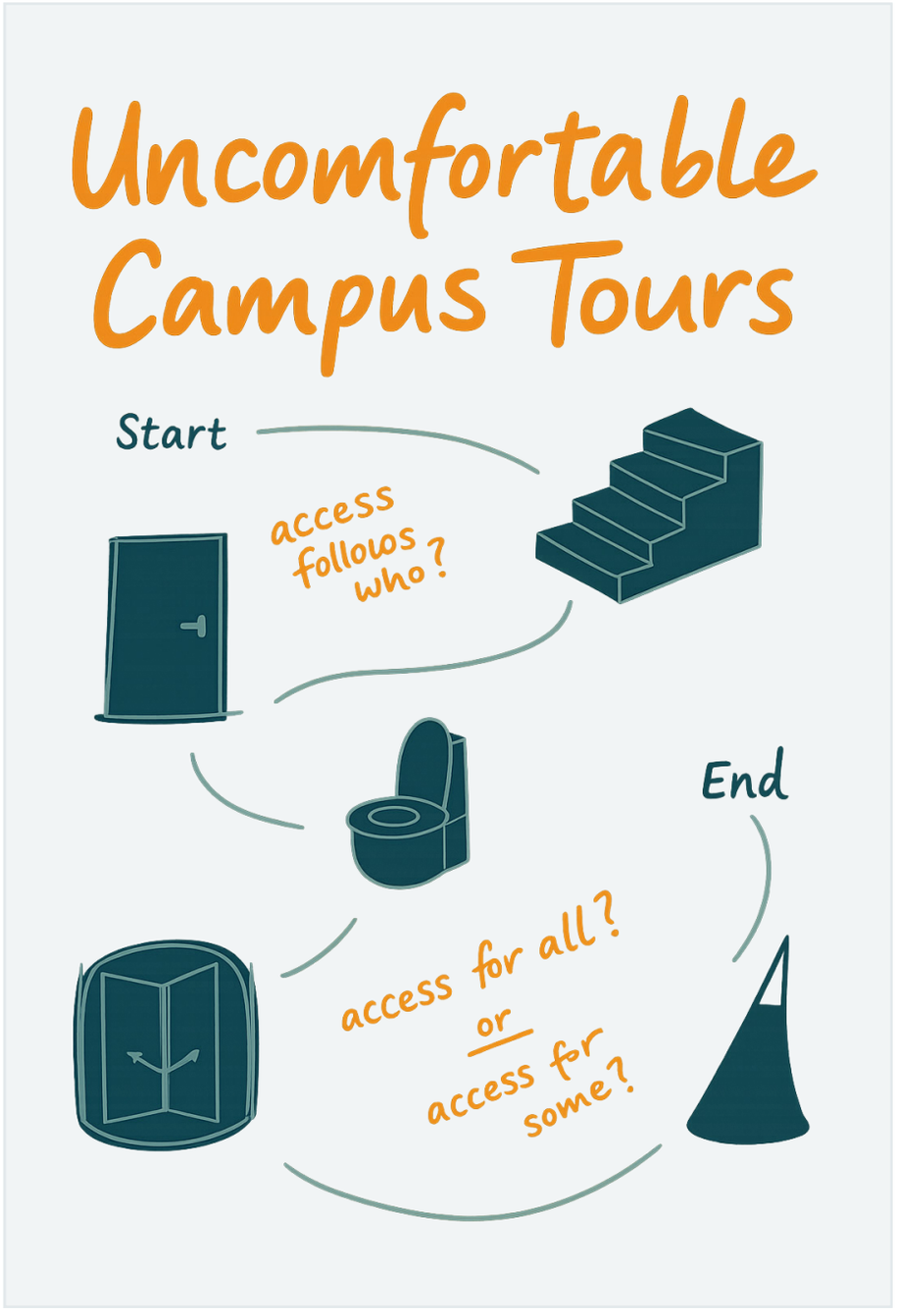



*Fig. 51: Uncomforable Campus Tour Poster*

### 03 Redirected Access at the Library

For one day, the main library entrance is closed and all users are redirected through the alternative accessible route, as illustrated in Figure 52. The aim is not inconvenience, but inversion: to let able-bodied users experience the detours that others navigate daily. The intervention creates a brief, embodied encounter with exclusion, not through explanation, but through movement.


*Fig. 52: Blocked Entrance at the Library*

### 03 Warning Exclusion Signs

Caution signs are modified to read “Exclusion Warning”, as shown in Figure 53, or “Mismatch in Progress”. Placed near inaccessible toilets, steep entrances, or other barriers, they reframe exclusion as a present risk rather than an invisible backdrop. The signs do not accuse, but they mark, challenging the idea that exclusion is inevitable or belongs only to those who experience it.


*Fig. 53: Exclusion Warning Sign*

### Approach and Contribution as an Entry Point

The campaign takes up the role assigned to the low agency × low understanding quadrant: activism and external pressure. Its stance is intentionally disruptive. Discomfort is used deliberately to break through indifference and shift the cost of inaction into public view. The tone is unapologetic and urgent, not neutral, it names exclusions, interrupts routine, and makes avoidance harder.

Authenticity depends on co-leadership by student-led groups such as StudAble. The campaign speaks from lived experience, not about it. TU Delft's role is supportive, offering resources, space, and visibility, without controlling the message or diluting the edge of the intervention. This aligns with the matrix principle of amplifying actors with high understanding but low formal power, rather than substituting their voice with institutional framing.

The tactics are non-violent and proportionate, but openly pressuring: occupying infrastructure, reframing signage, staging detours, and guiding tours that expose systemic choices. Ethical care sits alongside pressure: quotes are used with consent, identities are protected, and burdens of risk are not placed on disabled students. The aim is not harmony, but accountability, to move disengaged actors, publicly and concretely, toward institutional responsibility.

As an entry point for change, the campaign unsettles passive assumptions, interrupts routines, and makes exclusion present in everyday spaces. It shifts accessibility from an optional concern to an institutional responsibility, confronting actors who hold authority but lack awareness.

The next section introduces a complementary entry point: the Pathways of Access workshop. While the campaign applies activist pressure to disengaged actors, the workshop supports those in the medium agency × medium understanding quadrant, helping them turn partial insight into concrete action. Together, they respond to different leverage points surfaced by the matrix.

## The *Pathways of Access* Workshop

### Rationale and Position in the Matrix

The workshop responds to the needs of actors in the medium agency × medium understanding zone. They hold a critical position: close to implementation, familiar with operational processes, and sometimes already engaged in conversations about inclusion. Yet their involvement remains limited by uncertainty, about responsibility, time, reporting routes, or how their role meaningfully connects to accessibility.

In the matrix, this quadrant requires interventions that turn insight into action. Rather than more awareness-raising, the need is to clarify roles, provide tools, and enable responsibility-sharing. The Pathways of Access workshop was designed with this purpose.

### Aims of the Workshop

The workshop seeks to make agency visible in practice. Its aim is not to generate abstract empathy, but to situate accessibility within real roles, real moments, and real institutional processes. By grounding reflection in lived experience, it encourages participants to see how everyday decisions can quietly maintain exclusion. The focus is on enabling participants to identify where they can act directly, where they have indirect influence, and where systemic barriers require escalation or collaboration.

### Design Approach

To support the design, I developed a persona (Figure 54), Sam, based on recurring themes in interview data. Sam illustrates the complexity of navigating TU Delft as a student with a mobility impairment. Her experiences informed the scenarios used in the workshop.The structure avoids simulation or role-play. Participants remain in their actual job roles, responding not as imagined users but as institutional actors with real influence and constraints. Each scenario is anchored in a situated moment of exclusion and paired with a first-person quote, ensuring that lived experience is centred without requiring students to perform emotional labour in the session.

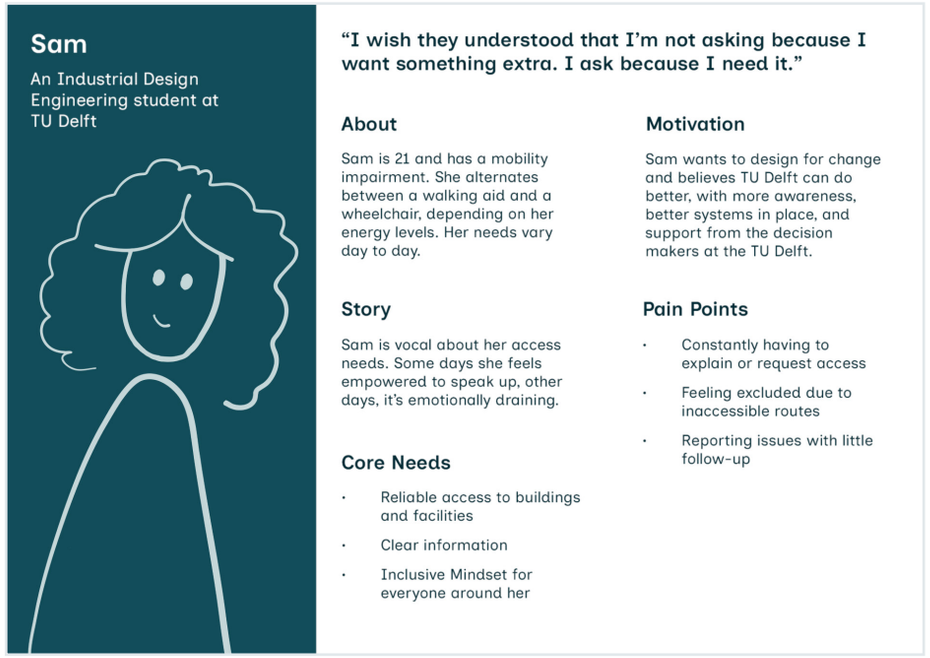



*Fig. 54: Sam Persona Card*

## → Core Elemenrs and Scenarios

The workshop guides participants through a mapped “day on campus” based on Sam’s experiences. Four scenarios illustrate different forms of exclusion, each tied to a mismatch between institutional systems and lived experience.

### 01 Arrival and Transit Fatigue

Limited transport options force reliance on overcrowded bus routes. For students with mobility impairments, the daily commute becomes a source of exhaustion.

*“I was in a wheelchair and could not get to campus because of the public transportation situation. Once you’re on campus it is alright, but to get there is such a hassle.”* - A survey participant

Participants consider: where does their role touch the journey, and how might institutional channels surface recurring issues even when responsibility lies outside TU Delft?

### 02 Toilet Threshold at IDE

A wheelchair-accessible toilet remains inaccessible due to a high threshold and poor handle placement, despite repeated reports.

*“If I should mention every barrier every day to every person, then I have a whole other job.”* - An Interviewee

Participants reflect on reporting and follow-up processes: who receives issues, who responds, and at what point does neglect become systemic?

### 03 Relocated Class Anxiety

A class is moved to another building without accessibility information, leaving uncertainty about how or whether it can be reached.

*“I found it hard to navigate buildings… I found the pages about the actual room and its facilities, but not so much where it lay on the floorplan.”* - A survey participant

Participants explore how information is communicated, where responsibility lies, and whether existing systems can accommodate access details.

### 04 Library Access and After-Hours Exclusion

A stairlift at the library is broken. The alternative entrance requires staff assistance, after 17h the service desk has to be informed to open the employee entrance. Students are left waiting while others enter freely.

*“It just creates a completely different vibe… it creates a sense of the individual being excluded from the main group or separated.”* - An Interviewee

Participants reflect on responsibility, acceptable workarounds, and the risks of temporary fixes becoming permanent.

### → Facilitation and Mapping

During the session, each scenario is marked on a large campus map. Participants annotate points of direct agency (green), indirect influence (yellow), and system-level blockage (red). The result is a collective surface that makes visible where responsibility is clear, where it is blurred, and where silence has settled. Clusters of inaction reveal not only isolated issues, but structural gaps in accountability.

To conclude, participants are invited to identify two actions: one that could be taken immediately within their role, and one that would require collaboration or structural change over time.

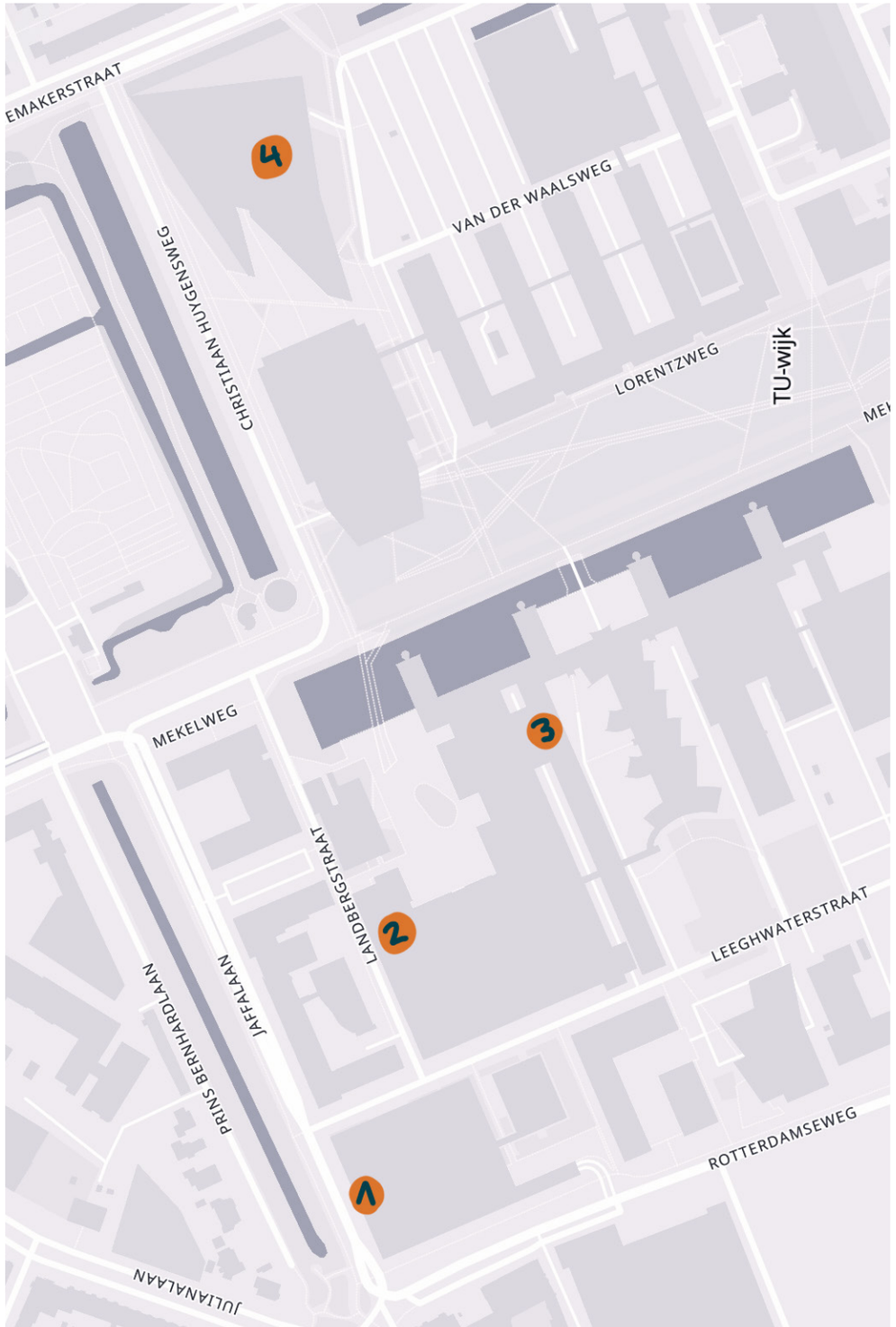



*Fig. 55: Campus Map with the Scenarios mapped*

### Approach and Contribution as an Entry Point

The workshop takes up the matrix's principle of turning insight into action. Its tone is pragmatic and constructive: the aim is not to shame or overwhelm, but to give actors the tools to connect accessibility directly to their role. Ethical care underpins the process: student quotes are used with consent, and participants engage with lived experience without placing the burden on disabled students themselves.

By focusing on institutional roles and constraints, the workshop encourages responsibility-sharing. It creates a safe but pointed space to recognise where action is possible, and where systemic change is needed. In this way, the Pathways of Access workshop functions as an entry point for change: it translates partial insight into concrete steps, strengthens role clarity, and opens space for collaboration.

As an intervention in the medium × medium zone, it complements the activist stance of the Access Follows Who? campaign. Together, they respond to different leverage points surfaced by the matrix: pressure for those who disengage, and enablement for those who are willing but uncertain.

## Interim Conclusion

This chapter introduced two entry points for change, each developed in direct response to the leverage zones identified through the Agency × Understanding Matrix. The Access Follows *Who?* campaign applies activist pressure where disengagement is strongest, unsettling indifference and making exclusion visible in everyday spaces. The Pathways of Access workshop, by contrast, supports those who are already partly engaged but lack clarity, turning partial insight into concrete action and responsibility-sharing.

Together, these interventions show how different forms of engagement are required for different positions within the system. Change cannot rely on uniform awareness-raising or abstract appeals to inclusion. Some actors need to be unsettled into recognition, while others need tools and guidance to act. By tailoring interventions to the realities of different groups, these entry points make it possible to move beyond fragmented effort toward more deliberate forms of institutional change.

The next chapter builds on this foundation by situating these entry points within a longer-term strategy. The roadmaps place them in sequence with other actions, showing how accessibility work at TU Delft might evolve over time.

## → Key Take-aways from Chapter 11

- Two entry points were developed in response to the leverage zones identified by the matrix.
- Access Follows *Who?* campaign (low × low): applies activist pressure, making exclusion visible and unsettling institutional disengagement.
- Pathways of Access workshop (medium × medium): enables actors who are willing but uncertain to turn partial insight into concrete action.
- Change requires different forms of engagement: some actors must be unsettled into recognition, others supported with tools and clarity.
- Together, these entry points lay the groundwork for more deliberate institutional change and feed directly into the roadmaps that follow.

# 12 The Roadmaps

The previous chapters introduced the Agency × Understanding Matrix and two targeted entry points for change: the Access Follows *Who*? campaign and the Pathways of Access workshop. These interventions made visible how accessibility is positioned within TU Delft today and where movement can begin. This chapter builds on that foundation by outlining how these and other initiatives can be sequenced over time to guide a broader institutional transformation.

To do so, I use the method of roadmapping (Simonse, 2024). Roadmapping provides a dynamic and visual way to connect current realities with a desired future, offering a narrative that makes complex change processes tangible and communicable. It shows not only what needs to happen, but when, and how different strands of action relate to each other. In this thesis, the roadmap is applied as a strategic guide: adaptive rather than prescriptive, designed to foster shared commitment, highlight interdependencies, and track progress over time.

The chapter first explains the rationale for using roadmapping as a methodology. It then introduces the four horizons that structure the transformation journey. By sequencing actions across these horizons, the roadmap provides a bridge from present conditions to a future vision of TU Delft as an institution that not only responds to barriers, but actively designs for justice, hospitality, and care.

## → Why Roadmapping?

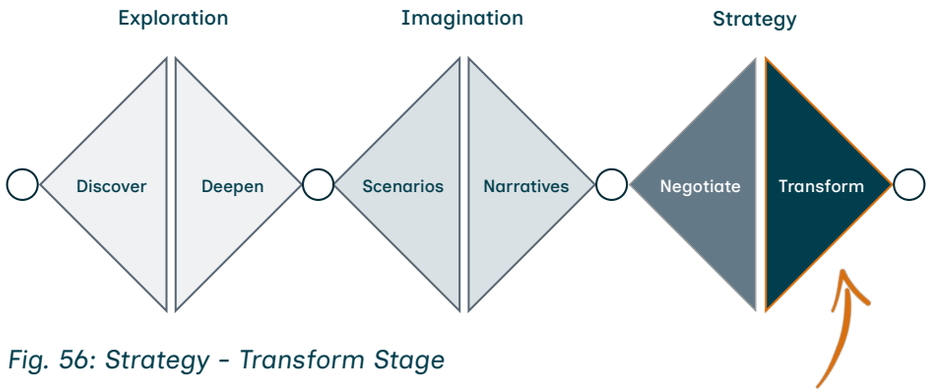



*Fig. 56: Strategy - Transform Stage*

In the structure of this thesis, roadmapping represents the final stage of the design futuring process: Strategy - Transform. Earlier chapters (7–8) introduced alternative futures and tested them through co-creation. Chapter 9 then synthesised the main research insights into a framework, showing where institutional shifts are needed. Building on this, Chapter 10 mapped how stakeholders are positioned within the system and what interventions they need, while Chapter 11 translated these insights into two entry points.

Roadmapping now brings everything together. It concludes the futuring process by connecting structural areas (the framework), stakeholder dynamics (the matrix), targeted interventions (the entry points) and the future vision into a phased strategy. In doing so, it shows not only what needs to change, but also when, and how responsibilities can be sequenced and aligned over time.

Roadmapping is defined as “a visual portray of design innovation elements plotted on a timeline” (Simonse, 2024, p.10). It enables organisations to devise creative and strategic responses to future challenges, moving beyond static, compliance-oriented checklists toward a dynamic, value-driven transformation.

This approach was chosen for TU Delft’s accessibility strategy for several reasons. First, roadmapping excels at making complex, long-term goals tangible and communicable. By visualising pathways with clear objectives, it provides a shared frame of reference that aligns diverse stakeholders around a common purpose. It also bridges the gap between bottom-up initiatives and top-down strategic priorities by offering a visual and co-created plan.

Second, the methodology is flexible and adaptive. A roadmap is not a rigid implementation plan, but a strategic guide that supports iterative learning and allows for adjustments as new challenges or opportunities arise. This is crucial for an evolving issue like accessibility, where needs and institutional understanding will shift over time. The roadmap structure makes long-term visions actionable by sequencing cultural and systemic change into manageable horizons.

Finally, roadmapping encourages reflection, framing accessibility as a value-driven and evolving institutional journey rather than a fixed destination. It provides a stable structure for strategic direction while creating room to explore future possibilities. This makes it possible to move from reactive problem-solving toward a proactive culture of inclusive design and belonging.

In this chapter, the roadmap is presented in two layers: a strategic roadmap, which outlines the four horizons of transformation, and a tactical roadmap, which specifies initiatives, collaborators, and enablers within each horizon. Together, these layers connect the abstract and the concrete, offering TU Delft a phased but adaptable pathway toward a culture of justice, hospitality, and care.

## The Strategic Roadmap

The Strategic Roadmap (Figure 57) provides a high-level overview of TU Delft's accessibility journey. It sequences change across four horizons, each building on the previous one. Together, they illustrate a pathway from today's fragmented efforts toward a future culture grounded in justice, hospitality, and care.

Designing Inclusive *Pathways*

An Accessibility Transformation Strategy for the TU Delft.

### Start the Conversation

Change starts with awareness. TU Delft sets the stage by making exclusion visible through stories and real-life examples. This phase builds a shared vocabulary about accessibility and gets people talking, sparking the emotional and personal connection needed to move culture.

### Put Structures in Place

TU Delft shifts from talk to action. Systems are created so accessibility issues don't fall through the cracks. Roles are assigned, reporting tools become available and easy to use, and staff know what to do.

### Embed Accessibility everywhere

Accessibility becomes embedded across all layers of TU Delft, from digital tools to faculty leadership. With infrastructure and ownership in place, accessibility becomes a visible and expected part of how the university operates.

### Designing for Justice, Hospitality & Care

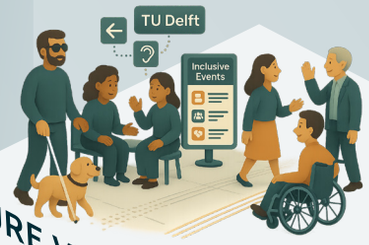
The TU Delft shifts from fixing barriers to anticipating them, designing for inclusion from the start.

This phase creates an adaptive, self-reflective culture where belonging is the baseline, not the bonus.

### Toward a Transformative Culture of Hospitality and Justice

Accessibility at TU Delft is not an afterthought, it is an institutional priority grounded in justice, hospitality, and accountability.

Responsibility is shared, supported by clear systems, and guided by lived experience. Rooted in the understanding that accessibility is never static, but always evolving, it is not just about following rules or meeting standards, it is about learning, adapting, and making space, especially when things don't fit neatly.







FUTURE VISION

| | HORIZON 1 | HORIZON 2 | HORIZON 3 | HORIZON 4 |
|---|---|---|---|---|
| | 2025 | 2026-2029 | 2029-2032 | 2032+ |
| Drivers | (In)visible Barriers and exclusion | Need for clear systems to address barriers efficiently. | Growing demand for consistency and clarity across faculties, services, and systems. | Institutional ambition to lead in inclusive innovation and future-ready design. |
| Enablers | Access Follows Who? Campaign & Workshops to foster awareness | Central reporting point, targeted staff training and clear prioritization criteria | Accessibility Officers, a central portal, and integrated guidelines ensure accessibility is built into everyday workflows. | A university-wide procedure, foresight tools, and co-design panels drive proactive, inclusive planning. |
| Impact | Accessibility becomes visible, emotionally resonant, and a part of daily conversation. | Responsibility for accessibility becomes actionable | Accessibility is institutionalized, visible across campus, and no longer dependent on individual champions. | Accessibility becomes a creative and anticipatory practice, and belonging is a design default, not a retrofit. |

Reactive Approach to Accessibility → Proactive Approach to Accessibility

*Fig. 57: The Strategic Roadmap*

## Start the Conversation

Change starts with awareness. TU Delft sets the stage by making exclusion visible through stories and real-life examples. This phase builds a shared vocabulary about accessibility and gets people talking, sparking the emotional and personal connection needed to move culture.


*Fig. 58: Horizon 1*

### → Horizon 1: Start the Conversation (2025–2026)

This horizon focuses on raising awareness and surfacing exclusion in visible, felt ways. The goal is to shift mindsets, establish a shared language, and spark institutional dialogue.

Key initiatives include:

- The Access Follows *Who*? campaign, with posters, spatial interventions, and uncomfortable campus tours that confront disengaged actors with everyday mismatches.
- The Pathways of Access workshops, enabling mid-level staff to map their roles against lived-experience scenarios and clarify responsibilities.
- Reporting channels at faculty service desks, co-created with student groups, to test low-threshold ways of surfacing accessibility issues.
- Early development of a prioritisation matrix and reporting criteria to lay the foundation for systematised follow-up.
- Sensitisation sessions and storytelling formats that build emotional awareness and shared vocabulary across faculties.

Expected impact

Accessibility becomes present in daily conversations, no longer invisible or optional. Recognition grows that mismatches are institutional, not individual, and the groundwork is laid for structural processes.

## Put Structures in Place

TU Delft shifts from talk to action. Systems are created so accessibility issues don't fall through the cracks. Roles are assigned, reporting tools become available and easy to use, and staff know what to do.

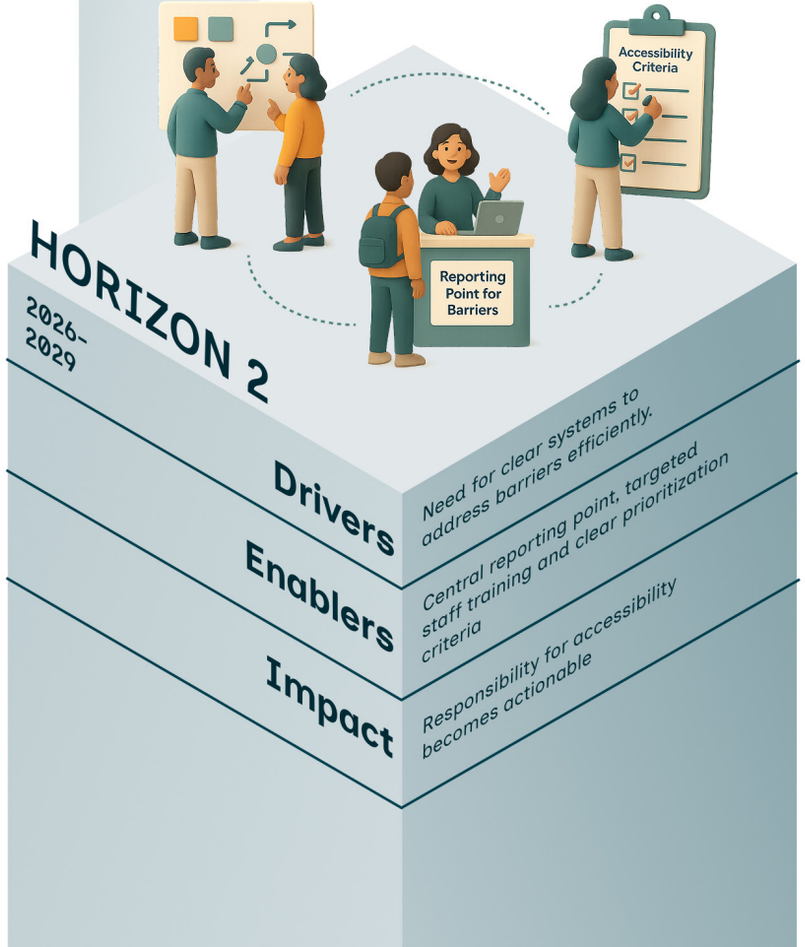



*Fig. 59: Horizon 2*

### → Horizon 2: Put Structures in Place (2026–2029)

This horizon transitions from awareness to systematic action, ensuring that barriers reported are acknowledged, tracked, and resolved. The focus is on building trust and accountability.

Key initiatives include:

- Making faculty service desks the primary entry point for reporting access barriers, supported by trained staff, digital intake tools, and clear signage.
- Establishing transparent follow-up protocols, including visible tracking dashboards and regular reports on "issues raised/issues resolved."
- Introducing micro-grants to support grassroots accessibility projects led by students and staff.
- Role-specific training for facilities, education, and policy staff, clarifying responsibilities across the reporting chain.
- Building a centralised knowledge base to collect best practices and provide tools for staff.

Expected impact

Reporting becomes trusted, responses are visible, and accessibility shifts from ad-hoc fixes to a systematic institutional responsibility.

**Embed Accessibility everywhere**

Accessibility becomes embedded across all layers of TU Delft, from digital tools to faculty leadership. With infrastructure and ownership in place, accessibility becomes a visible and expected part of how the university operates.

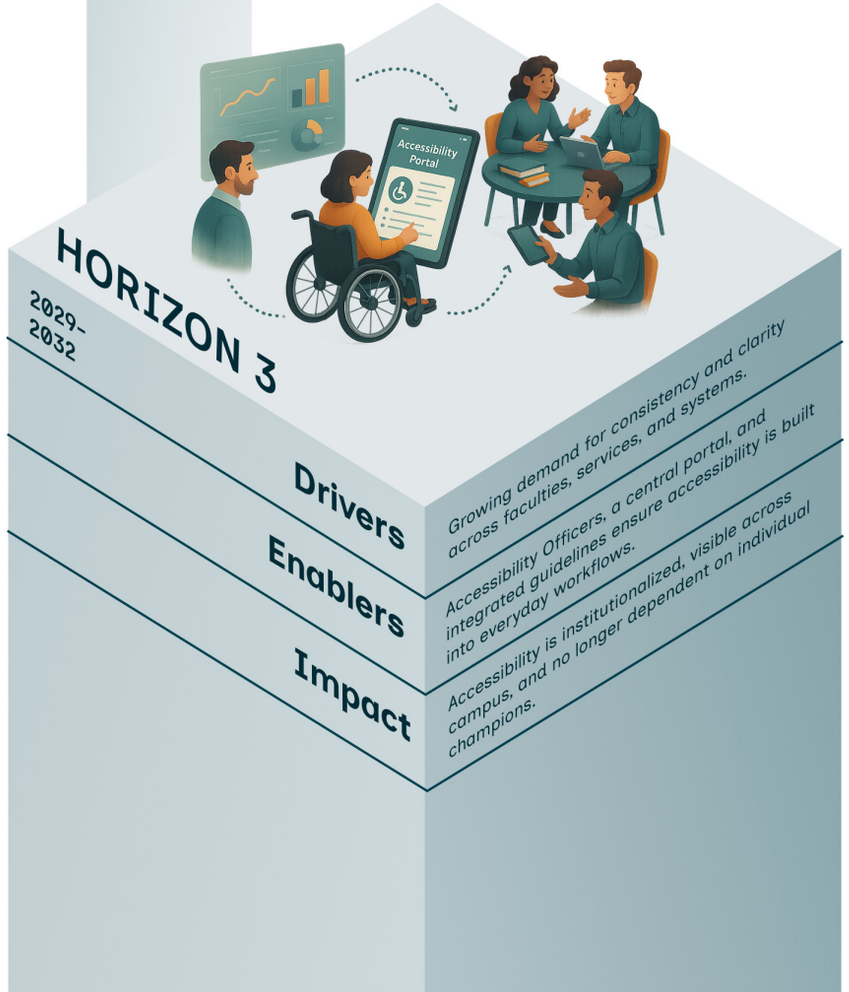



*Fig. 60: Horizon 3*

### → Horizon 3: Embed Accessibility Everywhere (2029–2032)

This horizon seeks to institutionalise accessibility into TU Delft's governance and daily operations, making it an expected and routinised practice.

Key initiatives include:

- Establishing a central Accessibility Office for coordination and monitoring.
- Appointing Accessibility Officers in each faculty and corporate offices to provide local expertise and consistency.
- Integrating accessibility into the Integrity and Social Safety reporting point, ensuring parity with other wellbeing concerns.
- Launching a comprehensive online portal, combining realtime updates, resources, and guidance.
- Conducting regular institutional audits and publishing the results to maintain accountability.
- Embedding accessibility requirements into project briefs, procurement, and renovation workflows.

Expected impact

Accessibility is embedded across the university. It becomes visible in governance structures, decision-making processes, and institutional routines, no longer dependent on individual champions.

**Designing for Justice, Hospitality & Care**

The TU Delft shifts from fixing barriers to anticipating them, designing for inclusion from the start.

This phase creates an adaptive, self-reflective culture where belonging is the baseline, not the bonus.

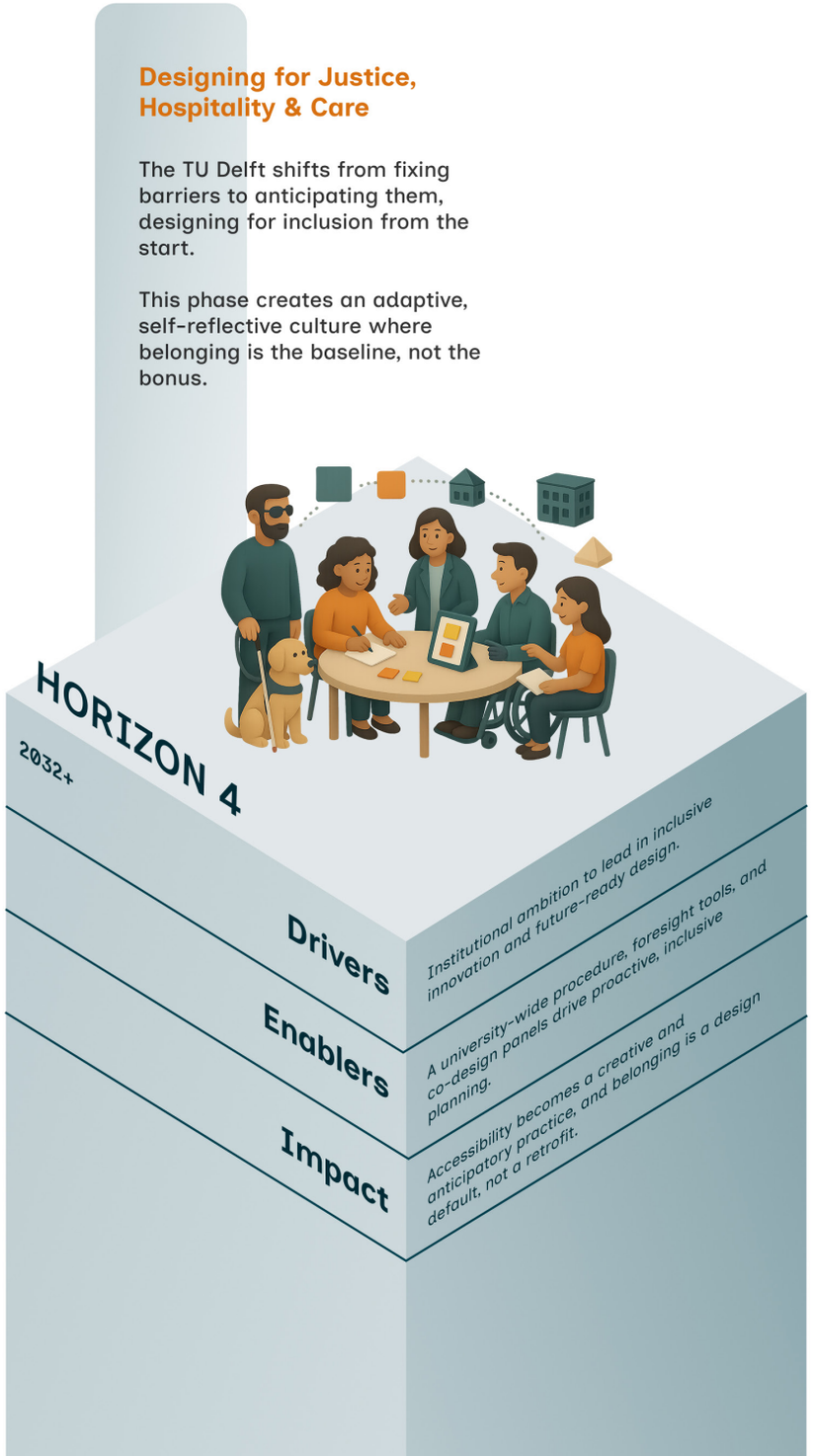



*Fig. 61: Horizon 4*

### → Horizon 4: Designing for Justice, Hospitality & Care (2032+)

This horizon builds on Chapter 9's vision of hospitality and justice as TU Delft's long-term direction. Justice means recognising exclusion as systemic and redistributing responsibility, hospitality means creating spaces that welcome, and care frames accessibility as a continuous practice, not a technical fix. Horizon 4 makes these values concrete by embedding them into everyday structures and routines. The horizon embodies a long-term cultural shift toward anticipatory design and shared responsibility. Accessibility becomes a creative, future-oriented practice, grounded in values of justice, hospitality, and care.

<u>Key initiatives include:</u>

- Creating paid lived-experience panels to guide decision-making and evaluation.
- Developing a TU Delft Inclusive Design Toolkit, tailored for education, research, and campus planning.
- Embedding accessibility into foresight and strategic planning processes.
- Installing real-time feedback dashboards and permanent feedback stations across campus.
- Institutionalising reflection practices

<u>Expected impact</u>

TU Delft becomes proactive rather than reactive, anticipating mismatches and continuously evolving. Accessibility is recognised not only as compliance, but as an expression of care, justice, and shared transformation.

### Toward a Transformative Culture of Hospitality and Justice

Accessibility at TU Delft is not an afterthought, it is an institutional priority grounded in justice, hospitality, and accountability.

Responsibility is shared, supported by clear systems, and guided by lived experience. Rooted in the understanding that accessibility is never static, but always evolving, it is not just about following rules or meeting standards, it is about learning, adapting, and making space, especially when things don't fit neatly.

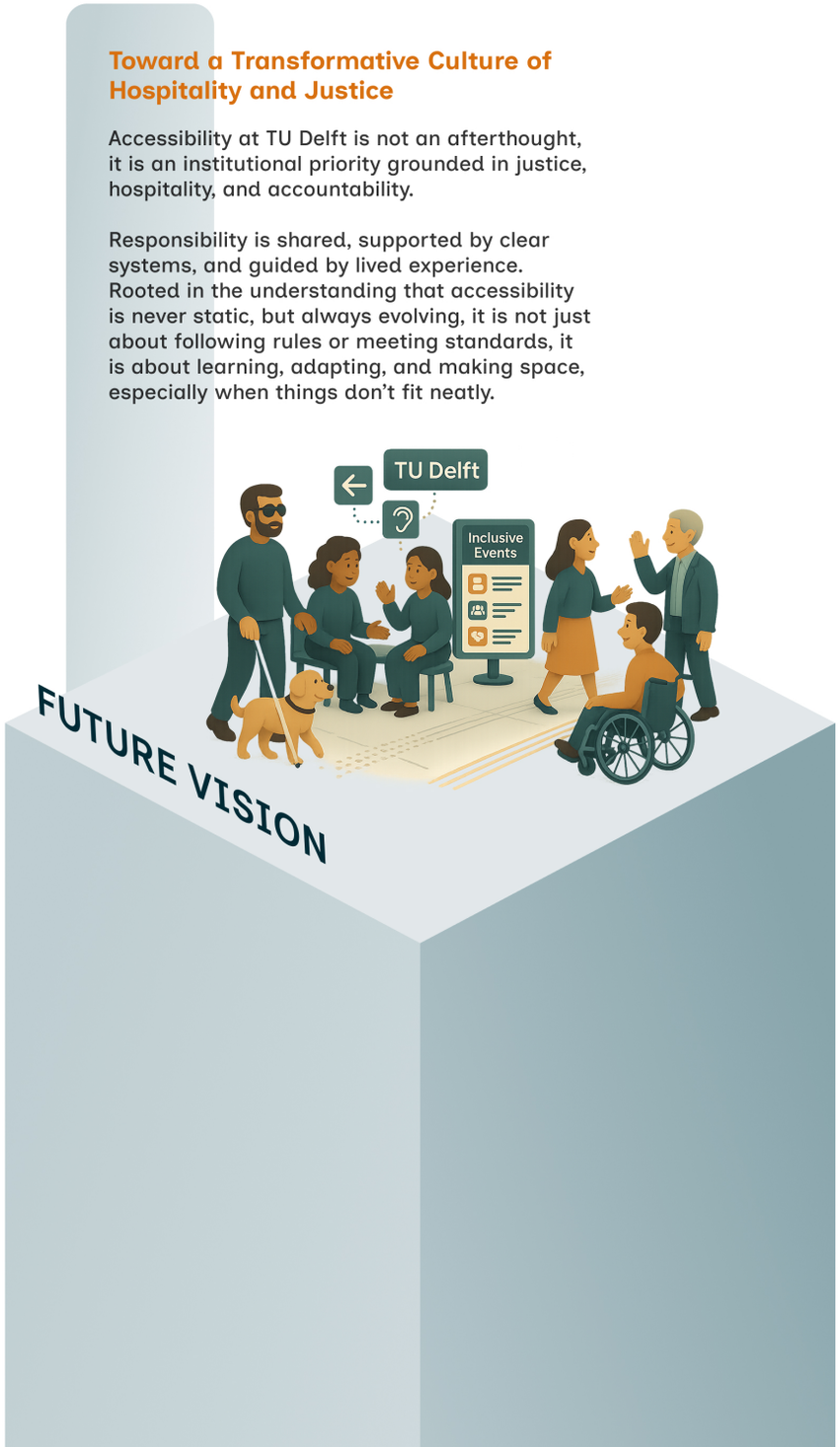



*Fig. 62: The Future Vision*

### → The Future Vision: Towards a Transformative Culture of Hospitality and Justice

The long-term orientation of the roadmap is not toward a finalised state, but toward a culture. In this vision, accessibility is no longer an afterthought or a compliance obligation, but an institutional practice grounded in justice, hospitality, and care.

- **Justice** means recognising exclusion as systemic and redistributing responsibility across the institution.
- **Hospitality** means creating spaces that actively welcome diversity, not merely accommodate it.
- **Care** means treating accessibility as a continuous practice of attention, adaptation, and responsibility.

In this future, TU Delft anticipates mismatches rather than reacting to them. Accessibility is embedded in governance, systems, and everyday decisions, supported by lived experience and distributed across all levels of the university.

The vision is not static or finished: it remains adaptive, reflective, and responsive to changing needs. TU Delft becomes known not only for its technical innovation, but for the way it designs inclusive futures, practising accessibility as an institutional ethic rather than promising it as an aspiration.

## The Tactical Roadmap

While the Strategic Roadmap sets out the four horizons of change, the Tactical Roadmap (Figure 63) translates these horizons into concrete initiatives and the collaborators and enablers that support them. It shows how actions can be sequenced over time and which groups need to be engaged to make progress possible.

Rather than prescribing fixed responsibilities or assigning lead actors, the Tactical Roadmap highlights the web of support and coordination required within each horizon. In this way, it provides a structured surface for accountability and iteration, while leaving room for roles and responsibilities to be clarified as the process unfolds.

# Designing Inclusive *Pathways* Tactical Roadmap

| | 2025 Horizon 1<br>**Start the Conversation** | 2026 Horizon 2<br>**Put Structures in Place** | 2029 Horizon 3<br>**Embed Accessibility everywhere** | 2032+ Horizon 4<br>**Designing for Justice, Hospitality & Care** |
|---|---|---|---|---|
| | Make exclusion visible, shift emotional awareness, and spark conversation across TU Delft. | Move from awareness to infrastructure. Make accessibility actionable, visible, and supported across TU Delft. | Accessibility is institutionalized, consistently visible, and no longer dependent on advocacy or awareness alone. | Move from embedded accessibility to designed belonging. TU Delft shifts into a phase of inclusive innovation. |
| **Overview** | Change starts with awareness. TU Delft sets the stage by making exclusion visible through stories and real-life examples. This phase builds a shared understanding about accessibility and gets people talking, sparking the connection needed to move culture. | TU Delft shifts from talk to action. Systems are created so accessibility issues don't fall through the cracks. Roles are assigned, reporting tools become available and easy to use, and staff know what to do. | Accessibility becomes embedded across all layers of TU Delft, from digital tools to faculty leadership. With infrastructure and ownership in place, accessibility becomes a visible and expected part of how the university operates. | The TU Delft shifts from fixing barriers to anticipating them, designing for inclusion from the start. This phase creates an adaptive, self-reflective culture where belonging is the baseline, not the bonus. |
| **Drivers** | (In)visible Barriers & Exclusion | Need for clear systems to address barriers efficiently | Growing demand for consistency and clarity across all faculties, services, and systems | Institutional ambition to lead in inclusive innovation and future-ready design |
| |  |  |  |  |
| **Key initiatives** | → **Make Exclusion Visible**<br>Access follows *who?* campaign using TU Delft stories + interventions in high-traffic areas<br>→ **Build Emotional Awareness**<br>empathy-based sensitization workshops for staff<br>→ **Foster Shared Understanding**<br>Develop common frameworks, narratives, and visual identity so staff, students, and leadership align on what accessibility means and how to act on it<br>→ **Lay the Groundwork for Reporting Systems**<br>Identify and connect existing reporting channels as a precursor to improvements in Horizon 2 | → **Pilot Reporting & Feedback System**<br>Test a reporting process with service desks, track resolution times and user satisfaction<br>→ **Develop Prioritization Criteria for Decision-Making**<br>Co-create a transparent matrix to rank and respond to accessibility issues<br>→ **Deliver Targeted Staff Training**<br>Develop & deliver role-specific training for service desks, faculty admin, and mid-level management to improve response to accessibility concerns<br>→ **Establish Transparency Practices**<br>Publish summary reports of accessibility requests and resolutions to build trust and visibility<br>→ **Introduce Accessibility Micro-Grant Scheme**<br>Enable students & staff to propose/pilot grassroots accessibility innovations with funding and support | → **Establish Accessibility Office & Deploy Accessibility Officers (AOs)**<br>Establish an office to coordinate strategy & assign trained AOs in all faculties, offices and services with clear mandate and accountability lines<br>→ **Launch Accessibility Portal**<br>Provide a centralised platform for resources, reporting, and accessibility information<br>→ **Integration into Integrity Reporting Point**<br>Expand Reporting Point to include accessibility concerns, building one central reporting point for all issues<br>→ **Institutionalise Regular Audits**<br>Conduct audits across physical, digital, and service domains, publish results, and track improvements<br>→ **Integrate Accessibility into Project Workflows**<br>Embed accessibility criteria and review steps into all project templates and approval processes | → **Embed Accessibility in Foresight & Campus Planning**<br>Ensure all long-term infrastructure and service planning fully integrates accessibility considerations from the outset<br>→ **Institutionalise Lived Experience Panels**<br>Maintain paid panels of students, staff, and community members to guide design, policy, and planning<br>→ **Develop Inclusive Design Culture and Tools**<br>Create tailored design toolkits, training, and rituals that make inclusive design the default across disciplines<br>→ **Celebrate Accessibility Achievements**<br>Install visible markers, host recognition events, and share success stories to reinforce accessibility as a valued and celebrated part of TU Delft's identity |
| **Collaborators** | D&I Office, StudAble, Horizon, CeeSAA<br>Faculty Management & Service Desks<br>Faculty of IDE<br>TU Delft Corporate Offices (Communication, ESA, Finance, HR, ICT, Legal, Strategic Development, Innovation & Impact Centre)<br>Campus Real Estate & Facility Management | | | |
| **Resources** | Access to TU Delfts internal communication channels | Support for data analysis & criteria development | Governance and policy capacity for workflow integration | Long-term support for for inclusive design initiatives |
| | Access to Budget & Funding<br>Access to spaces, equipment and staff | | | |
| **Value** | Awareness and emotional connection<br>Recognition of accessibility as a shared responsibility<br>Storytelling & dialogue strengthens peer-to-peer learning | Evidence-based decision-making for accessibility<br>Building internal capability before formal role creation<br>Collaboration to create shared, applicable standards<br>Early transparency to build trust and visibility | Accessibility as a baseline in all decisions and designs<br>Accountability and transparency as cultural norms<br>Continuous improvement driven by measurable outcomes | Anticipatory design that plans for diversity from the start<br>Accessibility as a visible part of institutional identity<br>Hospitality, and care as guiding principles in all decisions |
| **Outcome** | Accessibility becomes a visible and discussed topic<br>Community begins using a shared language for access<br>Early alignment on next steps for system change | Tested and refined reporting system ready for scale-up<br>Agreed prioritization criteria to guide decision-making<br>Staff trained to respond effectively to accessibility issues<br>Early public transparency on accessibility actions | Ownership of accessibility through AOs<br>Regular audits drive improvement and trust in the system<br>Improved visibility, ease of access, and user confidence in accessibility resources and reporting | Accessibility embedded in all planning processes<br>Guidance from lived experience in decision-making<br>Inclusive design sustained across the university<br>TU Delft as a reference point for inclusive design |

## FUTURE VISION

### Toward a Transformative Culture of Hospitality and Justice


Accessibility at TU Delft is not an afterthought, it is an institutional priority grounded in justice, hospitality, and accountability.

Responsibility is shared, supported by clear systems, and guided by lived experience.

Rooted in the understanding that accessibility is never static, but always evolving, it is not just about following rules or meeting standards, it is about learning, adapting, and making space, especially when things don't fit neatly.

*Fig. 63: The Tactical Roadmap*

## Interim Conclusion

The Roadmap brings the threads of the thesis together. Where earlier chapters explored alternative futures, synthesised a framework, mapped stakeholders, and identified entry points, the roadmap sequences these insights into a phased strategy for institutional change.

The roadmap is not a fixed plan, but a structure for alignment: beginning with awareness, moving through systems and governance, and pointing toward an anticipatory culture of care and justice. Its value lies in connecting research findings with strategic orientation, showing how diverse initiatives can build on each other over time, and clarifying the conditions for movement across the university.

In this way, the roadmap marks the conclusion of the design futuring process. It bridges vision and practice, offering TU Delft both orientation and accountability as it works toward an accessible future grounded in justice, hospitality, and care.

## Key Take-aways from Chapter 12

- The roadmap concludes the design futuring process, sequencing insights from research, the framework, the matrix, and entry points into a phased strategy.
- It operates on two layers: a strategic roadmap and a tactical roadmap.
- The roadmap is not a fixed plan, but a structure for alignment, supporting adaptation and iteration over time.
- Its value lies in connecting vision and practice: from awareness → systems → governance → culture.
- The long-term orientation is toward a culture of justice, hospitality, and care, where accessibility is embedded as a continuous institutional practice.

# 13 The Evaluation

In the previous chapters, I developed the framework, roadmaps, and entry points as pathways to strengthen accessibility at TU Delft. While these outcomes were grounded in research and co-creation, their relevance and feasibility required testing with different perspectives across the university.

To address this, I organised a series of evaluation sessions with four groups: simulated stakeholder personas, StudAble, four service desks, and the Strategic Foresight & Innovation Unit. Each session was designed to surface feedback specific to their role, whether lived experience, operational practice, or strategic positioning, while keeping the focus on the same set of outcomes.

Alongside these sessions, an attempted library intervention that was deemed too disruptive revealed how institutional processes constrain such actions, while underscoring the role of activism in making exclusion visible.

This chapter presents the insights from these evaluations. They highlight both validation and critique.

Taken together, these sessions provide a multi-layered view on how the proposed pathways could be received and embedded within TU Delft. They are not definitive answers, but critical reflections that help sharpen the project's outcomes and clarify the conditions under which they may lead to lasting change.

## Evaluation Approach

The evaluation was designed as a multi-layered process to test the outcomes of this project against different perspectives across TU Delft. Instead of one uniform method, each activity was tailored to the context of the participants, while keeping a consistent focus on the framework, roadmaps, and entry points.

The stakeholder persona session created a simulated setting where fellow students enacted composite personas developed from earlier research. This approach was chosen as many stakeholders were unavailable during the summer break, making direct engagement difficult at this stage. Using storyboards and touchpoints, participants engaged with the framework and roadmap from the perspective of their assigned roles. The Agency × Understanding Matrix was applied as a reflection tool, before and after the discussion to trace shifts in awareness and agency, making visible how different entry points might influence stakeholder positions over time.

The evaluation interview with StudAble brought in the perspective of student advocacy. Here, the reflection matrix, the roadmaps and entry points structured the conversation, testing the clarity and resonance of the roadmaps with an actor deeply connected to lived experiences of accessibility. The session was also valuable to align on the role that StudAble could play in advancing accessibility efforts, both as an independent association and as a partner to institutional actors.

The service desk consultations examined the operational side of the strategic roadmap. These conversations surfaced how proposed changes intersect with existing service processes and responsibilities. The reflection matrix again provided a way to ground these discussions in terms of awareness and capacity to act.

Finally, the session with the Director of Strategy Development, and an employee of the Strategic Foresight & Innovation Unit gave insight on the methods used and positioning of this project within the university's strategy. This perspective helped test the alignment of the outcomes with institutional ambitions, raising questions of scalability, governance, and long-term embedding.

Together, these activities brought in complementary perspectives: simulated stakeholder dynamics, student advocacy, service operations, and strategic alignment. In combination, they provided a robust basis for reflecting on the feasibility and relevance of the proposed pathways.

In parallel, I also explored the feasibility of testing one intervention in real life: temporarily blocking the main entrance of the TU Delft Library to redirect visitors through the "accessible" entrance. Although the proposal was declined, the process itself functioned as an evaluation activity. It surfaced how institutional procedures constrain disruptive actions, while underscoring the value of activism in making invisible barriers tangible.

## → The „Stakeholders“ Evaluation Session

→ Due to the summer break, a simulated evaluation was conducted to test the outcomes with stakeholder perspectives. Fellow students enacted different personas (Appendix J), which were developed from earlier research and based on the interviews with the stakeholders. The session followed a facilitation guide with a pre/post Agency × Understanding mapping (see Appendix K), a focused discussion on the framework and roadmap, and storyboarded near-term scenarios (status quo, campaign launch, workshop, six months later (see Appendix L). Participants first placed their persona on the matrix, engaged with the framework and roadmap, walked through the storyboard scenarios, as shown in Figure 64, then re-mapped their persona to trace shifts in understanding and agency. The session foregrounded trade-offs, ownership, and feasibility in TU Delft’s context.

→ **Insights**

- **Framework → clarity and desire for actionability**

  Participants found the framework understandable and relevant, yet asked for more direction on how it could be applied in practice and who would hold responsibility.

- **Roadmap → inspiring yet ambitious**

  The strategic horizons were considered useful as a shared reference, but the second horizon was seen as ambitious. Participants stressed the importance of indicating accountable owners and dependencies to make the roadmap more actionable.

- **Campaigns and interventions → experiential elements stood out**

  While posters were recognised as a visible first step, participants highlighted that experiential interventions had

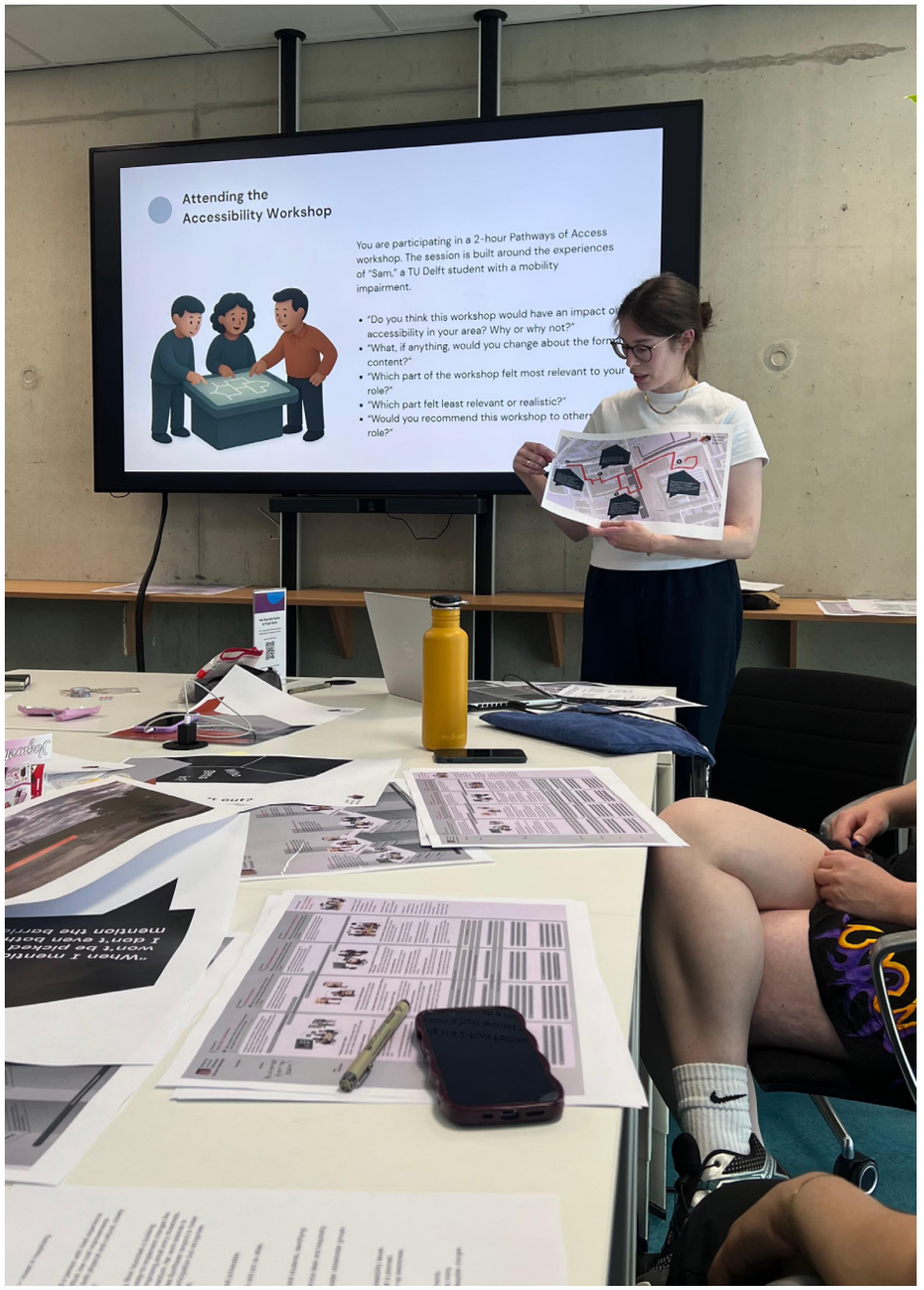



*Fig. 64: Walking through the Pathways of Access Workshop*

stronger potential to shift mindsets. One remarked, *"It's harder to ignore when it's so on the nose. I really like this one for that reason."*

- **Workshops → seen as particularly valuable**

  The "Pathways of Access" workshop around the persona Sam was considered more impactful than a broad awareness campaign. As one participant put it, *"This would be more relevant than the awareness campaign, because it is also awareness, right?"*

- **Reporting flow → welcomed but in need of refinement**

  The idea of a reporting pathway was strongly supported, though participants stressed the need for online options, photo uploads, QR codes, and feedback loops, rather than relying only on physical desks.

- **Targeting and governance → balance between power and inclusivity**

  Participants suggested focusing first on those with power to act, while still giving students a visible way to contribute. They also acknowledged the need to make trade-offs and decision criteria explicit.

- **Agency matrix → useful but debated**

  The Agency × Understanding Matrix proved engaging, sparking a rich discussion on whether "agency" should combine power and willingness or be separated. While some argued for prioritising power, others highlighted that high-power actors often lack willingness, making the current framing useful to capture that tension.



- **Overall impressions**

  Beyond specific feedback, participants validated the clarity and value of the project. One noted, *"The fact that we just came in and had so much feedback already shows you that your project is very understandable. It has a lot of value."* Another remarked, *"You are enabling them a starting point... you've done a lot of stuff."*

### → Implications for This Project

The session confirmed the clarity and relevance of the framework, but highlighted the need to make ownership explicit and to refine the roadmap's ambition into more actionable steps. It reinforced the value of experiential interventions and workshops over static campaigns, and showed that reporting flows need digital options and feedback loops to build trust.

## → StudAble Evaluation Session

StudAble was included in the evaluation as a key voice for student advocacy and lived experience. The aim was to test the clarity and resonance of the framework and roadmaps from their perspective, and to explore how the they might contribute to institutional change within the Horizons.

The conversation began with positioning StudAble on the Matrix, followed by a discussion of the roadmap and entry points. Particular attention was given to Horizon One, as this phase offers opportunities for collaboration on awareness and engagement. Later horizons were reviewed to reflect on longer-term roles and responsibilities. As a last step StudAble was positioned again on the matrix to reflect if the interventions would change their position.

### → Insights

- **StudAble's position within TU Delft**

  StudAble described itself as having strong understanding of accessibility but only partial agency. They often gather student concerns but lack clear routes into decision-making: *"We have some agency in how we can influence stuff, but often it can be hard... you don't really know where to go from there"*. At the re-mapping StudAble was mapped high-understanding and high-awareness.

- **Awareness interventions**

  Posters can raise visibility but risk being overlooked without follow-up: *"Of course, always... it's just another poster next to everything else"*. The disruptive interventions were seen as more impactful: *"It's a very direct way to make everyone realize what the problem is"*. However, credibility was noted as crucial: if TU Delft itself highlights barriers without fixing them, this risks undermining trust. It was discussed that StudAble could take on a role as co-lead in shaping and delivering the interventions, bringing lived experience to the forefront while the institution ensures visible follow-up action.

- **Workshops and training**

  The Pathways of Access Workshops for mid-level staff were valued as a way to build willingness and practical knowledge. Training and clear criteria could help staff navigate competing demands, and onboarding was suggested as a way to gradually shift mindsets.

- **Reporting and information**

  The central reporting point was described as essential: *"That would definitely help a lot."* Reliable, updated information on building accessibility (routes, entrances, closures) was seen as a simple but high-impact improvement: *"If I had all the time, I would only focus on that because that will help so many people already so much"*.

- **Structures and governance**

  Instead of new offices, StudAble favoured embedding accessibility into existing structures such as Diversity & Inclusion. They stressed that responsibility should be distributed across faculties and services: *"It feels more efficient to really have it integrated everywhere"*. While this reflects some skepticism toward a stand-alone office, it aligns closely with the roadmap's proposal to embed Accessibility Officers across faculties and services, coordinated through a central hub.

- **Lived experience and recognition**

  Initiatives should always be co-designed with students with disabilities: *“Never do something for us without us”.* While students can flag problems, the university must take responsibility for solutions. StudAble also stressed that their involvement should be recognised and compensated, rather than treated as voluntary.

- **Long-term vision**

  The roadmap’s ambition was supported, though sequencing was questioned. Inclusive design in new projects should already be standard practice: *“Everyone, when something new is done, the writing is already there: okay, we should make it accessible*”. Greater accessibility was also seen as a potential attractor of more students with disabilities, underlining the need for sustainable systems of support as numbers grow.

### → Implications for This Project

The session emphasised that visibility measures must be paired with credibility and follow-up, otherwise they risk undermining trust. It confirmed the importance of embedding accessibility into existing structures, while recognising and compensating lived experience as a driver of change.



## → The Service Desk Evaluation Sessions

### → Approach

Service desks were included in the evaluation as they are the first point of contact for many students and staff navigating the campus. The goal was to test whether positioning them as offical central reporting points for accessibility barriers is feasible and to assess their willingness and capacity to take on this role. Conversations were held with the service desks of IDE, ME, Pulse, and TPM. Each desk was asked to map itself on the Agency × Understanding Matrix and then respond to the proposed role of service desks as barrier reporting points, as described in the roadmaps. The Service Desk Employee at ME, preferred not to map them, referring that their supervisor should do it. Discussion also covered training needs, potential workload, and the future integration of reporting into a central portal.

### → Insights

- **Position on the matrix**

  All desks placed themselves in the quadrant of high agency with medium understanding, reflecting their role as frontline actors who are approachable and willing to help, but not always confident in their knowledge of accessibility. IDE remained in this position before and after the session, while Pulse and TPM both shifted upward to high understanding × high agency, showing that even limited discussion can raise their confidence and awareness. The ME service desk did not map themselves, explaining that their supervisor should be the one to do so, but described their role as the first line of contact, consistent with the other desks.

- **Feasibility of reporting role**

  All four desks recognised the logic of acting as reporting points. IDE noted: “*We are here between 8 and 5.30. We*

*will do what we can*". ME added: "*We're usually the first people students see… I see potential in us making a ticket to Topdesk*". TPM similarly described the desk as "*the first line for things that happen in the building*". Pulse confirmed: "*I think it's a very good idea. I think it's part of the job for sure*".

- **Integration with future systems**

  Several desks valued the idea of including the reporting into the social safety reporting point, creating a central reporting point but stressed the importance of keeping the desks as human entry points. A hybrid of online portal plus personal contact was considered best.

- **Training and awareness**

  IDE described training as useful "additional" support, while Pulse noted: "*If you understand better, you also become more agent*". TPM suggested workshops led by people with disabilities to bring lived experience into staff development. The mapping shifts at Pulse and TPM indicate that such training can indeed raise understanding while reinforcing their sense of agency.

- **Limitations and challenges**

  IDE noted that while they can log issues, *"it's not our responsibility"* to ensure follow-up. TPM highlighted a communication gap for students: "They don't know the way [to report issues]". Together, this suggests desks need clear paths and better visibility of their role in accessibility reporting.

→ **Implications for This Project**

The feedback showed that service desks are willing and able to act as reporting points, but only with clear mandates, training, and visible and clear systems. They underlined that decentralised frontline roles can increase agency, yet responsibility must be supported by central systems and accountability structures. This points to the need for a hybrid model of local entry points and central coordination.

## → The Strategic Foresight & Innovation Unit Session

To further test and position the strategic and tactical roadmaps, I organised an evaluation session with the Director of Strategy Development and an employee of the Strategic Foresight & Innovation Unit. Prior to the meeting, the participants received the roadmaps and chapter 7-9, and were invited to give their thoughts on them. During the session, they provided feedback on the framing of the scenarios, the institutional fit of the roadmaps, and the underlying assumptions about cultural change and responsibility.

### → Insights

- **Validation of Methods**

  The participants confirmed the strength of combining multiple futuring tools (Futures Cone, 2×2 Scenario Matrix, Experiential Futures Ladder). They described this layering as very strong, since it both structures possible futures and makes them tangible and „*less threatening*“ through narratives such as the stories of Sam and Bo. The axes chosen for the 2×2 scenario matrix (framing of accessibility and responsibility for accessibility) were seen as well-chosen and relevant.

- **Framing of Scenarios**

  At the same time, questions were raised about the tone of the scenarios. Some were experienced as “*framed more negatively*”, which prompted reflection on why I described them this way based on the research. Rather than a call to dilute these insights, the participants suggested clarifying the purpose of such framings: to expose risks, but also to balance them with preferable future.

- **No-Regrets Actions**

  A central question raised was which steps in the roadmaps can be considered “*no regrets actions*”. This referred to actions that are low-risk but high-value, and can therefore be implemented without waiting for broader reforms. Examples piloting a reporting and feedback system, targeted role-specific staff training, and introducing micro-grants for grassroots initiatives. These were seen as immediate entry points that build capability and trust regardless of which longer-term pathway is pursued.

- **Institutional Positioning and Operationalisation**

  The participants stressed the importance of aligning the roadmaps more explicitly with TU Delft’s existing strategies and agendas, particularly social safety and integrity. They emphasised that accessibility should be made operational by embedding it in ongoing planning and administrative processes. They also recommended looking outward to how other universities position accessibility structurally, in order to benchmark TU Delft’s ambition and strengthen external legitimacy.

- **Culture, Systems, and Evaluation**

  While many of the tactical steps focused on infrastructure, reporting, and governance, the participants emphasised that these should be explicitly linked to cultural change, asking how the proposals engage both the system and the culture. They also raised the importance of thinking about measurement and evaluation, how progress is tracked and how success is defined. A concrete example was shared about a faculty fire exit that is inaccessible: workarounds exist, but they are complex and reflect a worldview where exclusion is tolerated. This illustrated the risk of systems

reinforcing compliance logics without changing underlying mindsets.

- **Responsibility and Governance**

  Finally, the feedback reinforced insights from the co-creation sessions: without clear attribution of responsibility at the highest level, progress will remain fragmented. The participants stressed that the Executive Board must be the ultimate owner of accessibility, even if responsibilities are distributed across faculties and services. Embedding accessibility into administrative processes such as planning, budgeting, and reporting was identified as a way to make this responsibility actionable and sustainable.

### → Implications for This Project

The session confirmed the value of using multiple foresight tools and scenario methods, which were described as strong and relevant. The feedback urged clearer identification of no-regrets steps and raised the question of why some scenarios were framed negatively. It also stressed the need to operationalise accessibility by connecting the roadmaps to TU Delft's agendas, administrative processes, and Board-level responsibility. Finally, the participants emphasised that culture change must be addressed alongside systems, that evaluation and measurement are needed to track progress, and that lessons from other universities could strengthen TU Delft's positioning.



## → The Library Intervention?

One of the proposed interventions within this project was to make exclusion visible through an awareness action: temporarily blocking the main entrance of the TU Delft Library and redirecting visitors to the „accessible" entrance. The intention was to create a brief disruption of everyday routines, so that members of the TU Delft community could experience the barriers that people with disabilities regularly encounter when accessibility is not embedded in design choices. To test the feasibility of this idea, I contacted the Library team with a detailed request. Their response was appreciative of the intention, but also clear: *„Thank you for your special request. We appreciate you considering our building for your research (we are flattered). Unfortunately, your proposal is too drastic for us. We would only redirect our visitors to the back exit in case of an emergency or during a major event in the Library. We always communicate this in advance to our visitors".*

While the intervention could not be implemented as planned, this exchange itself functioned as a form of testing. It highlighted how institutional constraints shape what kinds of awareness interventions are possible on campus. The response also made clear that visitors are only redirected to the accessible entrance in exceptional circumstances, such as emergencies or major events, whereas for people with disabilities this entrance is part of their everyday reality. This contrast underlines the asymmetry that the intervention sought to make visible. The refusal emphasized another important insight: the role of activism. Institutional processes tend to filter out disruptive actions in favor of more manageable or symbolic measures. Yet it is precisely these moments of disruption that can spark recognition and reflection. In this sense, the attempt revealed that an activist element is not just an option but sometimes a necessity, and that in certain cases, it may indeed be more effective to ask for forgiveness than for permission.

## → Interim Conclusion

Taken together, the evaluation sessions confirmed both the clarity and the value of the framework and roadmaps, while surfacing important conditions for their adoption. Across all groups, participants emphasised the need for clearer ownership and accountability. Whether voiced by StudAble, the students using the stakeholder personas, or the foresight unit, the message was consistent: accessibility cannot remain dependent on individual initiative but requires explicit commitment from the Executive Board, supported by distributed roles across faculties and services.

A second shared theme was credibility. Awareness campaigns and reporting systems were welcomed, but only if paired with follow-up. Without visible action, posters risk being overlooked, and reporting points risk eroding trust. Experiential interventions, workshops, and direct engagement with lived experience and exclusion were seen as more impactful ways to shift mindsets, provided they are backed by institutional response.

The evaluations also highlighted ‚no-regrets' steps, as the strategic foresight unit called it, as a strategic lever. Early actions such as piloting reporting flows, role-specific training, and micro-grants were seen as low-risk and high-value, building capability and trust while larger structural reforms take shape.

Finally, participants stressed that technical systems must be tied to cultural change. Embedding accessibility in planning, budgeting, and governance processes is essential, but it must go hand in hand with shifting norms of hospitality, belonging, and care. Connecting accessibility to ongoing agendas such as social safety, and learning from the positioning of other universities, can strengthen both legitimacy and momentum.

At the same time, the attempt to test the library intervention showed that institutional feasibility often limits disruptive actions, even when they make exclusion visible in powerful ways. This underscores that cultural change requires not only frameworks and governance, but also moments of activism that challenge normalized barriers. Sometimes disruption is needed to spark recognition, even if it means acting first and seeking forgiveness later.

## → Key Take-aways from Chapter 13

- The evaluation confirmed the clarity and value of the framework and roadmaps, while highlighting the need for stronger ownership and accountability.

- Awareness interventions were welcomed, but participants stressed that credibility depends on visible follow-up and integration into institutional processes.

- No-regrets actions, such as piloting reporting flows, targeted training, and micro-grants, were identified as low-risk, high-value steps to build trust and momentum.

- Service desks and StudAble can act as important local entry points, but require central coordination and support from the Executive Board.

- Technical systems alone are insufficient, embedding accessibility in governance must be accompanied by cultural change towards belonging, hospitality, and social safety.

- Disruptive actions have a role to play. The attempt to test the library intervention showed that institutions often filter out disruptive measures, even though they make exclusion tangible. This highlights that activism is sometimes necessary to spark recognition, and that cultural change requires both systemic reforms and moments of disruption.

# 14 Conclusion and Implications: From Agency × Understanding to Action

The previous chapters developed and tested tools for making accessibility visible and actionable within TU Delft. The Framework synthesised recurring barriers into structural focus areas and pillars, offering a foundation for transformation. The Agency × Understanding Matrix mapped uneven distributions of agency and understanding and identified leverage points for change. Building on these insights, the entry points and roadmaps translated findings into targeted interventions and phased strategies that connect lived experience to institutional processes.

These outcomes do not resolve the problem, but they provide starting points for shifting accessibility from compliance towards a shared responsibility. This final chapter brings these strands together. It discusses the role of me as the researcher and designer, and the institutional dynamics encountered, acknowledges the limitations of the work and possible directions for future research, and outlines recommendations for TU Delft.

## → Discussion

This project required me to move between different roles. Human-centred design methods such as personas, probes, and workshops provided valuable entry points, but they were not sufficient to address the institutional nature of accessibility in this context. At several moments, I needed to step into a more strategic role: framing the challenge, selecting pathways, and positioning outcomes within TU Delft's existing structures. These shifts were not neutral but shaped by my own perspective as a researcher and designer. It is also important to acknowledge my position as a person without disabilities. I can empathise with exclusion and listen to lived experiences, but I cannot fully feel the everyday reality or the emotional toll it carries. This makes it essential that no actions are taken about people with disabilities without their direct involvement. Their voices must remain central in both research and implementation if accessibility is to be more than minimum compliance.

The evaluation underlined the limitations of human-centred approaches in this context. While they surface experiences and ideas, they do not easily connect to questions of strategy, ownership, and accountability. For accessibility to take root institutionally, design work needs to be coupled with strategic embedding: linking accessibility to TU Delft's current focus points, like social safety and physcial safety and truely embedding it into the system of the TU Delft.

In this respect, the Strategic Foresight & Innovation Unit pointed to the importance of alignment with TU Delft's Institutional Plan 2024–2030. The plan emphasises social safety, resilience, and foresight as core organisational priorities. Positioning accessibility alongside these agendas could both strengthen its institutional anchoring and create pressure for the Executive Board to assume responsibility.

Another recurring theme was responsibility. Stakeholders expressed willingness to contribute, but often pointed to others as the ones who should take the lead. This diffusion of responsibility risks leaving accessibility in a permanent state of fragmentation. The evaluation confirmed that explicit commitment by the Executive Board is necessary to establish ownership and accountability, supported by distributed roles across faculties and services.

The attempt to test the library intervention also highlighted the balance between institutional feasibility and activist disruption. Institutions tend to filter out disruptive actions, even though such actions may be the most effective at making exclusion visible. This tension is not easily resolved: cultural change requires both the credibility of institutional follow-up and the shock of disruption. Finding ways to hold these dynamics together is central to advancing accessibility.

Finally, this project also became a reflection on how TU Delft operates as an organisation. Change is not driven solely by ideas or tools, but by the ways in which those ideas are linked into governance, planning, and resource allocation. My design goal was to develop pathways that could make accessibility systemic and actionable. While the interventions and frameworks do not yet guarantee impact, they have shown that it is possible to make exclusion visible, to identify starting points for change, and to connect them to institutional processes. In this sense, the design goal was partially achieved: the work did not provide final answers, but it generated directions that TU Delft can take forward.

## → Limitations & Future Work

This project brought together a wide range of methods and perspectives, but it also has clear limitations. First, while people with lived experience of disability at TU Delft were actively involved, through interviews, the survey, and co-creation workshops, the number of participants was still relatively limited compared to the diversity of experiences across the university. A broader involvement of students, staff, and visitors with different accessibility needs would have further enriched the findings and deepened the institutional grounding of the recommendations.

Second, the scope of inquiry necessarily left out influential factors. Financial aspects, for instance, were not considered in depth and defined outside of the scope. With the recent budget cuts, the feasibility of many interventions will be shaped not only by cultural will or agency, but also by resource allocation. Similarly, access to the perspectives of the highest decision-making levels was limited. While the project surfaced important insights from grassroots and mid-level actors, the priorities and constraints of the Executive Board remained only partially visible.

Third, the complexity of TU Delft as a layered system was difficult to fully capture within the timeframe of this thesis. Accessibility is entangled in a web of responsibilities that stretch across faculties, services, and central administration. Untangling these interdependencies required simplification and abstraction, which inevitably might have overlooked certain nuances. Moreover, the absence of TU Delft as an official client shaped the process: participation was based on voluntary engagement rather than on a formal, top-down mandate, which at times made it harder to anchor the work within existing structures.

In addition, this project did not establish concrete measures or evaluation mechanisms to track the impact of accessibility strategies. Without indicators and feedback loops, institutional commitments risk remaining aspirational rather than operational. Future work should therefore develop metrics that connect to TU Delft's planning and evaluation cycle, so that accessibility progress can be monitored and adjusted over time.

Finally, it is important to acknowledge my own positionality. As someone without disabilities, I can empathize with, but not fully experience, the exclusion and emotional toll described by participants. My interpretations are inevitably situated and might carry personal bias, even though I sought to ground them in co-creation and lived experience. In relation, the interventions and strategies proposed here should not be seen as universally applicable. As discussed earlier, there is no one-size-fits-all solution. Accessibility must remain an adaptive, flexible process. What is offered in this thesis are starting points, to be adjusted and contextualised in practice.

Looking ahead, several directions for future work emerge. The CeeSAA project offers a natural continuation, as its work on accessibility assessment could build on the systemic insights surfaced here. More broadly, the Agency × Understanding Matrix may hold value beyond this case. It not only makes visible how different stakeholders are positioned, but also helps identify starting points for change by pointing to leverage zones and the kinds of interventions that could support movement. Future work could explore how the matrix might be applied in other institutional contexts to surface responsibility gaps and guide tailored entry points for action. Future work could also integrate financial realities, executive-level governance dynamics, and long-term monitoring of accessibility pathways into strategy.

Above all, these efforts should continue to prioritise the co-creation with people with lived experience, ensuring that change is not designed for them, but with them.

## → Recommendations

This project was not done in collaboration with the TU Delft, but is located within the CeeSAA project. It is therefore important to recognise that the recommendations below may not be taken up directly. No one at the executive level asked for this work, which makes it unlikely that the outcomes will automatically find a place in institutional processes. At the same time, the analysis revealed systemic patterns and possible pathways for change that warrant attention. With that in mind, the following recommendations are offered.

First, accessibility should be framed as a matter of both physical and social safety. Positioning it alongside existing agendas such as Social Safety can increase traction with decision-makers and create stronger pressure for executive-level responsibility. TU Delft's external positioning is also relevant: comparing its practices with other universities may help identify where the institution lags behind and where it could take a leading role.

Second, cultural change is essential. Budget cuts and value dilemmas will continue to shape decisions, but accessibility should not be dismissed on financial grounds alone. Including accessibility in these discussions from the outset makes it possible to find compromises that do not systematically exclude. A culture that treats accessibility as a shared responsibility will make it easier to balance competing priorities.

Third, responsibility must be made explicit and distributed. Faculties, services, and central administration all have a role to play, while visible commitment by the Executive Board is necessary to establish accountability. Where agency is low, activism and disruption can help surface exclusion and foster understanding. Where agency is present, it should be supported and extended into communities of practice. For people with lived experience, who often hold the highest level of understanding, it is important to enable their contribution while avoiding overreliance.

Fourth, the Agency × Understanding Matrix should be adopted as a living tool. Beyond its role in this thesis, it can be used to track how stakeholder positions shift over time, identify leverage zones, and guide tailored interventions. The entry points developed here, the Access Follows *Who?* campaign and the Pathways of Access workshop, are concrete examples of how such leverage can be acted upon. They should be tested and refined as ways to make exclusion visible and to prompt reflection on roles and responsibilities.

Fifth, the roadmap developed in this project shows that accessibility cannot be addressed in a single step. Change must be sequenced: beginning with awareness and sensitization, then building systems, clarifying governance, and ultimately shaping culture. Embedding accessibility in TU Delft's long-term identity, as part of a culture of justice, hospitality, and care, offers a way to move beyond compliance towards inclusion by default.

Finally, there will be moments where it feels easier to set accessibility aside, or to frame it in an individualistic ‚not my problem, not my fight' way. Yet accessibility and inclusive design bring value for all of us. As the persona spectrum by Microsoft (2015) illustrated, measures that address exclusion do not only benefit those with direct accessibility needs, but create a fairer and more equal environment that improves study, work, and social life across the entire TU Delft community. As Kat Holmes states: "Rules were initially written by human beings and can be rewritten. Those of us who are now playing the game have a responsibility to adapt it as needed. If we don't, we are accountable when someone's left out. We can respect the intent of the game, but also adapt the rules to make it more inclusive." (Holmes, 2018, p. 36).

## To conclude

This thesis explored accessibility at TU Delft without the university itself asking for it. In doing so, I encountered a fragmented system in which accessibility often slipped between responsibilities, with no actor feeling fully accountable. At the same time, I also saw hopeful signs: grassroots initiatives and committed individuals who showed that change is wanted.

Building on these insights, I proposed a set of tools, entry points, and roadmaps to move towards a future where accessibility is not an afterthought but part of everyday institutional practice. This is an ambitious vision, especially given the limited attention the topic currently receives. It is possible that the proposals will never be implemented in full or at all. Yet I hope that the work has sparked reflection among those who may not have previously considered the importance of accessibility for the university.

The challenge is complex, embedded in governance, culture, and systems. But bringing this complexity into view is already a step towards change. If this thesis contributes to advancing conversations, shaping awareness, or supporting future initiatives and projects such as CeeSAA, then it will have achieved something meaningful.

For now, I hold onto the vision of a university where everyone can move freely, where barriers no longer define who belongs and who does not. A vision of a place where accessibility is not a problem but part of TU Delft's culture of justice, hospitality, and care.

# 15 Personal Reflection

In this final chapter I reflect on my experiences, learnings and challenges during this project.

## → Personal Reflection

Over the past five months I often joked, sometimes more seriously, that I should have chosen an easier topic for my thesis. There were moments when I felt lost, and others when I felt that change was starting.

Accessibility at TU Delft is indeed a complex problem. It is shaped by value dilemmas, tensions, and competing priorities. Researching this topic without being asked to by the university did not make it easier, and it is unlikely that the work will be taken up directly. Yet during the process I already witnessed small shifts: interviewees who had never connected their roles to accessibility began to reflect on their responsibilities, and stakeholders engaged in new discussions when brought together in co-creation sessions.

Much of this project was about persistence. I raised the topic repeatedly, sometimes receiving discouraging responses, but more often encouragement to continue. I had some prior experience with inclusive design, but this thesis deepened my understanding of it, and of how large organisations operate and how complex their systems can be.

Alongside this learning came frustration. Frustration with how exclusion is designed, with the structures of society, and with the perceptions of what counts as “normal” and what does not. Accessibility is a right that should be self-evident: every building should be equally usable for all. Seeing that people did not share this conviction was difficult. I can only begin to understand the frustration and emotional toll of people with disabilities who face exclusion daily.

I tried to channel this frustration into energy for the project, in the hope that it might have sparked reflection that leads to something larger in the future. In the end, even though I often wished I had chosen a less complex topic, I am grateful to have concluded my journey at the TU Delft with this project. It has taught me a great deal about myself as a designer and as a person.

For now, I hope that the future will move towards the preferred one, both for accessibility at TU Delft and for myself as a designer.

# References

Literature Referenes
List of Figures

## → References


**B**

Bakker, K. (2024, July 5). *Inspectorate of Education assesses the social safety Plan for Change as inadequate.* Delta TU Delft. https://delta.tudelft.nl/en/article/inspectorate-of-education-assesses-the-social-safety-plan-for-change-as-inadequate

Bendixen, K., Benktzon, M. (2015). *Design for All in Scandinavia – A strong concept*, Applied Ergonomics, Volume 46, Part B, p. 248-257, ISSN 0003-6870, https://doi.org/10.1016/j.apergo.2013.03.004.

Benschop, S. A. (2019). *Terms of Reference (ToR) Diversity & Inclusion TU Delft 2018-2024*. Delft University of Technology. https://intranet.tudelft.nl/documents/20147/1094392/ToR+Diversity+and+Inclusion_2019.pdf/bcc1183a-87ef-30d4-8ba1-b8fa0560ca43?version=1.0&t=1582635686008

Bieling, T. (2019). *Inklusion als Entwurf: Teilhabeorientierte Forschung über, für und durch Design.* Birkhäuser.

Bonger, S. (2024, October 4). *TU Delft publishes a more definitive list of plans for social safety.* Delta TU Delft. https://delta.tudelft.nl/en/article/tu-delft-publishes-a-more-definitive-list-of-plans-for-social-safety

Bos-de Vos, M., Deken, F., & Kleinsmann, M. (2022). *Navigating multiple contexts to integrate system transformation programs.* International Journal of Project Management, 40(3), 290-311. https://doi.org/10.1016/j.ijproman.2022.03.003

**C**

Candy, S. & Dunagan, J. (2017). *Designing an experiential scenario: The People Who Vanished.* Futures, Volume 86, P. 136-153, ISSN 0016-3287,https://doi.org/10.1016/j.futures.2016.05.006.

Clarkson, J., Coleman, R., Keates, S., & Lebbon, C. (2003). *Inclusive design: Design for the whole population.* Springer

Clarkson, J., Coleman, R., Hosking, I., & Waller, S. (Eds.). (2007). *Inclusive design toolkit.* Engineering Design Centre, Department of Engineering, University of Cambridge.

Clarkson, J., Coleman, R. (2013). *History of Inclusive Design in the UK*, Applied Ergonomics, Volume 46, Part B, p. 235-247, ISSN 0003-6870, https://doi.org/10.1016/j.apergo.2013.03.002.

Criado-Perez, C. (2019). *Invisible women: data bias in a world designed for men*. United states, Abrams.

**D**

De Bruijn, A., & Van der Veldt, M. (2024, October 14). *Victims of social unsafety always draw the short straw at TU Delft: ‚An official report? That would be the end of me'.* Delta TU Delft. https://delta.tudelft.nl/en/article/victims-of-social-unsafety-always-draw-the-short-straw-at-tu-delft-an-official-report-that-would-be-the-end-of-me

Delft University of Technology. (2024). *Plan for change: towards a socially safe TU Delft.* https://www.tudelft.nl/en/2024/alumni/plan-for-change-completed

Delft University of Technology. (n.d. a). *Ambition: Equity, Diversity and Inclusion at the heart of the TU Delft.* TU Delft. https://www.tudelft.nl/en/about-tu-delft/strategy/diversity-inclusion/ambition2

Delft University of Technology. (n.d. b). *Student Onbeperkt.* https://www.tudelft.nl/en/student/my-study-me/counselling/studying-with-a-disability/information/student-onbeperkt

Delft University of Technology. (n.d. c). *Studable Delft.* https://www.tudelft.nl/studenten/community/verenigingen/studable-delft

Design Council. (2021). *Systemic design framework.* https://www.designcouncil.org.uk/our-resources/systemic-design-framework/

Desmet, P., Pohlmeyer, A., & Yoon, J. (2017). *Design for Happiness Deck.* Delft University of Technology. https://repository.tudelft.nl/islandora/object/uuid:22a4e066-a1ab-468c-bd78-6c2c3e39e064/datastream/OBJ/download

Dorst, K., and Watson, R. (2020). *Reframing and Strategic Transformation*, in Boess, S., Cheung, M. and Cain, R. (eds.), Synergy - DRS International Conference 2020, 11-14 August, Held online. https://doi.org/10.21606/drs.2020.130

E ECIO. (n.d.). *Implementing & ensuring the UN convention.* https://ecio.nl/en/implementing-ensuring-the-un-convention/

EIDD (2004). *The EIDD Stockholm Declaration 2004.* Adopted on 9 May 2004, at the Annual General Meeting of the European Institute for Design and Disability in Stockholm. Design for All Europe.

Emirbayer, M., & Mische, A. (1998). *What is agency?* American Journal of Sociology, 103(4), 962–1023. https://doi.org/10.1086/231294

Erasmus Magazine. (2024, March 4). *Inspectorate accuses Delft University of Technology of mismanagement: ‚Care for employees is being neglected‘*. https://www.erasmusmagazine.nl/en/2024/03/04/inspectorate-accuses-delft-university-of-technology-of-mismanagement-care-for-employees-is-being-neglected/

European Commission. (n.d.). *Problem and objective tree.* EU International Partnerships. https://wikis.ec.europa.eu/spaces/ExactExternalWiki/pages/50109060/Problem+and+objective+tree

F Fisher, J. (n.d.). *Make space for inclusive design with Cards for Humanity* | frog, part of Capgemini Invent. frog, part of Capgemini Invent. https://www.frog.co/designmind/make-space-for-inclusive-design-in-2020. Accessed on the 11th of June 2025

G Groß, B. & Mandir, E. (2024). *Designing Futures – Speculation, Critique, Innovation. A guide to exploring, visualizing and negotiating future scenarios*. with foreword by Riel Miller, published by Laurence King / Quercus / Hachette, 2024. ISBN 978-1529435054

Guffey, E. (2024). *What Does Inclusive Design Mean Today?*. In P. Schmidt, E. Steiner, & S. Zeller (Eds.), Design for all? Inclusive design today (p. 53-61). Spector Books.

H Hamraie, A. (2020, November 12). *Critical Access Studies* [Online lecture]. Harvard University Graduate School of Design. https://www.gsd.harvard.edu/event/aimi-hamraie-critical-access-studies/

Harniss, M. (2014). *Accessibility.* In A. C. Michalos (Ed.), Encyclopedia of quality of life and well-being research. Springer. https://doi.org/10.1007/978-94-007-0753-5_8

Heylighen, A., & Bianchin, M. (2018). *Building justice: How to overcome the inclusive design paradox?*. Built Environment, 44(1), 23-35. https://doi.org/10.2148/benv.44.1.23

Heylighen, A., & Dong, A. (2019). *To empathise or not to empathise? Empathy and its limits in design.* Design Studies, 65, 107–124

Holmes, K. (2018). *Mismatch: How inclusion shapes design.* The MIT Press.

I International Organization for Standardization. (2018). *ISO 9241-11:2018 Ergonomics of human-system interaction-Part 11: Usability: Definitions and concepts* (ISO Standard No. 9241-11:2018).

J Jimenez, S., Pohlmeyer, A.E., & Desmet, P.M.A. (2015). *Positive Design Reference Guide*. Delft: Delft University of Technology.

K Kahane, C. J. (2013, May). *Injury vulnerability and effectiveness of occupant protection technologies for older occupants and women.* (Report No. DOT HS 811 766). Washington, DC: National Highway Traffic Safety Administration.

Karlsson, M., & Rydström, J. (2023). *Crip theory: A useful tool for social analysis.* NORA-Nordic Journal of Feminist and Gender Research, 31(4), 395-410. DOI: 10.1080/08038740.2023.2179108.

Keates, S. & Clarkson, J. (2004). *Understanding design exclusion.* In: Countering design exclusion. Springer, London. https://doi.org/10.1007/978-1-4471-0013-3_5

L Lupton, E. (2014). *Beautiful Users: Designing for People.* Princeton Architectural Press with Cooper Hewitt, Smithsonian Design Museum.

M McRuer, R. (2006). *Crip theory: Cultural signs of queerness and disability.* New York University Press.

Microsoft. (2015). *Inclusive: A Microsoft Design Toolkit*. https://inclusive.microsoft.design

Ministerie van Algemene Zaken. (2023, 8. August). *Grondwet voor het Koninkrijk der Nederlanden 2023.* Rapport | Rijksoverheid.nl. https://www.rijksoverheid.nl/documenten/rapporten/2023/04/26/grondwet-voor-het-koninkrijk-der-nederlanden

Ministerie van Volkshuisvesting, Ruimtelijke Ordening en Milieubeheer. (2025, April 2). *Leven met een beperking.* Rijksoverheid.nl. https://www.rijksoverheid.nl/onderwerpen/leven-met-een-beperking

P Park, J.H. (2012). *Inklusion und Design.* In Öffnungszeiten – Papiere zur Designwissenschaft 26/2012 (pp. 21-25). Kassel University Press, Kassel.

Persson, H. & Åhman, H. & Yngling, A. & Gulliksen, J. (2014). *Universal design, inclusive design, accessible design, design for all: different concepts—one goal? On the concept of accessibility—historical, methodological and philosophical aspects.* Universal Access in the Information Society. 14. 10.1007/s10209-014-0358-z.

Pineda, V. S. (2020). *Building the Inclusive City: Governance, Access, and the Urban Transformation of Dubai.* 10.1007/978-3-030-32988-4.

Preiser, W. F. E., & Smith, K. H. (Eds.). (2010). *Universal design handbook* (2nd ed.).

S Schaad, G. (2024). *Intersectional feminist spatial practices: From "obstructed spaces" to an enabling everyday architecture.* In P. Schmidt, E. Steiner, & S. Zeller (Eds.), Design for all? Inclusive design today (p. 53-61). Spector Books.

Sanders, E. B.-N., & Stappers, P. J. (2008). *Co-creation and the new landscapes of design.* CoDesign, 4(1), 5–18.

Schmidt, P., Steiner, E., & Zeller, S. (Eds.). (2024). *Design for all? Inclusive design today.* Spector Books.

Schwartz, P. (1996). *Art of the long view: Paths to Strategic Insight for Yourself and your Company.* New York: Bantam Doubleday Dell

Shakespeare, T. (2006). *The social model of disability.* In L. J. Davis (Ed.), The disability studies reader.

Steiner, E. & Zeller, S. (2024a). *Design for All? New perspectives on Inclusive Design.* In P. Schmidt, E. Steiner, & S. Zeller (Eds.), Design for all? Inclusive design today (p. 12-35). Spector Books.

Steiner, E., & Zeller, S. (2024b). *On users' needs and new markets: A conversation with Rama Gheerawo.* In P. Schmidt, E. Steiner, & S. Zeller (Eds.), Design for all? Inclusive design today (pp. 107–113). Spector Books.

Steiner, E., & Zeller, S. (2024c). *On critical access studies and disability culture: A conversation with Aimi Hamraie.* In P. Schmidt, E. Steiner, & S. Zeller (Eds.), Design for all? Inclusive design today (pp. 91-97). Spector Books.

Steiner, E., & Zeller, S. (2024d). *On Public Transport, Access, and Independence: A conversation with Quemuel Arroyo.* In P. Schmidt, E. Steiner, & S. Zeller (Eds.), Design for all? Inclusive design today (pp. 91-97). Spector Books.

T

TU Delft Intranet (n.d. a). *Participation Act* https://intranet.tudelft.nl/-/participation-act

TU Delft Intranet (n.d. b). *Participation Act | Background information*. https://intranet.tudelft.nl/-/participation-act-%7C-background-information

U

United Nations. (2006). *Convention on the Rights of Persons with Disabilities.* https://www.ohchr.org/en/instruments-mechanisms/instruments/convention-rights-persons-disabilities

V

Van Dorst, M. J., Vink, J., Groen, E. J., van Delden, J. M., de Haan, A. L., Tijchon, L. A. J., van den Boomen, V. J. M., & Zijlstra, R. S. (2023). *Campusvisie 2040.* Delft University of Technology.

Voros, J. (2003). *A generic foresight process framework.* Foresight. 5. 10-21. 10.1108/14636680310698379.

W

Wijnands, K. (2025, June 3). *Working with autism: 'I come with instructions'* - Delta. Delta. https://delta.tudelft.nl/en/article/working-with-autism-i-come-with-an-instruction-manual

World Health Organization: WHO. (2023, March 7). *Disability.* https://www.who.int/news-room/fact-sheets/detail/disability-and-health

# List of Figures

# Appendix

The appendix of this report is available as a separate document in the TU Delft repository: https://repository.tudelft.nl/

A The Brief
B Interview Guide
C Survey Design & Questions
D Probe 1 - Three Requests
E Probe 2 - TopDesk
F Co-Creation Session Materials
G Matrix Workbook
H Filled-in Workbook
I Placement Criteria
J Evaluation Session - Personas
K Evaluation Session - The Reflection Matrix
L Evaluation Seesion - Presentation