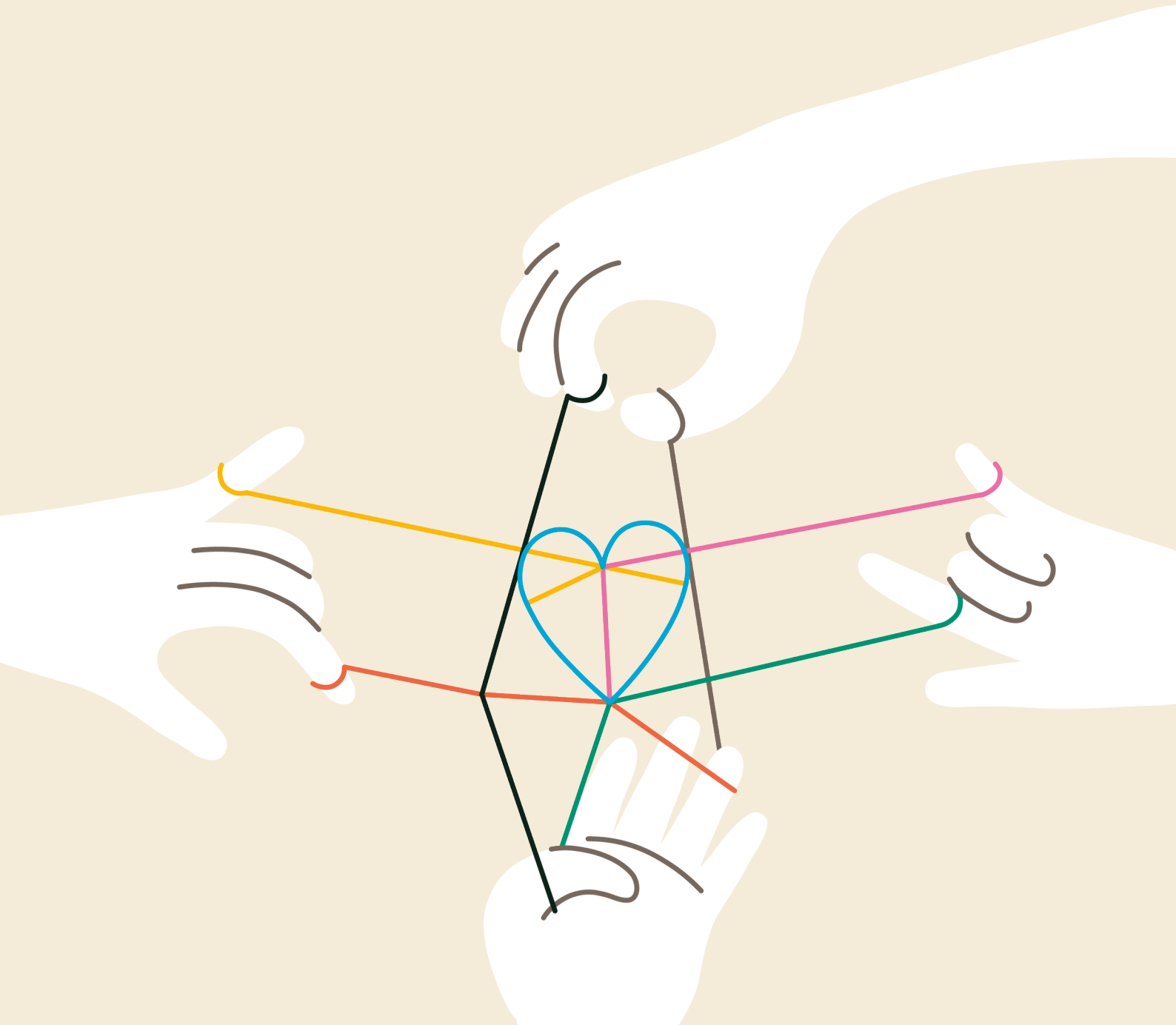


Reimagining the Communication Framework for Inclusive Accessibility at TU Delft



Summary

This thesis explores how accessibility at TU Delft can be strengthened through communication rather than solely physical infrastructure. The project recognizes accessibility as a shared inclusive mindset, a responsibility involving all stakeholders, and an ongoing process grounded in lived experiences.

Through literature review, interviews, surveys, and co-creation workshops, the study identified key barriers in TU Delft’s current system: unclear responsibilities, fragmented communication, limited recognition of user voices, and a policy- and budget-driven culture. However, in the meanwhile, positive practices such as informal initiatives and staff willingness to act demonstrate potential for change.

The project proposes a strategic interaction method that reframes stakeholder roles functionally as User, Support, and Decision, and integrates both formal and informal communication pathways. To consider TU Delft as a united system, it uses the metaphor of interconnected gears. The method emphasizes three guiding behaviors: willingness to listen, willingness to improve,

and willingness to take action. Touchpoints such as a “Ready-to-Help” pin, an emotional feedback platform, and a toolkit illustrate how the framework can be implemented in practice.

Validation with stakeholders indicated that the method lowers barriers to participation and clarifies responsibilities. Increasing visibility and sharing inclusive mindset are the ground for smooth and sustained implementation. The study contributes a practical foundation for TU Delft to realize its Campus Vision 2040, reframing accessibility as a cultural practice of inclusion and collaboration.

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Introduction

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Introduction

In recent years, the growing awareness of accessibility as a social, ethical, and systemic issue has gained increasing attention worldwide. People with Disability (PwD) is defined by the United Nations as persons with disabilities as ‘those who have long-term physical, mental, intellectual or sensory impairments which in interaction with various barriers may hinder their full and effective participation in society on an equal basis with others (2006). As the number of PwD make up over one-quarter of the adult population in the EU and one-third in the Netherlands (Eurostat, 2023), the need for built environments and institutional structures to support inclusive, equitable access has become urgent. Moving away from the traditional medical model, which views disability as an individual’s physical limitation, current discourse emphasizes the social model. This approach reframes disability as a condition caused by the mismatch between people and their environment (Shakespeare, 2017; WHO, 2011). However, many remain marginalized due to environments that fail to accommodate their needs (Park & Chowdhury, 2018). The United Nations Convention on the Rights of Persons with Disabilities affirms that PwD have the right to enjoy all aspects of life on an equal basis with others, it is vital that an accessible environment is met to accommodate their needs. Accordingly, accessibility is not merely an infrastructural issue but a matter of social value that could affect everyone at different

points in life and reflects our collective responsibility to create inclusive public spaces.

European disability strategy 2021–30 is actively promoting inclusive approach in education institutions, for its fundamental role in combating poverty and creating inclusive societies (European Union, 2021). TU Delft, as a leading technical university in the Netherlands, has actively positioned itself within this evolving discourse. Through its Campus Vision 2040, TU Delft articulates ambitions for an open, sustainable, and inclusive learning environment, emphasizing accessibility as a key pillar of the campus (2023). In alignment with broader shifts in Diversity and Inclusion (D&I) practices across higher education, TU Delft’s vision recognizes that a campus is not just a physical site, but a shared and dynamic space of belonging. Accessibility, therefore, plays a vital role in institutional responsibility and communication culture.

What makes accessibility on campus particularly complex is its embeddedness in overlapping systems of infrastructure, policy, and human behavior. For accessibility to be meaningful, it must address this complexity. Yet, TU Delft faces structural challenges in turning inclusive values into realization. And this project would act as a small step into TU Delft’s vision of inclusion.

Project Aim

This project investigates how TU Delft’s current mechanisms for reporting and responding to accessibility needs function in practice, including their advantages and shortcomings. Through the study of the current situation, it seeks to understand the existing feedback processes related to accessibility barriers, and identify where mechanism breakdowns occur between different institutional levels and how user voices can be better recognized, translated, and acted upon.

Rather than attempting to solve accessibility,

which is not feasible within the scope of a single graduation project, the aim is rather modest: to explore how communication systems can become more equitable, encouraging, and accessible. By focusing on bridging the communication, this project contributes a strategic approach that supports future improvements by building a clear and encouraging environment for different stakeholders to engage in dialogue. In this way, it provides a foundation for more inclusive practices and future co-design efforts toward an accessible campus.

Method Overview

The project proceeded through four key phases.

First, a literature review and two exploratory meetings were conducted to build an initial understanding of accessibility. This stage helped to explore the topic from both theoretical and experiential perspectives.

Second, a series of semi-structured interviews were carried out with stakeholders whose daily work involves accessibility advocacy or implementation at TU Delft. These interviews provided insights into communication flows, feedback practices, and how accessibility is currently addressed within the institution. A qualitative survey was conducted to capture the users' perspective, focusing on their experiences with accessibility barriers, emotional responses, and coping strategies. Together, these complemented each other by

combining institutional viewpoints with user-centered insights.

Third, following the generation of initial ideas, two co-creation workshops were organized with a diverse group of stakeholders. The workshops served as a space to reflect on communication gaps, and provide feedback on potential approaches for improving accessibility-related interactions.

Finally, the emerging design outcome was validated by interviews with stakeholders from different groups. These interviews assessed the feasibility, desirability, and viability of the proposed interaction method and offered suggestions for its refinement and implementation.

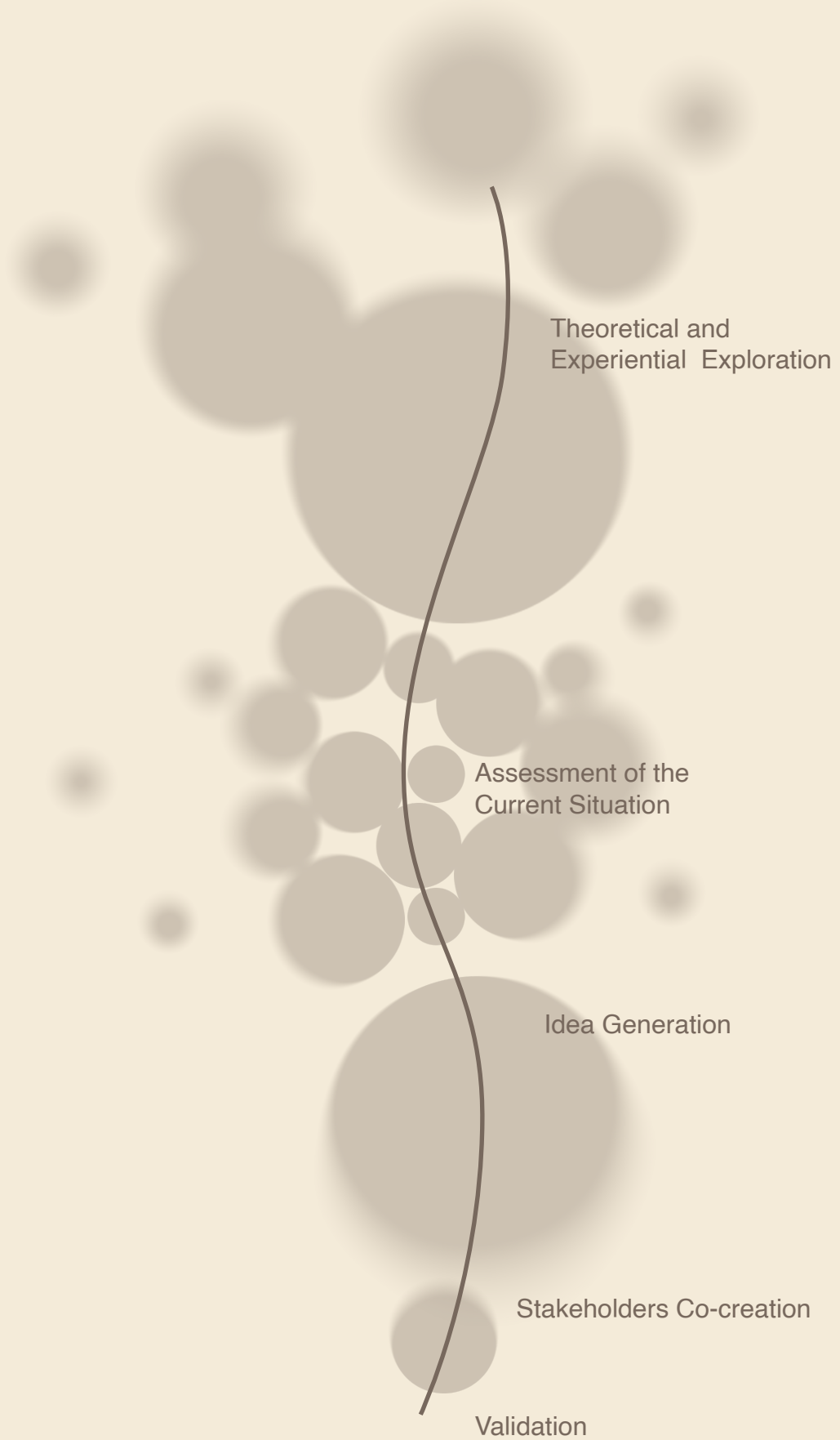


Figure 1.1 Project overview

Stakeholders

The campus accessibility system at TU Delft involves a wide range of stakeholders. This project adopts a role-based rather than a disability-based classification of stakeholders. This choice is grounded in two reasons: first, in the social model of PwD, accessibility needs are often situational rather than tied to a fixed medical identity; second, the level of resources and connection or the amount of influence they can reach depend on their relationship to the institution. In this way, accessibility is framed not only as a technical problem, but as a relational and organizational challenge.

The primary stakeholders include:

Students – the largest and most directly affected user group, whose educational experience depends on accessible environments.

Educators and Academic Staffs – in charge of campus education-related issues. Their engagement with accessibility mainly concerns the design and delivery of teaching materials and methods.

Supporting Staffs – including roles such as: Diversity and Inclusion (D&I) office and academic counselors, these actors maintain day-to-day educational operations and sometimes act as the first line of contact for accessibility requests.

Facility and Location Management – tasked

with managing physical changes to the built environment, including coordination with external contractors and architects.

Campus Real Estate (CRE) – property owner of campus, decision-makers of budget allocation over campus infrastructure.

Faculty-Level Administrators – decision-makers who control budget allocation and strategic priorities at the departmental level.

Executive Board – decision-makers who control the overall policy of the future direction of TU Delft.

The secondary stakeholders include:

Architects and Consultants – who provide design solutions and ensure compliance during renovation and new-built projects.

Building Contractors – responsible for physical implementation.

Municipality – as a regulatory body, it helps shape broader policy on accessibility on domestic scale.

Visitors – as temporary users, they are impacted by the overall inclusiveness of the campus environment.

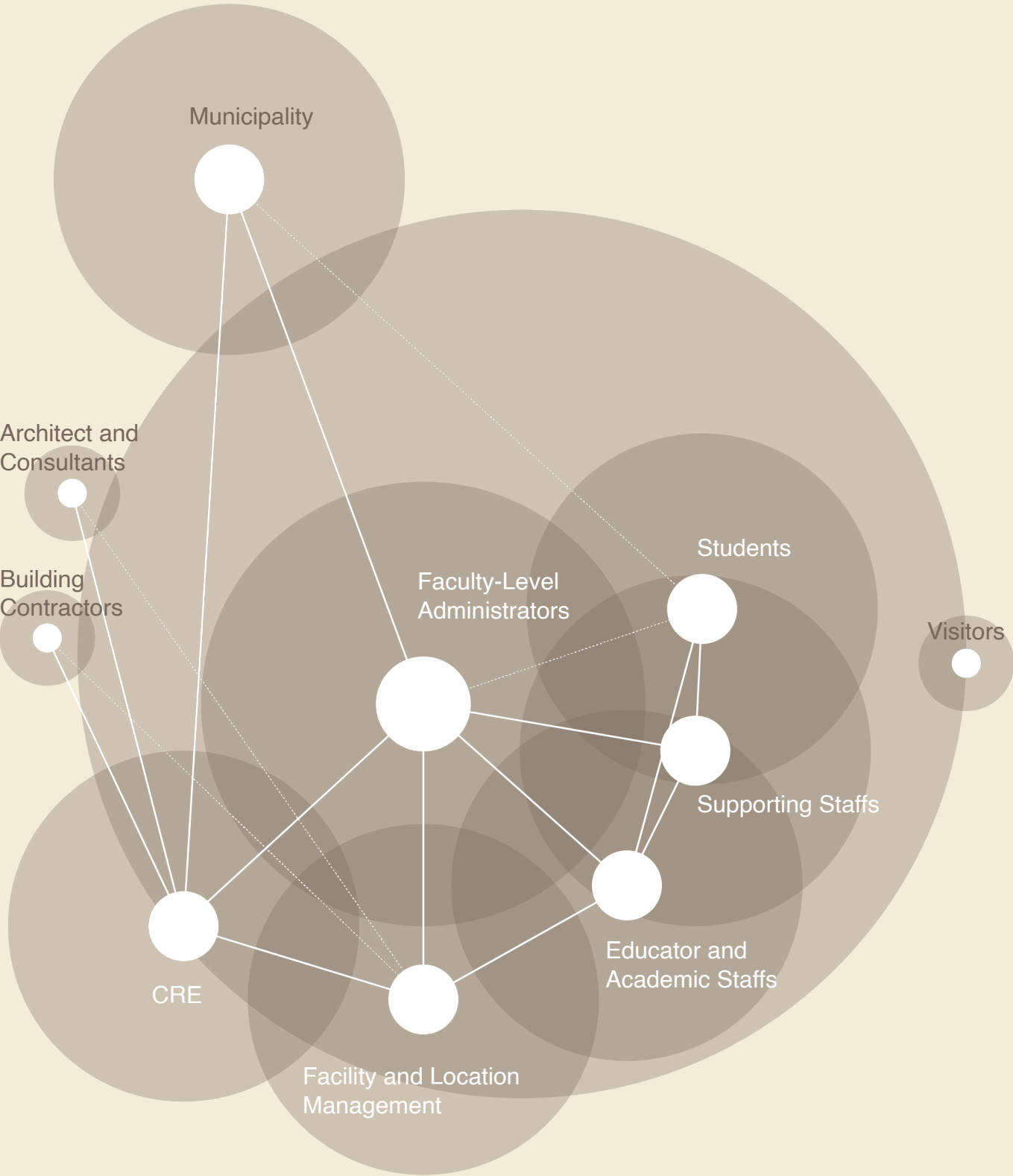


Figure 1.2: Stakeholders map

Understanding the Context

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Research Questions

The project is guided by the following central research questions:

RQ1

What are the current challenges in how accessibility-related issues are communicated and responded to within TU Delft’s institutional system?

RQ2

How do users, especially students and other primary stakeholders, experience accessibility barriers, and how do they express or report these challenges?

RQ3

How can a more inclusive, equitable and accessible interaction method be designed to strengthen the accessibility feedback process within the institution?

These questions focus not only on identifying breakdowns in the current system, but also on envisioning and validating alternative mechanisms that could support shared understanding and joint responsibility for accessibility.

Research Activities

To address the questions above, the research process was structured around three key methods: exploratory meetings, semi-structured interviews and a qualitative survey. Each method was chosen for its potential to access different perspectives and layers of institutional dynamics. Summaries of each activity and a data collection table (table 1) can be found below.

Exploratory Meetings

To gain in-depth insights into accessibility from a user perspective, two exploratory meetings were conducted at the early stage of the project. As I have not been personally identified as a user of accessible facilities, it was crucial to understand accessibility not just as a theoretical or design issue, but as a lived experience shaped by emotional, physical, and institutional conditions.

First meeting participants included accessibility consultants with lived experience, a university employee working in facility management; Second meeting was conducted with a D&I officer on campus who had recently initiated an independent building inspection related to accessibility concerns. To support this aim, a Research through Design (RtD) manner was adopted. RtD refers to research conducted through the practice of design itself, where new knowledge is generated by cycles of making and iteration (Stappers & Giaccardi, 2014).

As accessibility is a broad and multifaceted topic, and RtD provided a dynamic way to explore such complexity while gradually narrowing the scope. In the session, a set of early prototypes and reference images were presented (see Appendix 2.1 and 2.2) to provoke discussion and gather insights. In the second meeting, quotes from qualitative survey responses were presented as conversation prompts. These discussions offered a practice-oriented and first-hand perspective into the values in accessibility.

All meetings were conducted in person and transcribed through TU Delft Teams for analysis. The early findings helped to build an immersive understanding of accessibility and were used in both the interview questions and survey instrument, ensuring subsequent and useful data collection.

Semi-Structured Interview

A series of semi-structured interviews were conducted with stakeholders whose daily work involves accessibility advocacy or implementation at TU Delft. The interviews focused on the general processes of their work, such as communication flows, feedback practices, and encountered challenges, in order to reveal how accessibility issues are managed “behind the curtain.” From this stage, two ongoing cases at TU Delft were identified for deeper study. One initiated by StudAble, a student organization, as a

bottom-up process, and another initiated by faculty as a top-down process. Together, these cases represent different mechanisms regarding accessibility-related topics.

Case A involves a student organization initiated annual building inspection, in which members of a student organization select a building and conduct walkthrough evaluations based on a self-authored inspection guideline. This case exemplifies a bottom-up approach to accessibility advocacy.

Participant	Role	Organization	Activity Form
P1	StudAble	TU Delft	Semi-structured Interview
P2	Architect, Consultant	Architecture Studio	Exploratory Meeting
P3	Architect, Consultant	Accessibility Consulting	Exploratory Meeting
P4	Department Deputy	TU Delft	Semi-structured Interview
P7	Faculty D&I	TU Delft	Exploratory Meeting
P8	Campus Real Estate Facility and Management (CREFM)	TU Delft	Semi-structured Interview
P9	Horizon	TU Delft	Semi-structured Interview
P10	Education & Student Affairs (ESA)	TU Delft	Semi-structured Interview
P11	StudAble	TU Delft	Semi-structured Interview
P12	D&I	TU Delft	Semi-structured Interview
P14	CREFM	TU Delft	Exploratory Meeting

Table 1: Data collection overview

Case B centers on a top-down building modification request meeting involving employees from the building. This building specifically does not require high-spec laboratories, resulting in a different and clear prioritization logic driven by budget, safety, and compliance. As a result, the logic of prioritization in this case is more singular, making the process easier to analyze.

Interview questions focused on the timeline of each case, the roles of various stakeholders,

interaction and communication, and how decision guidelines were created and interpreted. All interviews were conducted via Microsoft Teams, audio-recorded, and fully transcribed for analysis. The interview guide can be referred to in Appendix 3.1.

A contextmapping-inspired approach (Sanders & Stappers, 2012) was applied. This enabled the interviews to uncover processes and characteristics of the current situation. Quotes related to both cases and their outcomes were extracted and analyzed to understand the systemic causes, and these causes were then grouped into categories to construct value exchange models and help analyze pros and cons of TU Delft accessibility.

Qualitative Survey

Midway through the project, it was noticed that most of the voices of students were not represented directly in the existing institutional accessibility processes. To complement the interview data and access broader student experiences, a qualitative survey was distributed via Qualtrics and posted through flyers (see Appendix 4.1) in the IDE, Echo, and central library buildings, which were frequently mentioned in consultant meetings as examples with existing barriers.

In the opening of the survey, barriers are clearly defined as “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”. Unlike conventional surveys focused on quantitative metrics, this instrument emphasized emotional and experiential responses:

participants were asked with open-ended questions to describe moments when they encountered accessibility-related barriers, how they felt, and what actions (if any) they took in response. Please refer to Appendix 4.2 for survey logic flow.

The survey received 20 responses, of which 17 were complete and usable. Demographic information can be found in Table 2. Thematic analysis of the open-ended responses was guided by contextmapping principles (Sanders & Stappers, 2012). From the answers, key emotions were extracted and grouped according to similarity in order to identify shared emotional patterns among users. These responses reflected users’ perspectives on the current state of accessibility on campus, as well as their coping strategies and needs when encountering accessibility barriers.

Age	18 – 24:	9
	25 – 34:	6
	35 – 44:	2
Gender	Female:	10
	Male:	6
	Prefer not to say:	1
Role in Campus	Student:	14
	Staff:	3
Accessibility Needs	Yes:	0
	No:	16
	Prefer not to say:	1

Table 2: Survey demographic

Rethinking Accessibility

Accessibility from Social Perspective

Accessibility is often narrowly defined in terms of physical standards, such as ramps, elevators, or spatial clearance. However, an increasing body of literature argues that this perspective is insufficient. Oliver (1996) first proposed that disability results from socially imposed barriers rather than individual impairments. Later adopted by the WHO that disability does not arise solely from individual impairments but from the mismatch between individuals and the environments in which they live. In the context of the social model of disability, barriers are no longer limited to individual impairment or physical obstacle but any condition that prevents individuals from social, institutional, or informational participation. As the United Nation emphasized in Convention on the Rights of Persons with Disabilities (CRPD) that PwD have the right to live independently and participate fully in life. Accessibility, therefore, can be understood as the process of identifying and removing barriers so that people with diverse needs are able to enjoy and participate in life independently fully.

This shift from a medical model to a social model reframes accessibility as more than a technical or medical specification; it becomes a reflection of societal values. Accessibility is thus relational and situational, dependent on how environments respond to different

users rather than being a fixed property of space. A failure to ensure accessibility can result in social exclusion, limited economic opportunities, and systemic marginalization (WHO, 2011). Conversely, accessibility contributes to broader societal values of inclusion and diversity.

Accessibility Assessment

Traditional accessibility measures, mostly as normative accessibility, have been widely criticized for their oversimplified, static, and exclusionary nature. Pirie (1979) critiques traditional methods for their lack of behavioral realism, noting that they fail to capture the disruptions or sacrifices individuals must make to achieve access. Moreover, such approaches tend to generalize accessibility across populations, neglecting the individual behavioral pattern and experiences of marginalized social groups. Similarly, Church and Marston (2003) argue that such measures are typically standards-based, focusing solely on whether access is present, without accounting for the quality, effort, or spatial burden associated with that access. These absolute definitions ignore individual differences, leading to distorted equality; for instance, a wheelchair ramp at the back of a building is treated as equal access compared to a main entrance for ambulatory users, despite the disparity in dignity and effort. Páez, Scott, and Morency (2012) critically extend this critique by pointing out that while

normative accessibility is helpful for setting service standards and policy benchmarks, it fails to reflect actual travel behavior and lived experience, thereby leading to potentially misleading conclusions in both planning and evaluation. In this regard, normative and positive accessibility must be understood not as competing metrics, but as complementary lenses that reveal the gap between intended service delivery and actual user experiences.

From the perspective of the social model of disability, however, accessibility aims not simply to provide technical compliance but to overcome barriers so that individuals with specific needs can live independently and participate fully in society (Oliver, 1996; WHO, 2011). This framing emphasizes that accessibility assessments cannot be limited to normative indicators alone. Achieving genuine accessibility requires attention to the lived experiences of users and ensuring that institutional systems are responsive to the specific needs they articulate.

Conclusion

Accessibility should be understood through a developmental and social lens, rather than limited to a standardized or medical perspective. This view is especially relevant in a dynamic, multifunctional environment like TU Delft's campus. Diverse users encounter different barriers on campus depending on context, mobility and role. The ultimate goal of accessibility is not solely to create a physically accessible built environment, but to provide an inclusive atmosphere where students feel welcomed to fully engage in their education and employees are supported in pursuing their professional goals. What matters more is the willingness to take continuous, incremental actions that respond to users' lived experiences.

Participatory Design for Inclusive Campus

Participatory Design Promotes Inclusive Campus

Student participation in shaping the learning environment has increasingly been recognized as essential for campus inclusivity and enhancing student well-being. This perspective is grounded in the United Nations Convention on the Rights of the Child (1989), which emphasizes that students should be involved in decisions that affect their educational experiences and environments. Despite this, historical practices in school and campus design have offered minimal input from teachers and almost none from students (Woolner et al., 2007).

Research indicates students' role in school varies from users, testers, informants, or design partners (Druin, 2002). Of these, the roles of user and tester remain the most common, although they are largely passive receivers. It reflects traditional hierarchical relationships where students follow adult directives. True participatory design should envision students as equal stakeholders to allow their perspectives to meaningfully shape educational spaces and practices (Könings et al., 2014).

When students are actively engaged as partners in the design process, the resulting environments are more aligned with their actual needs and preferences, which can lead to increased motivation, improved engagement, and overall well-being

(Könings et al., 2014). Strengthening student participation in this way not only supports individual learning outcomes but also contributes to recognize diverse voices and to build a more inclusive and equitable campus environment.

Challenges in Implementation

However, realizing participatory design faces several challenges. Power dynamics within educational institutions reinforce the perception of students as passive recipients rather than active contributors. This asymmetry makes it difficult for marginalized voices to influence structures that directly affect them (Fricker, 2007). The shifting of students from passive to active roles requires support and training, as many students are unaccustomed to challenging authority or navigating shared power dynamics (Druin, 2002). Seale, Gibson, Haynes, and Potter (2015) highlight that power imbalances persist even in initiatives claiming equal partnerships, as traditional academic hierarchies limit students' sense of ownership of campus. This power imbalance inherent in organizational roles can cause silence on common experience. (Morrison and Rothman, 2009). The inability to share common experiences can hinder the formation of shared reality, which is essential for validating one's beliefs and emotions. Without this shared reality, individuals may struggle to feel connected to others, ultimately resulting in feelings of

exclusion (Echterhoff & Higgins, 2018).

While participatory design holds a significant role for improving inclusivity in educational settings, its implementation is constrained by this power asymmetry. Students may remain silent in institutional communication because of perceived power imbalances. As a result, many needs remain unmet, inclusivity is compromised, and accessibility goals cannot be fully realized.

Conclusion

Participatory design offers significant potential for improving campus environments and governance by actively involving users and listening to their voices in shaping more inclusive systems. However, its application in educational contexts often encounters the persistent challenge of power imbalances,

which can limit the extent to which student perspectives are taken seriously.

To align with TU Delft's Campus Vision 2040, which emphasizes inclusivity as central values, participatory design should be promoted as a means of ensuring that students are recognized as equal stakeholders. Positioning students in this way enables them to voice their needs and contribute meaningfully to institutional decision-making. Such a foundation is not only essential for authentic participation, but also for building shared ownership and long-term trust in the institution's commitment to accessibility.

Exploratory Meeting

Accessibility as an Inclusive Mindset for All

Accessibility should not be narrowly defined by physical access alone but embraced as a commitment to building equitable and inclusive environments for all, with barriers understood as physical, cognitive, and social. Yet, in pursuing accessibility, experiences of exclusion remain evident. As one participant reflected:

P3 *“So we are not, the realm of accessibility is always about them and us. And we are just persons.”*

This perspective illustrates the influence of the medical model of disability, sets them apart from so-called “normal” users, and considers accessibility as responsibility only for those with special needs. Such a framing reinforces separation rather than inclusion.

In contrast, other participants highlighted more inclusive ways of understanding accessibility. One explained:

P7 *“Accessibility is more than only physical access. It also has a cultural perspective. And I call it more as a form of hospitality.”*

This perspective highlights accessibility as an inclusive mindset, one that extends beyond compliance and into the values of care and hospitality embedded in institutional culture. Another participant stressed the importance of collective responsibility:

P3 *“You can start with small steps, but in the end, every chain in the blockchain needs to be aware of accessibility.”*

Taken together, these perspectives demonstrate that the pursuit of accessibility should be understood as a shared responsibility of the entire community. In line with the social model of disability, which frames disability as socially and environmentally constructed, accessibility must be recognized as an inclusive mindset for all to promote inclusion.

Accessibility as a Process

Pursuing accessibility exclusively through traditional assessments can be counterproductive. An insistence on comprehensive, “perfect” compliance often introduces additional barriers and neglect feasible opportunities for small improvement, as one participant pointed out:

P7 *“When you would like to organize everything in a perfect way, you put a lot of barriers. Barriers of time, barriers of money, barriers of a lot of bureaucracy. And that makes it sometimes very difficult to grab the low-hanging fruit.”*

Accessibility should be treated as a continuous, multi-path process. Solutions need not be limited to physical infrastructure, while they can emerge at different layers, such as organizational, informational, or digital.

P3 *“And so sometimes you can’t make the solution within the building, but you can think on another layer or in another reality, augmented reality, and give a solution to that. So that’s accessibility not only within the building, but also within other realities.”*

P3 *“Sometimes you can’t do the solution in the hardware, so you do it in the software. And software can also be a support.”*

Accordingly, accessibility is not a fixed

destination but an evolving practice that calls for commitment and small but meaningful steps, as one participant stated:

P14 *“Because it’s, like you say, it’s never just black and white. It’s bad until it’s good. But it’s looking for some way to find the best middle way.”*

This quote underscores that accessibility is not achieved through a single decisive action but through an ongoing process of adjustment and refinement. The transformation from “bad” to “good” depends on maintaining continuous feedback loops, where user experiences are actively heard and translated into improvement. This willingness to listen and to act upon feedback enables the institution to steadily enhance its practices with small steps. Such an approach reflects an inclusive mindset, acknowledging accessibility as a shared responsibility within the institution.

Emotional Exhaustion during Voice Up

In voicing their needs, emotional burden can place barriers in the communication, and inevitably lead to silence of the user. As one participant shared:

P3 *“I’m not an activist. Maybe younger people are really good activists and go to the person in charge like I can’t enter the building, I can’t*

*see, I can't find the toilet,
the toilet is not usable.
But when I would do that
every day then all my days
are filled with anger, with
sadness."*

This quote illustrates the emotional burden that arises when individuals are forced to repeatedly request for their most basic needs. This exhaustion makes it harder for users to engage with existing feedback systems, as speaking up becomes associated with frustration. When the institution does not provide or respond to these lived realities, it risks undermining inclusion and discouraging participation. Over time, such dynamics create additional barriers to establishing an accessible and equitable communication environment.

Conclusion

Accessibility should be understood as a cultural mindset that everyone shares responsibility for rather than limited to physical infrastructure. It is not a one-time achievement but an ongoing process that requires continual listening and responding to diverse voices. However, this process is often hindered by the difficulty of speaking up, as users may experience emotional exhaustion when their needs are repeatedly ignored or inadequately addressed. Such exhaustion can be shaped by structural hierarchies. Addressing these challenges calls for a willingness across all stakeholder groups, such as the willingness to listen, the willingness to improve, and the willingness to take action. With those attitudes, the institution can lower the emotional burden of participation and create an accessible communication environment.

Current Situation at TU Delft

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Insitutional Structure and Stakeholders

At present, accessibility-related matters at TU Delft are governed and supported by multiple departments and initiatives, each situated at a different organizational level. The Diversity and Inclusion (D&I) Office, operating under the Executive Board (CvE), focuses on policy advocacy, awareness-raising, and high-level strategy around inclusion, including accessibility. It holds symbolic visibility and strategic influence over accessibility related topics.

Another similar actor is Horizon, situated under Education & Student Affairs (ESA), which serves as a central point of contact for students with special needs. Horizon provides informational support and coordination to individual cases, but is not a decision-making body. Previously, it also hosted StudAble, a student-led accessibility community in TU Delft. Though initially supported by Horizon,

StudAble now operates more independently, providing support and building an inclusive community for students with special needs.

Importantly, many physical accessibility issues on campus relate to the built environment, which falls under Campus Real Estate & Facility Management (CREFM). Campus Real Estate (CRE) owns the campus property of TU Delft. The property may be leased centrally to TU Delft or at the faculty level. CRE and faculty run decisions on the built environment together. The management and supporting of functional use of space falls under CRE, while educational use of the space is often led by faculties. In this system, CREFM acts as the middle person to communicate between CRE and TU Delft or faculties. It's also responsible for carrying-out solutions for accessibility concerns and initiating official requests for modification.

Accessibility Actions at TU Delft

To understand how accessibility concerns are addressed in practice, two ongoing initiatives at TU Delft were analyzed: one student-initiated (Case A) and one institutionally initiated (Case B). Each offers insights into the roles of stakeholders, communication flows, and barriers within the current governance system.

Case A: Bottom-Up Building Inspection

Case A is an annual student-led building inspection, initiated by StudAble and supported by Horizon and the student council. The process was structured around a self-developed inspection guideline based on national accessibility policies. These inspections are conducted collaboratively, involving users with accessibility needs, and result in a formal report highlighting barriers and possible improvements.

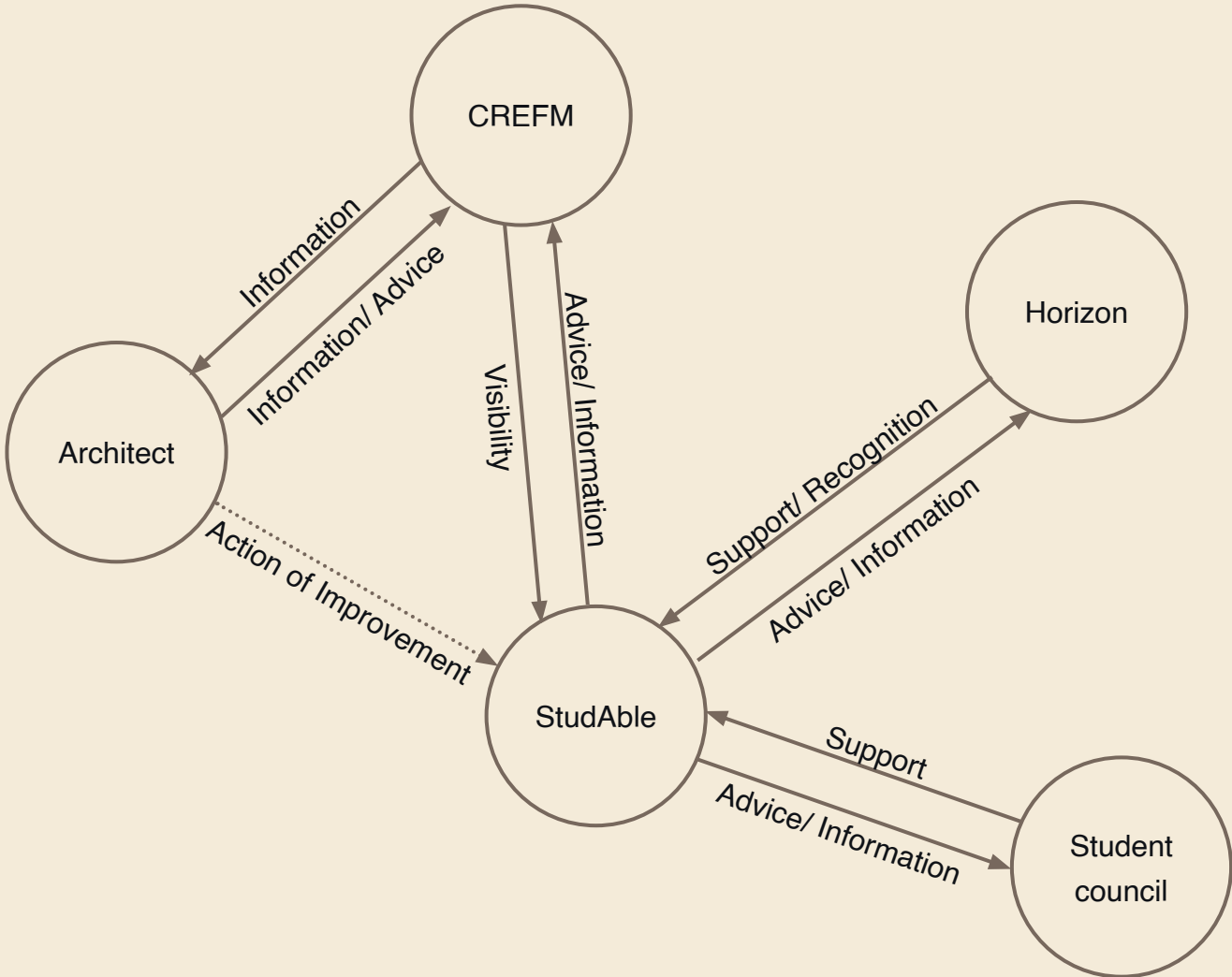


Figure 3.1: Value exchange map Case A ECHO building

The process followed a staged structure: pre-assessment (setting up the inspection), during (on-site assessment by mixed teams), and after (compiling and submitting a report). The values exchanged were primarily information and advice. StudAble collected findings, translated them into structured reports, and shared them to Horizon and CREFM. Horizon and CREFM would then determine which other stakeholders should receive the report.

For example, in the inspection of the ECHO building, the report was shared with the responsible architect through CREFM. The report was positively recognized by the architect and some modifications were implemented in response to the feedback. But in the case of other buildings, StudAble lost track of the report and can not guarantee that all stakeholders involved received it. StuAble as a student organization managed to combine assessment policy with lived experience, however these contributions by students didn't receive recognition from systemic mechanisms nor actively being translated into solutions. The value of lived experience and data was clear within the student group but not effectively integrated

across the wider institutional structure. The value exchange map of ECHO building (Figure 3.1) revealed the missing of decision-makers and limited impact of the building inspectoin. Although the reports are often well-documented and shared with staff, they seldom reach the top decision-makers nor result in systematic change. As such, the efforts of Case A demonstrate initiative and expertise at the user level, but lack institutional reinforcement.

Case B: Top-Down Building Modification Meeting

Case B takes the form of a formal building modification process, initiated by a CREFM officer of the building and the faculty. The process is structured around a standardized request form and a multi-stage prioritization system. This system is aimed at improving the working and studying environment. The submitted requests were discussed in a series of meetings involving faculty secretaries, department representatives, a ESA representative, and a CREFM representative. The structure followed the

Geef de aanleiding en een omschrijving van het project:	
Give the reason and a description of the project:	
Geef aan waar de aangevraagde aanpassing voor gebruikt gaat worden:	
Indicate what the requested change will be used for:	
Zijn er raakvlakken met andere (lopende) aanvragen/projecten:	
Are there interfaces with other (ongoing) requests/projects:	
Betreft deze aanvraag een tijdelijke of structurele situatie:	
Does this request concern a temporary or structural situation:	

Figure 3.2: Request form

MoSCoW prioritization method: classifying items as Must have, Should have, Could have, or Won't have, with emphasis on safety and policy compliance.

The stakeholder journey unfolds three stages:

pre-meeting (request collection and briefing), during (evaluation and prioritization), and post-meeting (budget review and decision-making). As the meeting is an ongoing process, only pre-meeting and during meeting stages will be discussed.

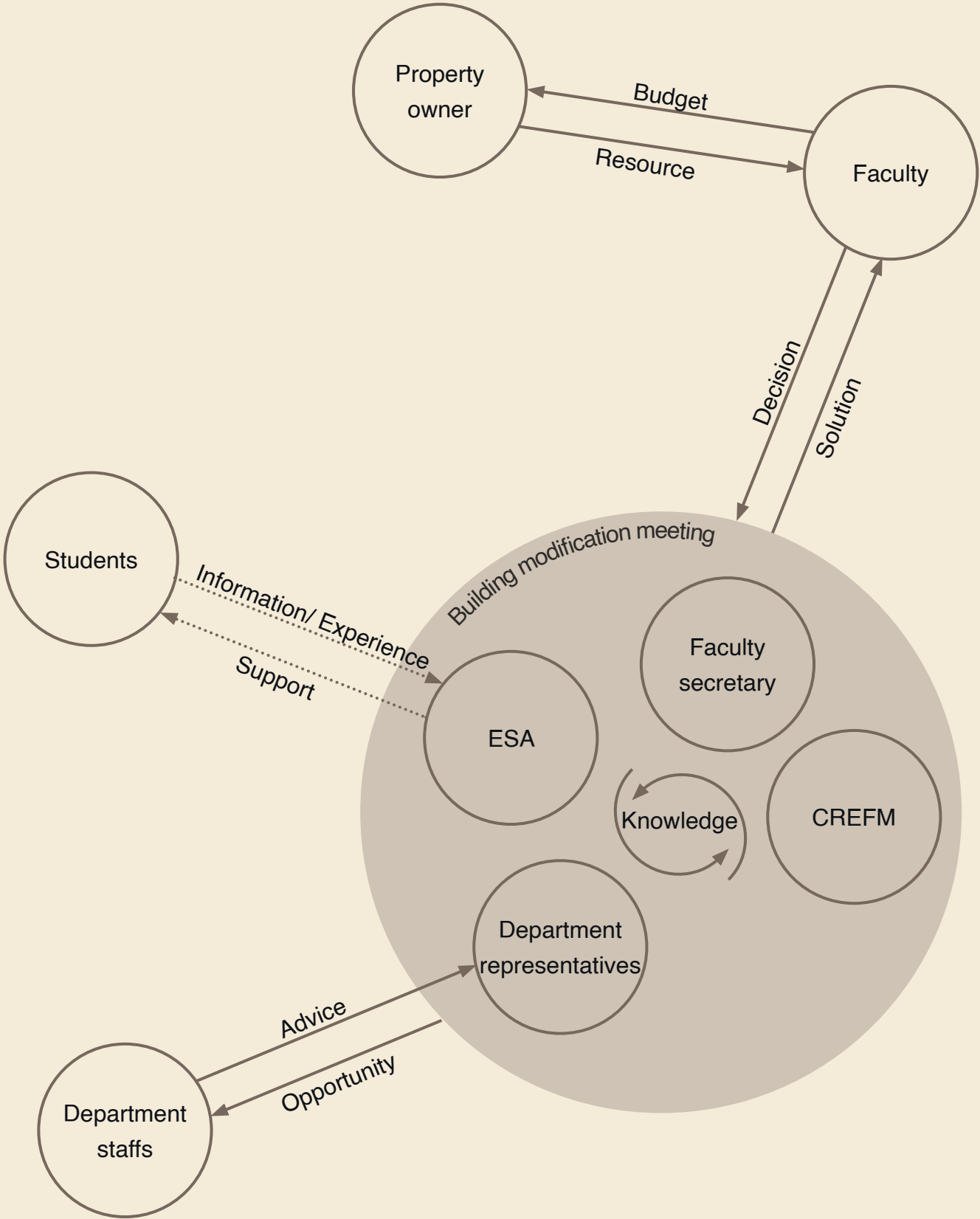


Figure 3.3: Value exchange map Case B

Multiple departments are involved simultaneously in this meeting, but the role of student input remains ambiguous. Although a student representative is formally present, her contribution is largely limited to information previously collected from her daily work, rather than bringing in new input tailored to the meeting itself. The official request forms are distributed to academic staff through department representatives, and students are neither invited to complete these forms nor directly included in the meeting process. As a result, the level of actual student influence on decision-making appears limited. A sample request form is shown in Figure 3.2. The form primarily emphasizes the description of issues and their functional purpose, while giving little attention to the lived experiences of users on campus.

The value exchange map (Figure 3.3) reveals a relatively more complex network than in Case A, with the negotiation loops between the faculty and property owner regarding budget and feasibility. Yet, the original request initiators often lack visibility into how decisions are made and how their needs are evaluated.

While the process appeared efficient and structured, it lacked direct input from users with lived experience. “Bottom-up” data was largely contributed by staff members or based on secondhand knowledge. The priority list generated through this process was passed to the property owner and faculty administrators, who would determine budget allocation and final decisions. As such, while Case B illustrates a coordinated top-down effort, it lacks emotional resonance and contextual insight that direct user engagement might have provided.

Other Events in Relation to Accessibility

Beyond the two main cases, TU Delft also carries out other accessibility-related activities. For instance, Horizon and StudAble jointly organize the annual AccessAbility Week. It features expert lectures, workshops, and interactive sessions with both students and staff. In everyday practice, student feedback is primarily collected through service desks, the student council, and academic counselors. The feedback would be reported to ESA during the weekly meeting. This feedback can also include accessibility-related concerns. Horizon and ESA additionally communicate relevant information through newsletters.

Alongside these formal structures, individual efforts also play an important role. Beyond ESA’s routine meetings for gathering student input, some members have developed informal approaches such as WhatsApp chats to better understand students’ situations. Similarly, a department D&I officer has tried to take small steps and initiated his own building inspection at his department.

Taken together, these examples illustrate how an inclusive mindset is currently present among those individuals who demonstrate a willingness to contribute what they can to make campus life more inclusive. Yet, those also highlight that the current practices rely heavily on personal motivation and informal action.

Users’ Voice

Unclear Feedback Mechanism

Among the 17 active survey participants, 10 reported having encountered barriers on campus. However, none of them had taken action to resolve the issues. Notably, 7 of these 10 expressed the intention to address the barrier but stated they did not know how. This indicates a lack of knowledge about available support channels and unclear procedural pathways.

Service desks are intended to function as the first point of contact for student feedback and should also address accessibility-related issues. However, during the research, emails were sent to all service desks asking whether they have accessibility related issues (please refer to Appendix x for email prompt). However, very few responses were received. Among those who replied, some reported that they had never received accessibility feedback, while some explicitly stated that such issues “fall outside our scope.” This aligns with the survey findings, where users expressed that they lacked clear channels to report the barriers they encounter on campus.

Emotional Burden

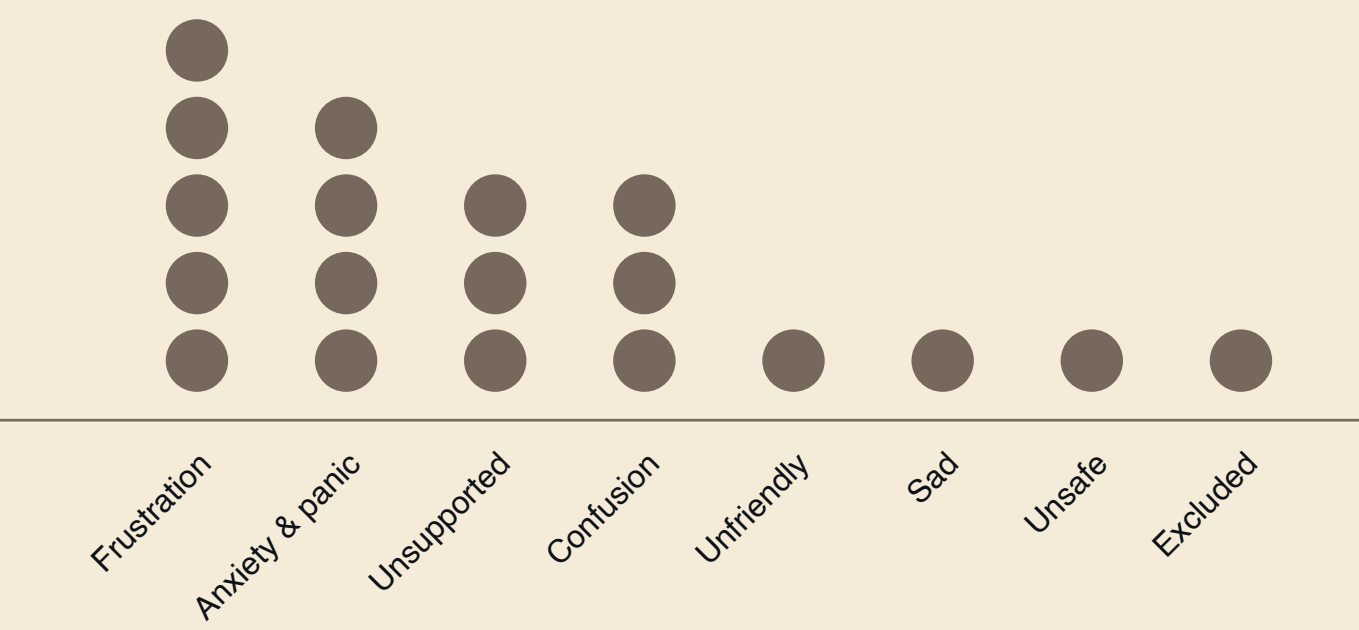
The following quote further illustrates the emotional toll of being visibly disabled in a poorly accommodating environment. While the student self-identified as motivated, her surroundings framed her through a medicalized lens. The feeling of unsupported caused by barriers on campus turned into a burden towards her willingness to participate in educational activities and harmed the education quality she received on campus.

“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. And it took me soo much energy just coming from my home to campus, even though I live next to the Delft central station.”

As shown in Table 4, the most common emotions towards those kinds of experiences are frustration, anxiety and panic,

unsupported and confused users often experience feelings of frustration, anxiety and panic, and confusion. One also mentioned excluded. This highlights the absence of a clear and visible feedback mechanism, which not only prevents issues from being addressed but also further undermines students’ engagement, emotional safety, and their long-term sense of belonging within the campus environment.

Such gaps can only undermine inclusion and accessibility, making it more difficult for TU Delft to realize the ambitions of Campus Vision 2040.



Tabel 4: Emotions when encoutering barriers on campus

Division of Stakeholder Layers

Given the institutional complexity of accessibility governance, this project proposes a reclassification of stakeholders into three layers after the study of current activities in TU Delft: top, middle, and bottom to clarify how communication and responsibility flow within the system.

The top layer includes decision-makers such as Executive Board members, faculty administrators, and property owners. They define policy direction and allocate budget.

The middle layer includes coordinators and implementers such as CREFM, ESA, D&I staff, and Horizon, those who receive feedback from the bottom layer and translate it into actionable plans or reports.

The bottom layer comprises users with lived experience: mainly students, but also temporary users such as visitors who interact directly with facilities.

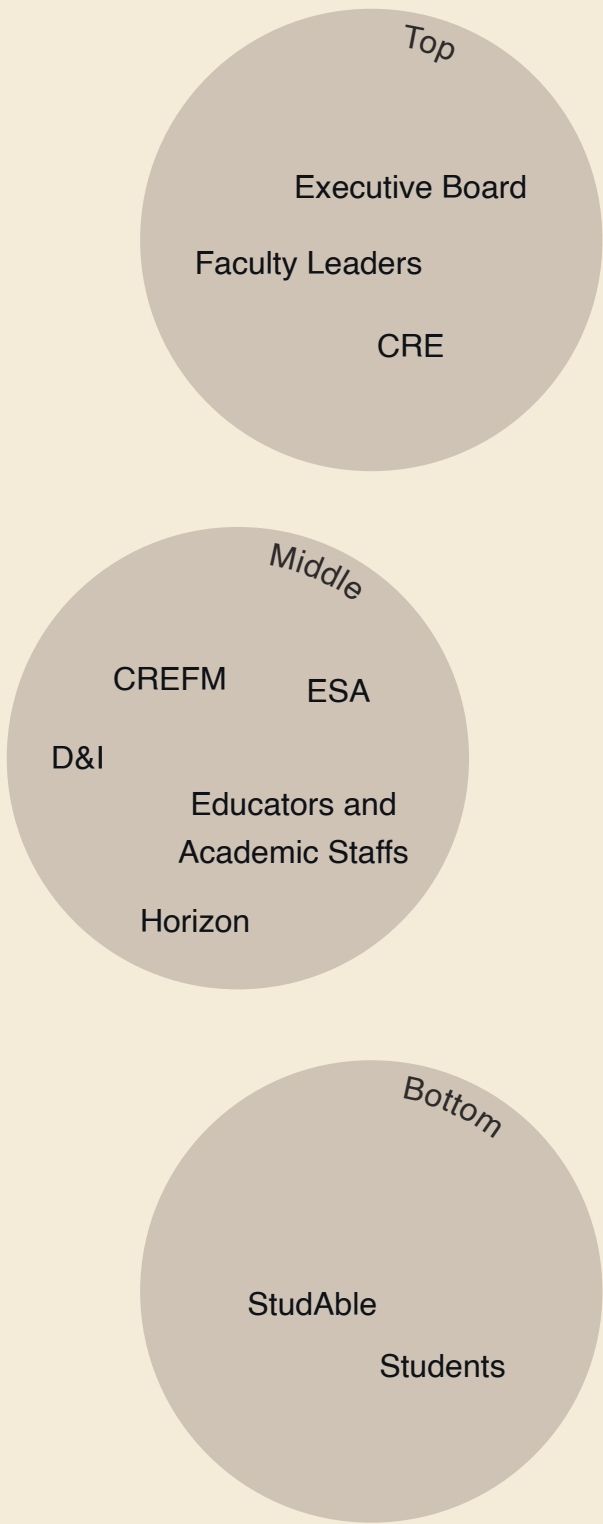


Figure 3.4: Typical division of Stakeholders

This reclassification is grounded in the titles and positions that individuals act in TU Delft. As one participant with accessible needs stated:

P7

“But I’m privileged because I’m in the higher management. I’m a member of the management team. I know the way.”

This reclassification is grounded in the titles and positions that individuals act in TU Delft. As one participant with accessible needs which would be generally considered as bottom layer, however as a TU Delft employee working on accessibility directly, he has fewer barriers in resolving his needs, making connections and accessing resources due to their position in the institutional network (represented in figure 3.5). Conversely, students, particularly those without organizational backing, often lack access to the channels necessary for their concerns to be addressed meaningfully. Therefore this reclassification is based on their position on campus.

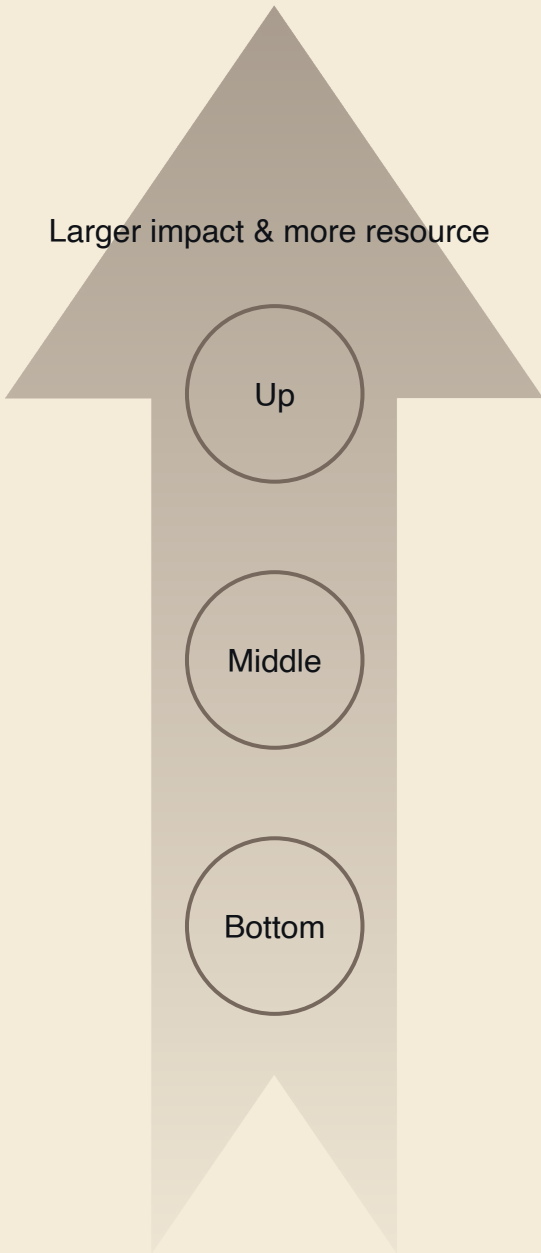


Figure 3.5: Impact and resource allocation between stakeholders

Assessing the Current System: Strengths and Shortcomings

To understand how accessibility is currently addressed at TU Delft, it is necessary to assess both the strengths and the limitations of the existing situation. While certain practices demonstrate commitment, significant gaps remain that hinder the realization of a more inclusive and responsive campus environment.

Formal Efforts Toward Inclusion

Through interviews several positive elements emerged. Efforts to raise awareness of accessibility issues are actively supported through university announcement channels and newsletters. These communications aim to inform students about available resources, ongoing initiatives, and opportunities to provide input.

TU Delft has also shown willingness to incorporate the feedback of students with disabilities. An example is the establishment of StudAble under Horizon, which initially began as an effort to gather student input for a new policy on studying with disabilities. Over time, this process revealed that students desired a sense of community. As the process is explained by one Horizon officer:

P9 *“They wanted a new policy here for studying with disabilities, and they wanted input from students.”*

So then there was like, this small group of students who could think along on this new policy, and then they learned that actually these students really wanted a community.”

These initiatives demonstrate TU Delft’s growing attention to accessibility and illustrate both a willingness to improve and a willingness to take action.

Proactive Staff Engagement and Informal Connections

Regular input from students is structurally guaranteed through scheduled feedback mechanisms, such as ESA’s regular meetings with study councils, as well as through more informal channels like WhatsApp groups. Beyond these formal procedures, the establishment of informal connections often allows for rapid feedback loops, particularly when students are able to identify the right contact person. In such cases, practical problems can often be resolved efficiently at the individual level. The staff members taking the initiative to reach out directly to students in addition to these structural channels demonstrated a proactive and optimistic attitude. Their willingness to listen reflects a strong commitment to accessibility and

inclusion. Those Participants demonstrated strong concern and commitment toward accessibility and inclusion during the interviews as well, as one stated:

P8 *“So, but from day one, I met xxx (an individual with accessible needs). I said OK. I’m very glad you’re here because I don’t know. You should make a program what is needed physically in this building or what. What you need to want to change because then you can ask money for it and if you have money then we have something that I can help.”*

These accounts show how staff expertise with the willingness to listen and the willingness to improve accessibility can lead to an inclusive mindset. Such proactive engagement has a positive impact on building a more supportive and inclusive educational environment for all.

Complicated Systematic Process

Even in case B, where the requesting procedure is relatively clear. The reporting system is also time-consuming and bureaucratically layered, as participants described:

P4 *“And then it will enter the different budget rounds. So the CRE budget rounds, can this be done? And*

that of the faculty, depending on the issue.... So it’s going to be a lot of going back and forth between.”

P10 *“And that seemed a good solution and it seemed easy and it will be soon be realized. But it’s, I think, one and a half year ago that we thought of this solution. So then it first, it seems as it’s going very fast and suddenly it’s more complicated, people not having time. And then, yeah, it’s taking a long time to realize it.”*

This complexity is illustrated in Figure 3.6, which shows the multiple layers a request must pass through before reaching a final decision. Such complexity can discourage action, particularly for students who lack the time, experience, or confidence to navigate institutional procedures. Even when input is collected, the way it travels through the system often dilutes its original meaning. In Case B, user experiences were first communicated to academic counsellors, then summarized by ESA officer, and only later introduced into formal discussions. These experiences were translated into request forms that described objective physical conditions, with little reference to the emotions or experience. After briefing,

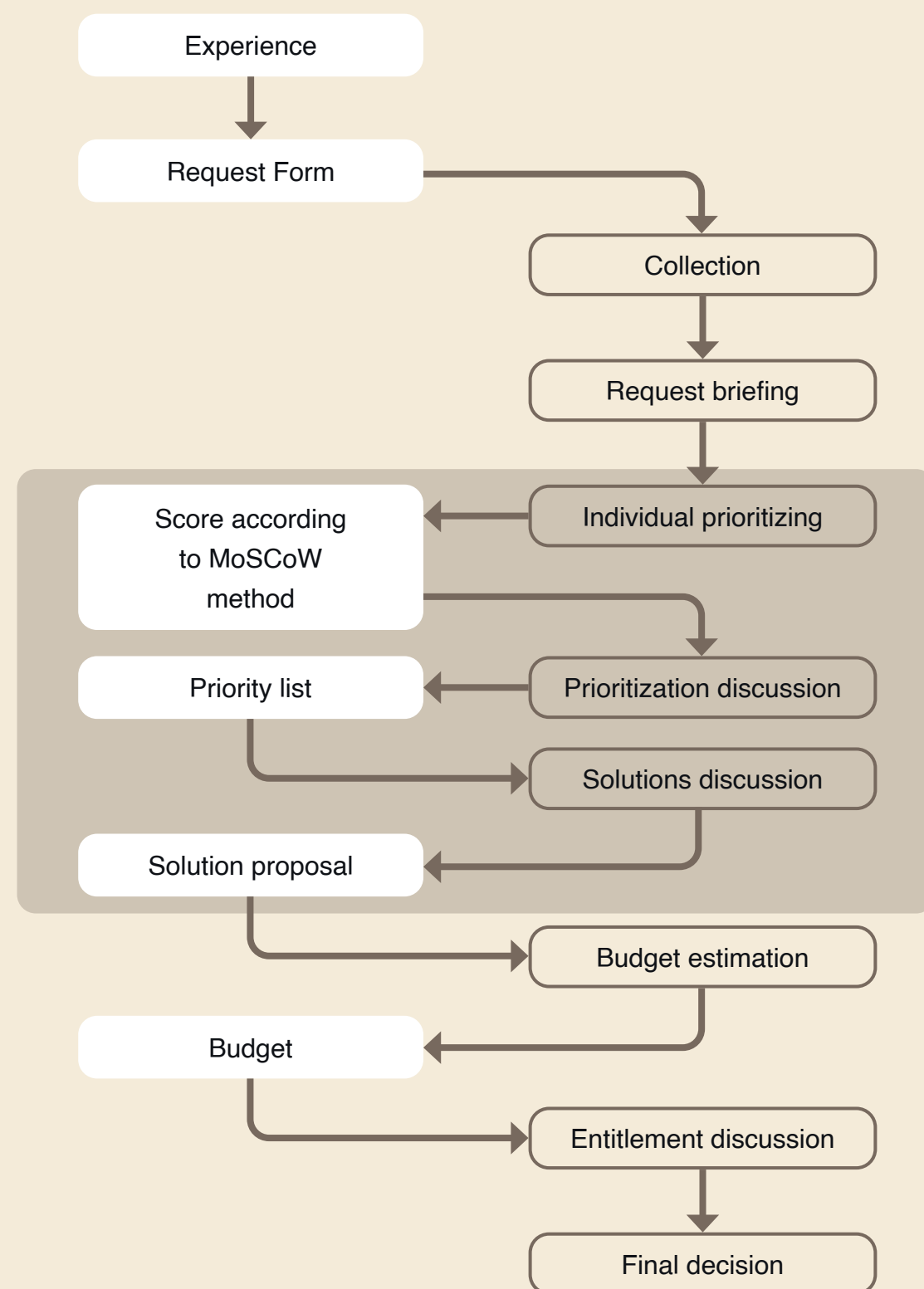


Figure 3.6: Request process

requests were further reduced to scores using the MoSCoW method, then ranked and discussed as possible solutions during meetings. Once the initial priority list is transferred to the top layer, these requests are converted again into budget

considerations. At each step, emotional and contextual details are lost, and only interpretive information is considered when prioritization requests. As a result, lived experiences become sanitized and standardized, making them less compelling

and harder to act upon in ways that genuinely address users' needs.

From this analysis it becomes clear that while the systematic process has the potential to generate large-scale impact, it is also highly time-consuming and complex. By filtering out lived experience, it makes it difficult for those at the bottom layer to participate meaningfully or exert influence.

Budget and Policy Oriented

A further complication is the underlying cultural orientation of the institution. Although TU Delft hosts numerous professionals with strong accessibility expertise and personal commitment, accessibility as a shared institutional value has yet to be fully embraced and the value of lived experience is neglected. Decision-making continues to be dominated by a policy- and budget-oriented mindset. As one participant put it:

P4

"For final prioritization, and then it's a question about available budgets, which, given the budget cuts, is not much, but there is some. And what is feasible."

This perspective reflects a risk-averse, compliance-driven culture, where actions are prioritized based on financial feasibility and regulatory alignment, rather than lived experience or long-term inclusion goals. Budget limitations further reinforce this orientation, as another participant from Horizon emphasized:

P9

"Concerning accessibility and then it was, there was no budget."

Together, these views highlight how financial and policy constraints can overshadow accessibility as a cultural and institutional value, limiting opportunities for systemic change.

Responsibility Ambiguity

Another challenge lies in the communication channels is the ambiguity of roles across different support structures. As revealed in the survey, students often face difficulties in knowing where to report accessibility issues, and even when they attempt to do so, they may be referred to multiple places without receiving an adequate solution. As the Horizon officer explained:

P9

"It's not that the student is just in the middle, we also hope that academic counselors mostly first reach out to us if they think, hey, I'm not sure, but maybe the students can also be helped with Horizon. And then we can already say yes or no. Instead of that the student is sent to us, and then we have to disappoint them sometimes."

This quote illustrates the underlying problem: even well-meaning staff may be uncertain about their responsibilities within the broader system, particularly in the absence of timely and updated guidance. As a result, students experience unclear boundaries, repeated referrals, and frustration when their issues remain unresolved. The lack of clearly defined handoff protocols between departments reinforces the fragmentation, leaving accessibility needs insufficiently addressed.

Communication Breakdowns

Both Case A and Case B illustrate the disconnect between top and bottom layers, where the middle layer functions as a necessary but sometimes distorting filter.

In Case A, the inspection guideline was developed by a disability researcher with lived experience, drawing directly on the national accessibility policy. This combination of theoretical knowledge and practical perspective provided a well-balanced framework. The report was positively recognized by the architect of the ECHO building and contributed to improvements in the accessibility of the space. Despite the quality of the student report, the output was not officially acknowledged or operationalized by top-level decision-makers. It relied on the goodwill of middle-layer staff and informal recognition rather than institutionalized pathways for inclusion.

In Case B, feedback from users was filtered through multiple interpretations before reaching decision-makers. The experience from bottom users were translated into formal format instead presented directly to the top layer. The priority system further reframed lived experiences into policy-appropriate

language, often flattening the depth of those concerns. Decisions at the top were made based on policy alignment and budget, not live input.

This pattern, shown in figure 3.7, indicates experience and requests from the bottom layer must first pass through the middle layer. The feedback from the bottom layer is often translated into a feasible plan in the middle layer before being submitted to the top layer. Then the top layer makes a decision on the proposal based on policy and budget compliance. The bottom layer is seldom

involved in the decision-making process, instead they can only interact with the middle layers and receive instructions. This indirect flow not only slows down communication but also risks losing important contextual details along the way.

Another structural weakness caused by communication breakdown is the lack of cooperation across parallel efforts. Several accessibility-related initiatives are ongoing across campus, but they are often initiated by different individuals or departments without coordination. For instance, a D&I officer independently initiated a building inspection, unaware that a similar activity was already carried out by StudAble. This situation underscores a broader fragmentation, resulting in waste of time and effort on similar issues.

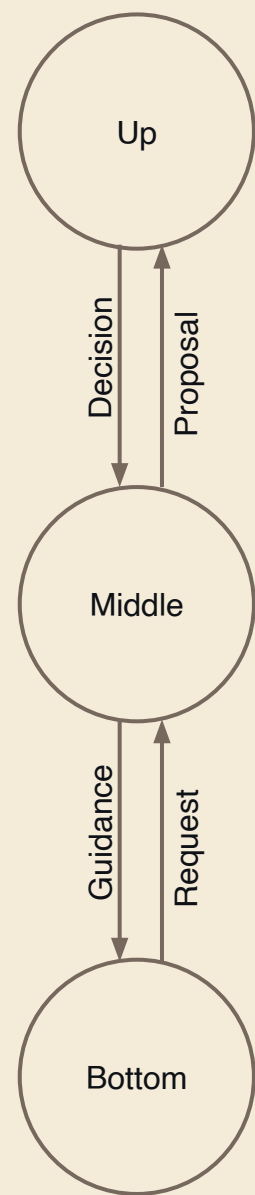


Figure 3.7: Current communication flow at TU Delft

Conclusion

The current system at TU Delft on accessibility topics reflects both the institution’s evolving commitment to inclusion and its structural limitations in translating that commitment into reality. While several departments and individuals actively advocate for accessibility, the lack of coordinated communication across and within stakeholder layers leads to fragmented efforts, delayed responses, and emotional burdens for users attempting to voice concerns.

Case A and Case B illustrate contrasting approaches, bottom-up and top-down. Both suffer from ineffective flow of feedback. Valuable student reports from case A had limited influence on strategic decisions. While in case B, institutional processes filter user input through multiple intermediaries and result in loss of direct context and urgency. Additionally, internal confusion among staff

regarding protocols and responsibilities further weakens the communication chain.

Participatory design and co-governance showed a significant role in improving inclusion in educational spaces (Moreno-Romero et al., 2024). The current challenges at TU Delft reveal a communication breakdown instead of an equal communication among stakeholders, which in turn complicates the implementation of participatory design. These challenges underscore the need for a more accessible and inclusive communication system. Moving forward, the design process focuses not on solving accessibility itself, but on redesigning how accessibility is communicated, shared, and acted upon within the university. The next chapter explores how these findings inspire new frameworks and tools to support a more inclusive campus environment.

Design Exploration

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Rethinking the Goal of Accessibility Design

It was recognized during the exploratory meetings that perfect accessibility is an unattainable goal, both conceptually and practically. The pursuit of an idealized accessibility may risk creating new barriers rather than fostering inclusion. Given the limited time, authority, and scope of a graduation project, the aim here is not to propose a physical solution for accessibility, but to highlight the value of lived experience and to foster an inclusive, low-barrier communication environment in which feedback can flow more freely, directly, and meaningfully.

If accessibility is understood as the mismatch between user needs and their environment (Oliver, 1996; WHO, 2011), then communication with users to gather feedback becomes a central tool for gathering users’ needs and requests for alignment on

accessibility. For this to work, the process must be accessible. Communication therefore plays a critical role here in recognizing lived experience and strengthening the mechanisms through which feedback can support ongoing progress toward accessibility.

This project, therefore, proposes to shift focus from infrastructural solutions to communication-based interventions. It treats emotional safety, clarity of process, and cultural reinforcement as equally important design criteria, recognizing that systems change begins not only with physical modification, but with relational awareness and willingness. The goal is not just to “gather more feedback,” but to cultivate a sense of inclusion, shared responsibility, and possibility for action.

Defining Stakeholders and Design Direction

While everyone on campus is potentially impacted by accessibility, this project focuses on primary stakeholders, those most directly engaged with accessibility barriers or in the position to act upon them. These include students, TU Delft employees, faculty-level decision makers and executive board. Secondary stakeholders such as architects, external consultants, contractors, and municipal actors are acknowledged but remain outside the scope.

Previous fieldwork has revealed that connections between these layers tend to be one-directional and heavily mediated. In Case B, user experiences were filtered through multiple procedures, losing emotional nuance in the process. In Case A, valuable insights from students failed to reach upper-level decision-makers, limiting impact. As such, this project reframes the challenge as a

communication design problem, asking: *How can connections between layers be made more accessible, and actionable to create a safe and encouraging communication environment?*

The triangle model (figure 4.1) replaces linear, hierarchical structures (figure 4.2) with a mutual exchange dynamic, where each node is connected and able to influence others. Importantly, the use of “top” and “bottom” is not intended to reinforce hierarchy, but to reflect the emotional and procedural distance users often feel when navigating institutional systems.

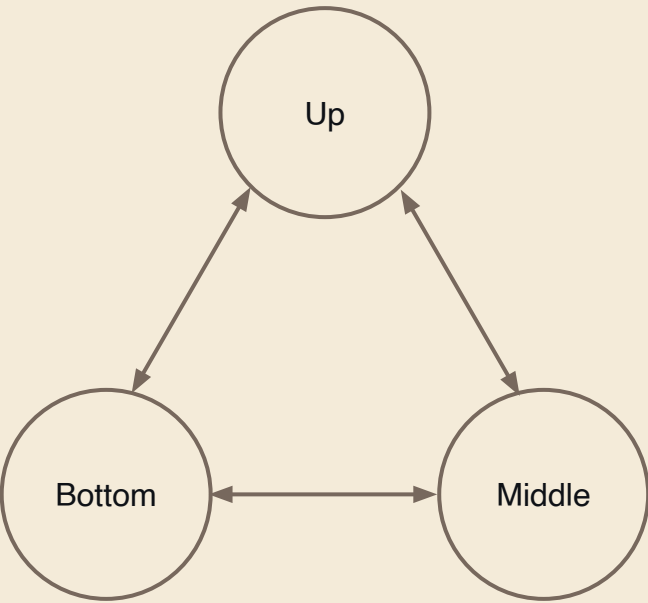


Figure 4.1: Proposed stakeholders interaction

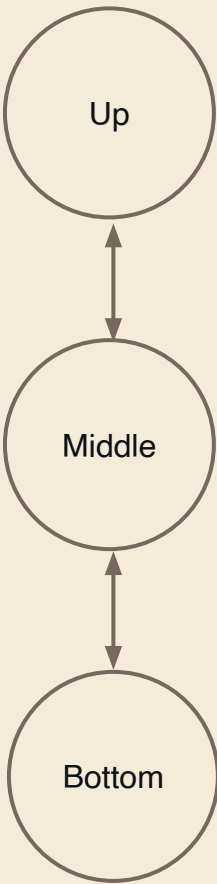


Figure 4.2: Current stakeholders interaction

Possible Touchpoints

Rather than pursue a singular solution, during the brainstorming session I explore four concept directions, each targeting a different segment of the communication triangle. These concepts are designed to be low-barrier, scalable, and compatible with existing institutional infrastructure.

“Ready to Help” Pin or Badge

Inspired by exploratory interviews and initiatives like the Hidden Disabilities Sunflower scheme, this concept reverses the traditional visibility logic: rather than asking users in need to identify themselves, it empowers others to signal their willingness to help.

This badge or pin could be worn by trained staff, volunteers, or simply community-minded individuals whenever they feel they are capable of providing help. It functions as a social symbol, inviting and encouraging those with accessibility needs to seek assistance without fear of burdening others. In a campus where many students reported not knowing “who to talk to”, such visible signs of support may lower psychological barriers to engagement. It also encourages the idea that accessibility is a shared responsibility.

Emotional Feedback Platform

The most central concept is the creation of an emotional feedback platform, blending analog and digital strategies to enable expressive, layered, and open-ended communication. Drawing inspiration from “wishing trees” in East Asian traditions and color-sticker street polling, the platform allows users to share their emotional responses to campus barriers in either abstract (color-based) or verbal (quote-based) form.

As believed that the trees in spiritual context is the living connectors between Earth and Sky. This platform serves as a symbolic channel between bottom and top layers. Users can choose how much information they want to share, while institutional actors can choose how much detail to absorb. This mutual filtering mechanism helps balance openness with cognitive load. It also circumvents lengthy bureaucratic systems by offering a fast, visual indicator of collective sentiment.

The platform could initially take a physical form (e.g., an installation in a central building), with later integration into a digital dashboard. Ultimately, it reframes feedback as a community expression, not just an administrative task.

Further implications involve clarifying the internal service processes for managing staff as well as mapping the user journey, in order

to improve service coordination and ensure timely, effective responses to accessibility needs.

Making Visibility a Cultural Norm

The final concept focuses on raising visibility of ongoing accessibility efforts, both to validate user participation and to normalize awareness across the campus. For instance, making signage of accessible facilities more prominent not only helps those in need, but also signals to others that these needs are being recognized and supported.

In addition, both Horizon and StudAble are embedded in TU Delft general website with limited information and neither have an active updating website. Only StudAble is maintaining an active social media account. Creating channels to active update and broadcast on the news around accessibility in addition to just providing general information can foster trust and motivation among students. It shifts communication from reactive to proactive and turns invisible work behind the curtain to a more transparent information open to everyone.

Further implications involve website building and clarification on material to showcase on it.



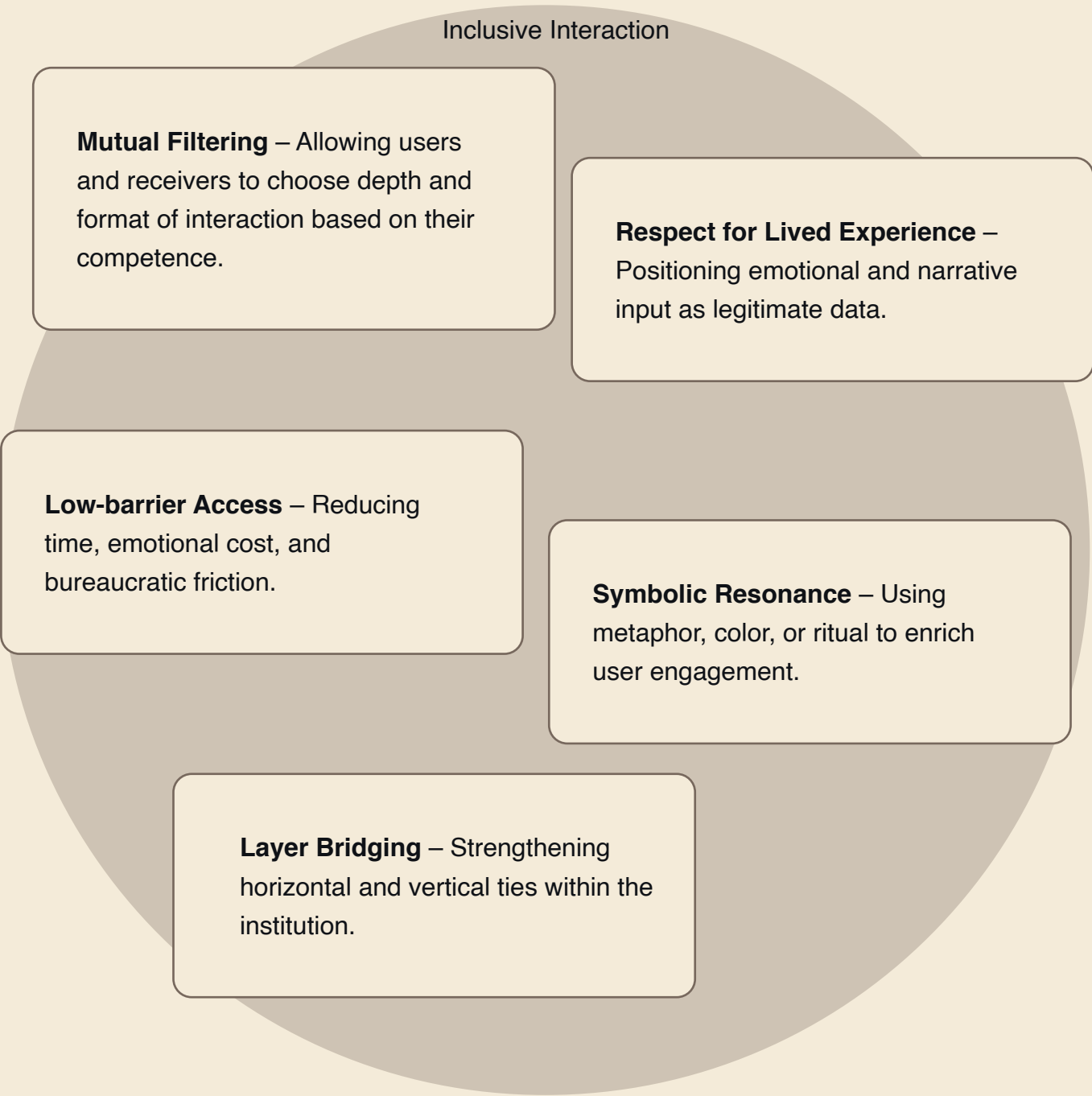
Figure 4.3: Reference images of Ready-to-Help pin



Figure 4.4: Reference images of emotional feedback platform

Common Threads and Strategic Focus

Across all concepts, several design values recur:



These prototypes are not final solutions, but strategic interventions—intended to seed culture change, expose blind spots, and stimulate dialogue across stakeholder groups. Rather than focus on solving accessibility through technical fixes, the design exploration advocates for rebalancing voice and visibility, starting with the way people communicate, and the systems that listen.

Figure 4.5: Design value for inclusive interaction

Design Development

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Workshop as Co-Creation and Evaluation Tool

To validate the proposed design directions and gather insights for refinement, two co-creation workshops were organized with a mix of stakeholders who had participated in earlier stages of this project. The primary goal of the workshops was to test the resonance of initial concepts, explore stakeholders’ perspectives on communication dynamics, and investigate the feasibility of building more meaningful connections across organizational layers.

Workshops were selected as a method because they enable stakeholders to actively contribute to the design process, rather than act solely as informants. As participatory design literature emphasizes, co-creation fosters a stronger sense of ownership and realism in solutions (Simonsen & Robertson, 2012). Especially in topics like accessibility, which are deeply rooted in everyday experiences and power dynamics, collaborative formats are crucial in surfacing tacit knowledge and institutional blind spots.

Workshop Set-up

Invitations were sent to interview participants based on their roles, expertise, and relevance to accessibility issues. A small number of additional students were also invited to enrich the variety of perspectives. To accommodate participant availability and ensure focused discussion, the workshop was divided into two sessions, each with five participants.

The workshops were held on campus, and accessibility of the space was carefully checked in advance, including room entry, restroom access, and seating flexibility. The session began with a brief project introduction, followed by a presentation of research insights (please refer to Appendix 5.1) and the idealized future vision for communication around accessibility at TU Delft. Participants were then invited to play with cards and colored stickers to express ideas, critique the proposed concepts, and suggest improvements (result refer to Appendix 5.2).

Session 1 included 3 middle-layer participants (2 of whom work directly with accessibility) and 2 students from the bottom layer. Session 2 had a similar composition, including 1 member from StudAble (refer to table 3 for participant list). Both sessions were recorded and transcribed using TU Delft Teams.

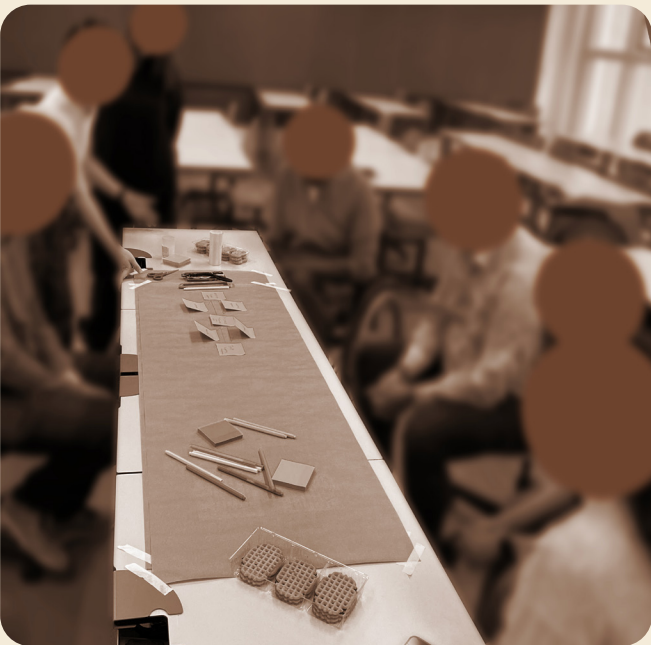


Figure 5.1: Workshop 1

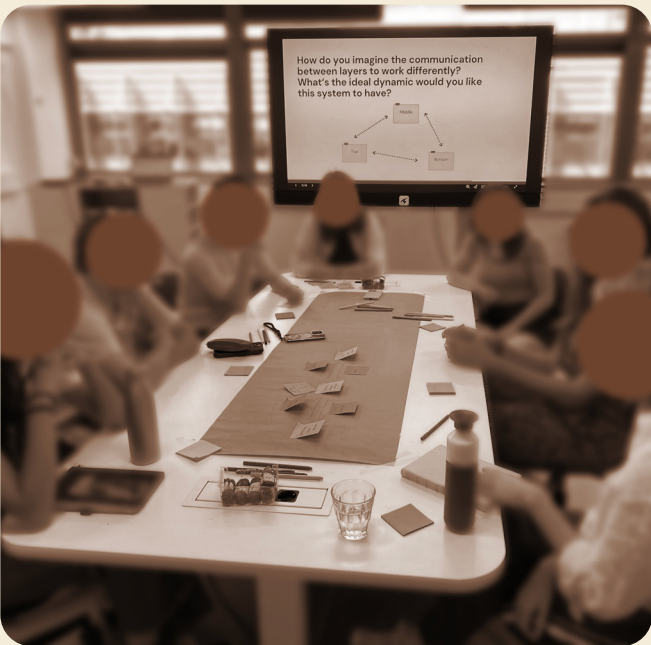


Figure 5.2: Workshop 2

Participant	Role	Organization	Activity
P4	Department Deputy	TU Delft	Workshop 2
P7	Faculty D&I	TU Delft	Workshop 1
P8	CREFM	TU Delft	Workshop 2
P9	Horizon	TU Delft	Workshop 2
P14	CREFM	TU Delft	Workshop 1
P15	Academic Staff	TU Delft	Workshop 1
P16	Student	TU Delft	Workshop 1
P17	Student	TU Delft	Workshop 1
P18	StudAble	TU Delft	Workshop 2
P19	Student	TU Delft	Workshop 2

Table 3: Workshop participants list

Key Insights and Implication

Top vs Bottom Hierarchy

A recurring theme throughout both sessions was ambivalence around the “top–bottom” terminology. One participant noted:

P

“I feel that you should – I have trouble with seeing it as bottom and top. I see it more as a client-provider relation. And then there’s not so much bottom and top. They have the money to provide. You have the needs that need to be fulfilled as a client... You don’t have to see it as a victim. It’s just that you have a request like you can ask for security of your data that you store, like you have a request for a safe environment in traffic. It’s not that you’re on the bottom.”

This quote reflects a valuable shift in mindset: reframing the user not as a powerless complainant, but as a legitimate stakeholder with rights and expectations, much like a service client. This doesn’t unjustify the emotions that users are feeling towards the barrier reporting process as proven

previously, however it challenges the emotional toll often felt by students when requesting accessibility improvements. Instead of invoking pity or deference, communication should affirm equal worth and mutual accountability. Consequently, a key design criterion emerging from the workshop is the creation of a more equal and respectful communication environment, where users are empowered to express needs without hesitation or emotional trauma.

Another participant addressed the organizational logic behind layering and towards the proposed triangle communication model:

P

“Well, there is a reason that there is a middle layer, in the sense that there are very few people at the top layer. There are many people at the bottom layer, so we’ve got a layered system. That’s how it works.”

This points to the structural reality of bureaucracy: direct interaction between thousands of students and the executive board is impractical. Therefore, any proposed communication system must balance reach with feasibility. For top-layer stakeholders, efficiency, clarity, and prioritization are

essential. And the amount of information from bottom to top should be controlled. For bottom-layer users, accessibility, recognition, and emotional safety are key. The communication tools must, therefore, adapt in format and intensity across layers, offering different levels of engagement based on capacity and need.

Communication Breakdowns within Layer

A particularly telling insight came from a participant describing a moment of confusion about institutional responsibility:

P

“And then it was indeed the question came who should pick this task up and then I also don’t work here that long. So I asked my colleagues who are more experienced, and they referred to very old documents. But there are not documents who say in this process, then this actor is taking over, so it arrives here. And then here’s a big question mark. Now I don’t remember the name. Maybe the HSE? No, I don’t know the name of the person. But my colleagues first named another term maybe an older term yeah and so it’s five years ago”

As the breakdown between different layers were discussed previously, this quote

illustrates the communication breakdown also shown within the layer. The willingness of some staff members to listen and act, but the responsibility is not defined nor communicated thoroughly within the middle layers. Staff within the institution is not clear with the system, therefore unabling them from helping the individuals. And these costs often shifted back to the bottom layers, resulting in an emotional burden during voicing up. This reflects both the positive impact of an inclusive mindset and the limitations of a system where support is conditional on formalized requests and financial feasibility, rather than being proactively embedded into institutional practice.

From this, a new design direction emerged: the need to improve intra-layer communication, not just top-down or bottom-up flow. While the original design goal focused on bridging the institutional hierarchy, the workshop revealed the importance of equal communication and internal clarity, especially within the middle layer, is equally essential for responsive accessibility work.

Integrating Insights into the Final Design Direction

Based on these findings, the design trajectory was refined toward producing a strategic communication framework. This framework reimagines stakeholder relationships not as rigid hierarchies, but as adaptive networks with reciprocal responsibilities and emotional awareness.

For bottom users, the focus is on creating an inviting, casual, and expressive environment that encourages spontaneous and honest feedback, such as an emotional feedback platform.

For the middle layer, the focus shifts to improving clarity of responsibilities, internal sharing and communication, and institutional memory, helping staff locate resources and act with confidence.

For the top layer, the priority is delivering concise, actionable, and emotionally compelling input that respects their limited time while conveying the significance of lived experience.

Instead of building a rigid or highly procedural communication system, the framework aims for a flexible, low-barrier design that supports both quick expression and deeper engagement. As the process evolves, the goal is to establish habits of feedback and listening that gradually normalize accessibility discourse as a shared institutional culture.

Final Design Outcome

Concept Definition

The concept of the final design of this project is to propose a strategic interaction method that helps the feedback system at TU Delft to be more accessible, with the goal to better facilitate accessibility of the campus in the future. This method bridges between different stakeholders. By addressing communication breakdowns, unclear responsibilities, and emotional burden in reporting accessibility barriers, the concept seeks to facilitate an institutional culture that is willing to listen, willing to improve, and willing to take action. Through the willingness, users with special needs can be recognized, valued and acted upon. Therefore, the campus would grow a hospitality culture that can make everyone feel cared and included. This contributes not only to short-term case resolutions, but also to long-term cultural and infrastructural improvement.

Reimage the Stakeholder Groups

Moving Beyond “Top vs Bottom”

Previous survey and exploratory meeting research identified a significant emotional burden experienced by users with special needs in their daily campus life. These individuals often face barriers due to the environment’s inability to accommodate their specific needs, which results in undermining their ability to fully participate in academic

activities. The act of putting forward requests to address their special needs further adds up to their emotional exhaustion. The constant effort required to advocate for themselves in a system has given rise to the idea of a “bottom vs. top” dynamic. In addition, the traditional role of students as users, which are positioned as passive recipients facing hierarchical structures, fails to be equipped or willing to respond to their realities (Morrison and Rothman, 2009).

Workshop participants provided two perspectives on this hierarchy:

One justified the current system due to the practical imbalance in the number of users vs. leadership.

Another proposed a client-provider model: users as clients have the right to request support, and providers have a duty to respond.

To address this, the proposed interaction method avoids hierarchical language and instead adopts functional roles as: decision/ support/ user. This transition reduces the stigma of voicing needs, normalizes requests as part of system functioning, and clarifies mutual responsibilities. It gives the right of putting out requests back to the users.

Decision/ Support/ User

The previous top/middle/bottom division of stakeholders highlighted the emotional burden users often experience when submitting accessibility requests. This structure, while descriptively convenient, reinforced hierarchical assumptions that intensified users’ feelings of exclusion and passivity. To eliminate such hierarchy and promote more equitable engagement, this design framework instead classifies stakeholders based on their functional roles within the feedback and decision-making ecosystem. Unlike the previous division which is based on the position in TU Delft, this approach allows for more dynamic stakeholder groups depending on context and supports a shift toward equal status between participants, empowering all actors to engage as contributors in the institutional process.

Decision Layer: Decision Layer: Involved in decision-making processes. This does not only include university and faculty leadership but also individuals who act as decision-makers in specific cases, such as the CREFM officer in Case B who decided to adopt MoSCoW method during prioritization. And in a smaller context like a student organization, the chair of the organization can also be the decision layer.

Support Layer: This group functions as a bridge between users and decision-makers, facilitating the movement of information and solutions throughout the system. Support actors also possess a unique dual perspective: they hold a grounded understanding of user experiences while also comprehending the institutional criteria and procedures that guide decisions. This dual position enables them to mediate effectively

between user needs and administrative priorities. This may also include students who take on supporting roles on campus, such as members of the student council.

User Layer: Individuals who interact with the campus environment on a daily basis. This layer includes all individuals regardless of

their formal role on campus. For example, in Case B, the academic staff who submitted a request form in the context of the meeting can be defined as the user layer even though their daily job can involve other tasks. What defines this role is not institutional title, but the position from which the individual engages with the system in a smaller context.

This functional classification increases flexibility and avoids reinforcing static power hierarchies. Instead of viewing the organization as a fixed structure, this model embraces adaptability, allowing individual cases to be considered in context. By focusing on what stakeholders do, rather than who they are by title, the framework opens the possibility for dynamic role transitions. This perspective empowers individuals to step into active contributor roles within the system.

The open question that follows: how can the users be assured that their requests are recognized and fulfilled? And how can the decision layer demonstrate they are providing what users need? How can support layer support well?

Formal and Informal Connections

In previous researches, in both cases and the daily job description of supporting layer, the feedbacks are shown to travel through both formal and informal channels:

Formal connections include structured reports, official requests, and policy-driven meetings. Such as the format being used in case B. Such connections have greater reach and accountability, but the systematic procedures tend to be slow and emotionally distant.

Informal connections such as WhatsApp chats, hallway conversations and observations are adopted in the support layer to gather broader feedback outside their formal responsibilities. These connections are faster response, resonate with individuals. However the impact of it is relatively limited.

Benefits of Formal and Informal Connections

Informal connections bring several important benefits to the accessibility communication system. They allow for faster response times, which can be critical in resolving urgent or case-specific accessibility issues. Because these connections are less procedural and more adaptive, they enable tailored solutions that reflect the unique needs of individual users. Additionally, the informal approach positions the users and supporters in a relatively personal and equal status, reduces both emotional and procedural barriers, making it easier for users to express concerns without fear or frustration. These connections also reflect the support staff’s creativity in approaching tasks beyond systematic procedures, and the willingness

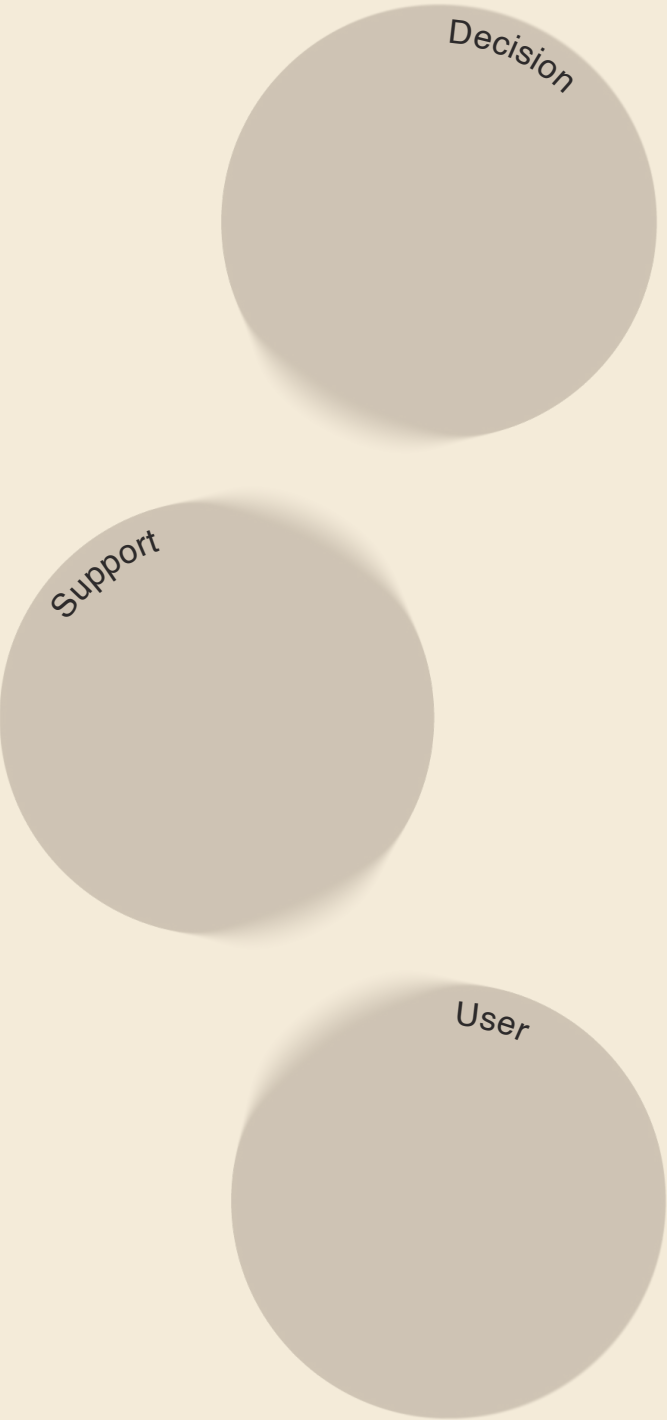


Figure 5.3: Dynamic stakeholder division

to take initiative and adapt beyond formal responsibilities, demonstrating a proactive commitment to accessibility improvements.

Formal connections offer distinct advantages within the feedback system. These channels provide institutional recognition, adding credibility and authority to the feedback received. They support accountable processes, making it easier to document, track, and evaluate actions across different departments. For example, in Case A, the report used to communicate between stakeholders was grounded in lived experience, but its formal documentation and phrasing enabled it to be circulated across different layers of the institution and led to tangible improvement. Thereby increasing the potential for user feedback to inform resource allocation and policy changes. These benefits demonstrate the importance of maintaining structured routes alongside more adaptive informal pathways. And the initiation of formal connections demonstrate the willingness to listen and the willingness to improve.

Transition between Formal and Informal Connections

The model also encourages interplay between formal and informal pathways, recognizing that informal feedback can evolve into formal channels when conditions allow. For example, informally gathered data by ESA has been utilized during formal feedback processes such as in Case B. Similarly, the inspection procedure of Case A began as a student initiated effort but, after gaining institutional attention, gradually received more support and resources. These transitions from informal to formal processes demonstrate how informal connection can slowly push systemic change, enabling greater impact and

recognition. More importantly, they signal that the institution is willing to adapt and improve, reinforcing a culture of inclusiveness.

Enabling Decision-User Interaction

In the existing system, direct interaction between users and decision-makers is rare, and this distance is often justified by the structural imbalance between the large number of users and the small number of decision-makers. However, the transition to a functional stakeholder model allows individuals to move between roles depending on context. This flexibility helps rebalance the communication, enabling interaction that is context-specific rather than role-restricted.

Connecting the decision layer and users requires accessibility on both sides. Role flexibility helps reduce the emotional burden for users when voicing their needs, while informal connections allow quicker responses that compensate for the numerical imbalance between the decision layer and users. These interactions try to avoid lengthy procedures, lowering the threshold for engagement. Direct contact enables users to perceive the decision layer’s willingness to listen and willingness to improve, while also helping decision-makers gain a clearer understanding of users’ lived needs and ensure that these needs are addressed.

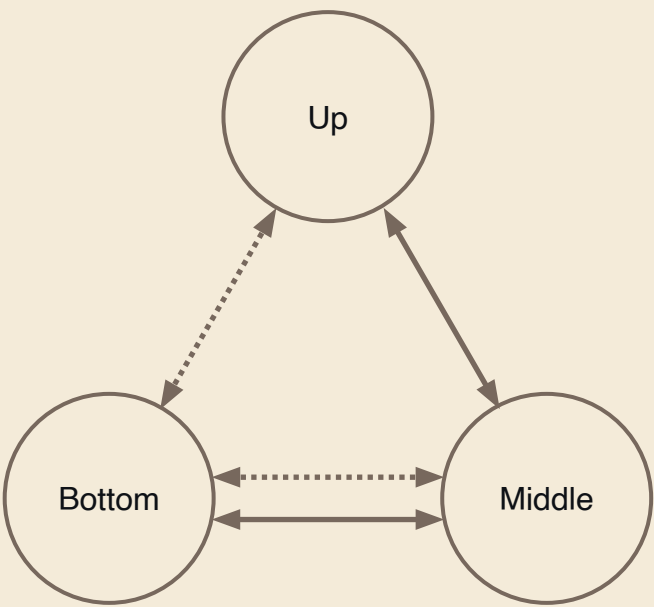


Figure 5.4: Proposed stakeholders interaction with informal interaction

Value and Impact of the Interaction Method

At the core of this method are three interrelated guiding behaviors: the willingness to take feedback, the willingness to improve, and the willingness to take action. These behaviors, when made visible through daily interactions between users, support staff, and decision-makers, signal a shift toward a more inclusive and proactive campus culture.

When users are encouraged to express their needs through accessible, low-barrier channels, it demonstrates a willingness to take feedback. When support staff or decision-makers act on this feedback, whether formally or informally, it reflects a willingness to improve and take action. The visibility of these willingness assures users that their needs are being acknowledged and justifies their right to put out requests. Thus, it empowers the users and lowers the emotional burden of speaking up. Over time, this can help individuals shift from feeling like passive recipients to active contributors in shaping the campus environment. The transition to

equal contributor allows true participatory design in forming an accessible education environment (Könings et al., 2014). For the support layer, the framework creates room for creativity and helps clarify their contribution to campus inclusivity. It reinforces their position not just as facilitators but as co-owners of institutional change. For the decision layer, the model offers a practical pathway to realize TU Delft’s Campus Vision 2040 by integrating inclusive values into everyday communication practices. It shifts the institutional mindset from reactive compliance to intentional, culture-driven transformation. Possible touchpoint will be introduced in the following chapter

Ultimately, the interaction method helps cultivate a willingness mindset of hospitality across the institution and reduces the psychological and procedural barriers to participation. It empowers individuals at all levels to voice up and create a more inclusive environment to better facilitate accessibility.

Visualization and Metaphor

The final triangular model still visually implied a form of hierarchy. To better convey role flexibility and equality among stakeholders, a different metaphor was needed.

Since TU Delft as an institution functions similar to a machine, the metaphor of gears was adopted. In this model, each role has the capacity to drive the system forward, while a failure in any part risks the breakdown of the whole system. The driving force of this system is the willingness to listen, the willingness to improve, and the willingness to take action. Only when all actors align toward a shared goal can the gears avoid getting stuck and ensure smooth functioning. Together, numerous such well-functioning interaction systems constitute TU Delft as a whole.

This interaction method also responds directly to the design values identified earlier. It lowers barriers by reducing the emotional and procedural burden of giving feedback. It provides symbolic resonance by using the gear metaphor to represent TU Delft as a whole. The recognition of informal and formal connection allows for mutual filtering by giving both users and receivers flexibility in how communication takes place. It respects lived experience by treating emotional and narrative input as valid contributions to the system. Finally, it bridges layers by strengthening both horizontal and vertical ties, ensuring that different roles remain connected within a shared mechanism.

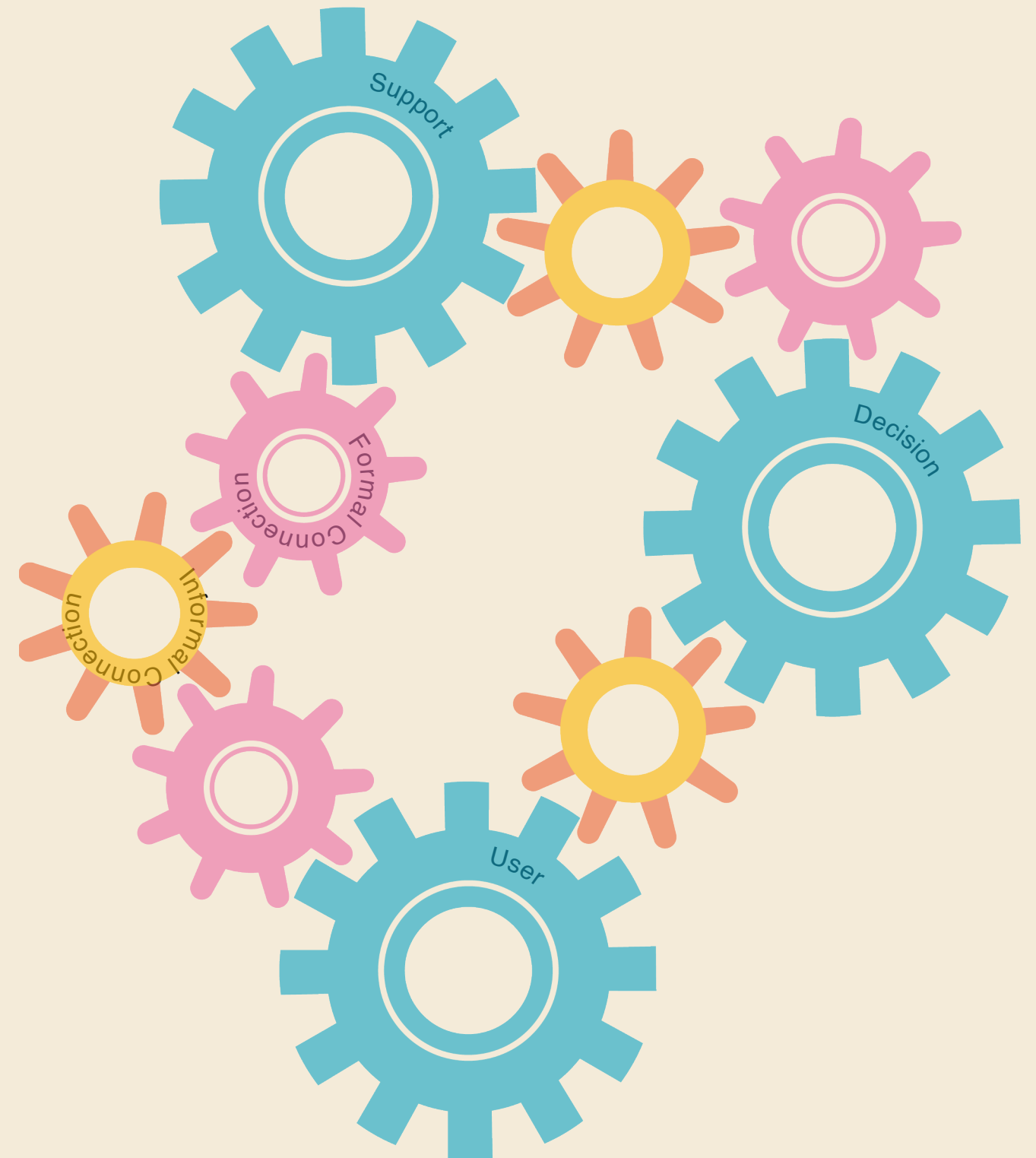
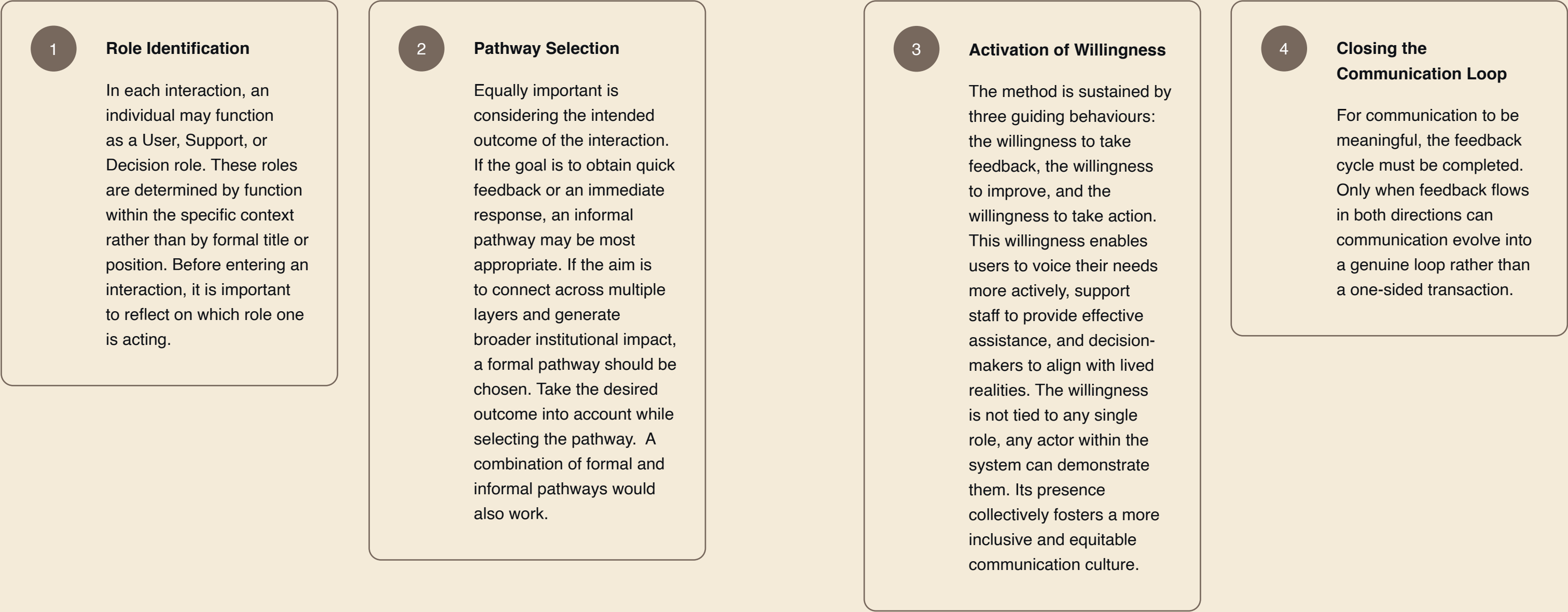


Figure 5.5: Interaction Method

Guidelines for Application

The proposed interaction method is intended to be applied across a wide range of campus communication situations, supporting stakeholders in recognizing their functional role, selecting appropriate communication pathways, and engaging in behaviours that promote inclusivity and responsiveness.

The method consists of the following stages:



The interaction method is not intended as a rigid protocol but as a flexible framework that can be integrated into existing routines. Through these mechanisms, the method supports more equitable and accessible communication across the institution.

Possible Channels and Touchpoints

The following touchpoints are not proposed as fixed solutions, but rather as strategic inspirational components to explore how the interaction method can manifest in real-world interfaces. These channels represent possible moments of communication between stakeholders, aiming to lower barriers, increase visibility, and reflect institutional willingness to listen, willingness to improve and willingness to take action.

Touchpoint A: Communication Toolkit

To translate the proposed interaction method into practice, a physical toolkit is envisioned in the form of a gear model. The gears represent both stakeholder roles (User, Support, Decision) and communication pathways (formal, informal, combined). These components would be produced as detachable pieces with magnetic backing, allowing them to be arranged on a wall or tabletop during meetings.

The toolkit can serve as a discussion aid for meetings with diverse stakeholders, helping participants to identify the most appropriate interaction method for a given situation. Second, it acts as a communication tool for users, offering a tangible way to visualize and understand how their feedback travels through the system. By assembling and adjusting the gears, stakeholders are reminded to reflect on their own role,

anticipated outcomes, and responsibilities before entering an interaction. The tangible and playful nature of the model encourages experimentation, making it easier to confirm existing pathways and to explore new possibilities.

Implementation would involve purchase and distribution coordinated by the administrative team. While ESA could embed it into regular dialogues with students.

Touchpoint B: Ready-to-Help Pin

The Ready-to-Help Pin is a wearable symbol used by support staff to indicate their readiness to receive informal feedback. When worn voluntarily by trained staff, this pin serves as a soft visual cue that incentivizes users to talk and lower the barrier for users in giving feedback.

This touchpoint addresses a common problem uncovered in the research: many users are unsure whom to approach when they encounter barriers. By creating a visible sign of receptiveness, the pin fosters approachable dialogue, reduces the confusion of users and makes the feedback process more accessible to users.

This informal channel between support layer and users hosts spontaneous, situational exchanges and encourages support staff to embrace their role as facilitators of inclusion. It also reflects the willingness to listen and

engage a culture of hospitality on campus.

The implementation of this touchpoint will involve ESA and Horizon for staff on-boarding training.

Touchpoint C: Emotional Feedback Platform

This touchpoint is an updated version of the current feedback system used by ESA and student councils. It enables students to formally communicate their needs to the support layer by filling out a structured feedback form. These forms are displayed in visible campus locations and categorized using colored labels that indicate the emotional tone of the feedback. Over time, as more colored forms are collected, they begin to form a visual signal representing the overall atmosphere and shared concerns of users.

While the form itself serves as a formal user-to-support interaction, the visual accumulation of colored inputs, which can be obvious to notice, becomes an informal signal to the decision layer. This touchpoint is a responsive system as an updated version of current input

mechanisms, by introducing visual and low-barrier methods for expressing sentiment.

By making feedback more tangible and visible, this touchpoint embraces the willingness to take feedback and reduces the emotional and procedural burden of giving input. It promotes the willingness to take feedback and helps ensure that recurring emotional patterns are recognized and acted upon.

The implementation of this touchpoint will involve ESA and student councils.

Together, these touchpoints activate different dimensions of the interaction method and reflect the layered nature of communication within an inclusive institution. They are flexible, combinable, and open to adaptation, making them ideal vehicles for piloting and evaluating the framework in real contexts.

Scenario Illustration

Scenario A

A newly arrived international student has been struggling with visa-related questions. After sending several unanswered emails, he becomes increasingly anxious, knowing that his ability to remain in the Netherlands depends on this issue. Hoping for clarity, he schedules a meeting with the academic counselor online. When he arrives, still nervous, he notices the gear toolkit placed on the counselor’s desk. Sensing his curiosity, the counselor uses the toolkit to explain the available communication pathways for him to reach out. By arranging the gears, the counselor shows him which offices to contact first, and how informal approaches can transition into formal escalation if no reply is received. The visual explanation

reassures the student, helping him see that there are multiple ways to be heard. With a clearer understanding of the next steps and less emotional burden, he leaves the meeting feeling relieved and supported.

Touchpoint	Website, email confirmation	Greetings, verbal conversation	Communication toolkit	Greetings
User action	1. Make appointment online 2. Receive confirmation	3. Arrive at the office 4. Explain current situation and expectation	5. Receive guidance 6. Interact with toolkit while discussing	7. Leave the office
Emotion	Worried and lost	Anxiety	Supported	Relieved
Steps	Pre-meeting	Arrival	Discussion	Completion
Support action	Arranging appointment	Greet the student	Provide guidance and explain the system	Reassure student and greet him out

Table 5: Scenario A journey map

Scenario B

A first-year student finds it difficult to navigate the first floor of IDE. The signage is misleading and she is running out time for his next class. While in a hurry, the student doesn’t have time to go back down to the service desk near the entrance and is unsure who else she could ask. The student notices a support staff member wearing a “Ready-to-Help” pin. The student approaches the staff member. The support staff helps the student

to find the way and notice that an increasing number of students have asked the same questions recently. The staff puts down a note on it and decides to submit a request form during the building modification meeting. Although the student does not submit a formal request, the feedback enters the system via this informal route.

Touchpoint	Physical signage	Ready-to-Help pin	Verbal conversation	Informal note and feedback form
User action	1. Arrive in IDE building 2. Fail to navigate by reading the sign	3. Searching for help 4. Notice the pin	5. Ask for help 6. Receive direction	/
Emotion	Lost and panic	Hopeful	Relieved, grateful	
Steps	Arrival	Searching	Seek assistance	Reporting
Support action	Physical signage installation	Staff feels capable to provide help and put up the pin	Staff trained by ESA to be equipped to provide help	Staff recognize a pattern and draft an feedback form

Table 6: Scenario B journey map

Scenario C

A teacher recently found out that the accessible restroom is not accessible for one of the students in class. The teacher really wants to offer help but doesn’t know how to improve the situation in the accessible restroom. Although the teacher is not in a formal support role, she feels responsible and frustrated by her inability to help. She fills out a colored feedback form through the Emotional Feedback Platform located near the faculty entrance, describing the student’s struggle. Her submission, along with other

negative feedback forms, triggers the alert of the location manager when she enters the building, and pushes her to initiate an input meeting. The form, collected by the student council, is later included in a summary by ESA and presented during the meeting. One month later, the teacher receives feedback from the facilitation manager, telling her that improvement will be made on the accessible restroom.

These scenarios emphasize how small moments of communication—both formal and informal—can lead to meaningful changes. They also demonstrate how the interaction method empowers individuals to act within their roles, supports emotional validation, and connects feedback to action through multiple pathways.. They are flexible, combinable, and open to adaptation, making them ideal vehicles for piloting and evaluating the framework in real contexts.. It bridges structural gaps between campus actors and ensures that lived experience informs institutional development in meaningful ways.

Touchpoint	Verbal conversation	Personal judgement	Emotional feedback form & installation		Emotional feedback form & color signal	Email
User action	1. Learns about the barrier from her student	2. Feels unable to help effectively	3. Take the form and write on it 4. Hang it back		5. Waits response	6. Receives respond
Emotion	Concerned	Frustrated and sad	Hopeful		Uncertain	Empowered, satisfied
Steps	Aware	Willingness to help	Reporting		Feedback process	Response
Backstage action	Student speaks up about her issue	Inclusive mindset embedded	Student council prepare the form		Student council collect the form; ESA takes input and inform facilitation manager	Facilication manager follows up with resolution

Table 7: Scenario C journey map

Evaluation

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Evaluation Criteria

To assess the applicability and relevance of the proposed interaction method, following criteria will guide the evaluation process:

Accessibility – Communication should be easy to access both emotionally and practically.

Role Flexibility – Role flexibility can be sensed. Roles can shift depending on context, rather than being fixed to job titles.

Informal–Formal Pathways – Both informal and formal can be acknowledged.

Institutional Fit – The method should be realistic to implement within existing processes and resources and sustained over time.

The fulfillment of emotional accessibility and role flexibility demonstrates the desirability of the method.

The recognition of role flexibility and the informal–formal pathway highlights its feasibility in practice.

Ensuring institutional fit supports both the viability and feasibility of long-term implementation.

Evaluation Approach

The evaluation will rely on stakeholder-based semi-structured interviews, taking perspectives from the three functional stakeholder groups: users, support, and decision-makers.

During the interview sessions, the concept of the interaction method will first be introduced with physical cut-out of the gear metaphor including:

- The three functional stakeholder roles (User, Support, Decision) and the concept of dynamic role shifting.
- The distinction between formal and informal connections.
- The metaphor of the gear.

Following the introduction, a semi-structured conversation will be conducted using open-ended prompts. Each interview lasted between 20–30 minutes and was conducted either in person. (Please refer to Appendix 6 for interview guideline) Sample questions may include:

- Would you be more willing to provide feedback within this interaction method?
- Can you recognize any existing formal or informal connection in the system? And what benefit or drawback does it have?
- Can they see any drawbacks or flaws that make the implementation in your

daily work difficult?

What might stop you or your colleagues from using it?

Interviews concluded with open-ended reflection on the interaction method, and invited participants to imagine other potential approaches or touchpoints.

All interviews were recorded through TU Delft Teams and transcribed for further analysis. The analysis focused on identifying points of agreement, perceived barriers in implementation, and opportunities for adaptation, in relation to the evaluation criteria.



Figure 6.1: Participant interact with the gear

Evaluation Result

A total of four semi-structured interviews were conducted: one with a decision-level stakeholder (chair of a student organization), one with a support-level stakeholder (member of a student association), and two with users (students). Each participant was invited to reflect on the criteria established earlier in the project. Overall, the feedback was largely positive, indicating the potential value of the proposed interaction method.

Accessibility

Participants generally agreed that the model lowers the threshold for giving feedback and makes them more willing to participate in communication.

The users recognized the impact that they could have and pointed out that direct connection to decision-makers would feel reassured when their input was taken seriously. The support stakeholder highlighted that the accessible of this interaction method can directly eases their work as she found difficulties in collecting feedback during her daily work. The decision-level participant noted that while users might still need additional support to push issues forward, as it usually requires large input from the users sides to make the system function.

User 1 – It makes me feel that I can take control of all connection.

These insights demonstrate the desirability of the method, though participants also pointed out that feedback should be clearly structured to maintain its accessibility.

Role Flexibility

Participants recognized the possibility of shifting roles between User, Support, and Decision, and many found this flexibility useful for reflecting on their position within the institution.

One participant acknowledged their dual identity as both a user and support, noting that past negative experiences motivated him to help others whenever possible. However, he expressed reluctance to assume a decision role, citing the pressure of responsibility as a burden. This hesitation itself reflected an important realization: users are able to clarify the responsibilities of decision-making when placed in such scenarios.

Despite individual differences, all participants agreed that the model makes it clear that every role can meaningfully influence the system. Role flexibility was therefore seen as both understandable and valuable, proving the desirability of the method. Although the adoption is feasible it still depends on individual personality, willingness, and competencies.

Informal–Formal Connection

All participants easily understood the distinction between informal and formal connections. They confirmed that informal connections already exist on campus, often created by support staff to compensate for the limitations of formal channels. The support participant considered the proposed model particularly useful for making information collection more efficient, expressing optimism that it could help more students.

At the same time, participants emphasized that informal inputs should be properly recorded. Because informal pathways rely heavily on personal willingness, participants stressed that an inclusive mindset remains essential if such feedback is to be sustained and acted upon.

Institutional Fit

Participants highlighted that similar forms of interaction already exist, though often in small-scale formats, proven the feasibility of the method. For example, the support described an initiative where faculty heads answered student questions and support summarized them into posters for advocacy. An activity she considered meaningful but limited in impact so far due to visibility.

Support – We had this kind of small connection once... I’m hoping with more advocacy, this could stay active instead of a one time thing.

Decision – Also, if two gears are trying as hard, but then go in the wrong direction, then the whole system is just stuck.

The decision-level stakeholder reflected that potential friction could arise when different groups do not share the same goals, causing the “gears” to become stuck.

Therefore, with an inclusive mindset, the method is feasible to implement into the current system, and it needs more awareness and visibility to sustain over time.

Unexpected Findings

Although role flexibility was generally well recognized, not all participants expressed willingness to take on the role of decision-maker. The main concern was the stress associated with responsibility and accountability. At the same time, this also demonstrated an awareness of responsibility and a cautious attitude toward their potential influence. This highlights the need to consider individual readiness, personal preferences, and specific strengths when encouraging role transitions.

During validation, one participants noted that this metaphor strongly resonates with TU Delft’s identity as a technical university. Moreover, one participant suggested possibilities to further refine the model by incorporating similar elements such as belts to represent additional dynamics within the system. However, it is also pointed out that the imagery may feel overly mechanical and lacking a human touch.

Discussion & Conclusion

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7.2	Conclusion	90

Discussion

Research Findings and Outcomes

The research underscores that, within the framework of the social model of disability, barriers are understood not only as individual impairments but as socially and environmentally constructed obstacles that limit participation (Oliver, 1996; WHO, 2011; Shakespeare, 2017). Lived experience should also be taken into consideration when assessing accessibility in addition to technical compliance standards (Pirie, 1979; Church and Marston, 2003). In striving for an inclusive campus environment, participatory design has been recognized as playing a critical role in ensuring that diverse voices are meaningfully involved in shaping institutional practices and spaces (Könings et al., 2014). To assure the implementation of participatory design, an equal and accessible communication plays a crucial role in it. It enables users to voice their experiences with barriers and, ideally, to see these concerns addressed. And therefore advocate inclusion on campus.

With the ambition of Campus Vision 2040, at TU Delft, however, barriers were identified that negatively affect campus life. Students who encounter accessibility challenges struggle to enjoy daily campus activities and, in many cases, lack clear channels to report their concerns.

From the case studies, several systemic shortcomings were identified:

1. A lack of a clear and accessible feedback system.
2. Ambiguity in responsibilities.
3. Communication breakdowns between different stakeholders.
4. Limited recognition of lived experience as valid input in decision-making process.
5. Lengthy and complex procedures.
6. Budget- and policy-driven mindset.

At the same time, the study revealed positive aspects of TU Delft’s current practices:

1. Active efforts to raise awareness of accessibility through events and communication channels.
2. Informal connections initiated by support staff, which enable quick responses and demonstrate willingness to listen and take action.
3. An inclusive mindset that is already visible in the willingness of certain staff and departments.

These findings address Research Questions 1 and 2, clarifying both the challenges and the strengths of the current system.

Building on this understanding, the study proposed a new interaction method: classifying stakeholders based on functional roles rather than hierarchical titles, and deliberately integrating both formal and informal pathways. The validation results suggest that this approach can lower the threshold for users to provide feedback, encourage greater participation in the system, and highlight the value of direct connection of users and decision makers. Importantly, it

also demonstrated the potential and feasibility of the method with existing examples. These outcomes answer Research Question 3.

The research contributes by:

1. Developing a functional-role-based feedback model that moves beyond fixed hierarchical layers.
2. Highlighting the constructive role of informal connections within institutional communication.
3. Emphasizing the three forms of willingness—listening, improving, and taking action—as cultural signals that support an inclusive campus mindset.
4. A direction for visualized tools that make feedback processes more tangible and visible.

For TU Delft specifically, the combined use of formal and informal pathways offers a transferable reference point for improving feedback systems. And the proposed interaction model aims to strengthen communication between different levels and departments. Implementation could begin by embedding the model into existing structures, such as ESA and the student council, while promoting visibility and continuity to ensure that feedback channels remain open and active. The emphasis on willingness as a cultural driver underscores its importance in building inclusive campuses.

As the proposed solution is a theoretical communication framework, the actual effectiveness of the model will require long-term implementation and monitoring to be fully validated.

Limitation

During the research, the selection of participants largely focused on individuals already engaged with accessibility-related work, supplemented by additional contacts through snowball sampling. While they approached accessibility with a relatively high level of awareness and concern, they provided valuable insights for generating findings. However, the implications of the project are meant to involve all campus stakeholders, yet the study did not include those with little or no prior exposure to accessibility. Their absence may have influenced the breadth of perspectives represented in the findings.

In addition, because the project was carried out approaching the summer period, stakeholder availability was limited and the overall sample size remained small. The exploration of how formal and informal channels may transition into one another also lacked systematic depth, leaving this as an area for future research. Furthermore, the investigation of interactions between the supporting and decision-making stakeholders remained underdeveloped, highlighting another direction for continued exploration.

The project primarily validated the proposed interaction method at a theoretical level. Long-term testing in practice will be necessary to evaluate its real-world effectiveness and to assess its integration into ongoing campus processes.

Future Direction

Exploration of interaction method – The interaction method could be piloted across more departments and organizational units that regularly handle large volumes of user input, such as ESA or student councils. Testing the model in larger contexts and samples would provide practical insights into its adaptability and effectiveness across different institutional settings.

Integration with digital platforms – It could allow for long-term monitoring, data collection, and analysis of feedback flows more systematically and analytically, providing statistical grounding for the method.

Relationship between responsibility and stress – It is mentioned during validation that the responsibility can lead to stress. Exploring ways to reduce the emotional burden of decision-making could encourage more stakeholders to take on active roles.

Equal status is achieved between stakeholders – If students, for instance, were able to meaningfully participate as decision-makers in a growing context, this could alter the balance of campus governance and provide new perspectives on how interaction happens between stakeholders.

Reflection

This project originated from my personal curiosity about whether accessibility in public spaces is effectively realized. As the research progressed, the focus gradually shifted to how users respond when facing accessibility barriers in the context of TU Delft as a public space, and finally toward the theme of communication. This outcome was not something I anticipated at the beginning. The initial expectations on accessibility were perhaps too idealistic. However, how could this interaction method later contribute to the assessment of accessibility on campus is left underexplored.

While I approached the project with an exploratory mindset, I still found the topic of accessibility quickly too broad to be fully addressed within the limited timeframe, and that the design methodology I applied was not always consistently rigorous. And although the research findings were sufficient for this project, they cannot reveal the full complexity of TU Delft’s institutional mechanisms.

Project planning was another challenge. The availability of stakeholders, especially in the later half of the project during the summer break, restricted participation, and the broad scope of the topic led to a longer research process than expected. And I still feel many design opportunities were left without discussion.

At times I struggled with the principle of “nothing about us without us”, questioning whether the outcomes I was producing truly aligned with what people with accessibility needs would want or value. Over the project, however, I came to recognize the importance of taking action, while leaving it to those in

need to assess the value of the method once implemented.

AI Statement

During this graduation project, generative AI tool (ChatGPT) was used to support the research and writing process. The use was limited to tasks such as generating alternative phrasings, and structuring outlines for the interview guide and report. All content derived from AI was reviewed and edited to ensure accuracy.

Acknowledgement

I would like to express my gratitude to my supervisors, Stella and Marina, for their guidance and encouragement throughout this graduation project. And special thanks to Viktoria, my ‘teammate’ during the project. I could not have completed this project, both mentally and practically, without the collaboration with her.

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Finally, I am deeply grateful to my friends and family, whose support and encouragement sustained me through the challenges of this project.

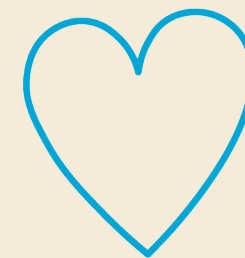
Conclusion

This project explored how accessibility at TU Delft can be advanced not only through physical infrastructure but also through communication processes. Building on the social model of disability, the research recognized that barriers are socially and institutionally constructed (Oliver 1996; WHO, 2011), and that addressing them requires more than compliance with technical standards (Pirie, 1979; Church and Marston, 2003). Through exploratory meetings, interviews and surveys, the study revealed key challenges in the current system: ambiguous responsibilities, complex procedures, limited recognition of lived experience, communication breakdowns across stakeholder layers and budget and policy oriented mindset. At the same time, positive elements were identified, including the informal practices of support staff, efforts to raise awareness, and an emerging willingness across groups to listen, improve, and take action.

The resulting contribution of the project is a proposed interaction method that redefines stakeholder roles functionally as user, support, or decision rather than hierarchically.

This model highlights the potential of informal–formal pathways, role flexibility, and the activation of willingness to foster a more inclusive communicative culture. Validation with diverse stakeholders indicated that the method can lower the threshold for participation, clarify responsibility and provide decision-makers with more direct insight into user needs.

While the scope of the project was necessarily limited, its findings suggest that an inclusive communication environment is a crucial step toward realizing TU Delft's Campus Vision 2040. By embedding willingness to listen, willingness to improve, and willingness to take action into everyday practices, accessibility can be reframed as an ongoing process and a shared mindset. The proposed method is not a final solution but a foundation which future initiatives can build on. Ultimately, the study demonstrates that accessibility is best pursued not as a fixed end-state but as a continuous cultural practice of inclusion and collaboration.



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