Graduation Plan

Master of Science Architecture, Urbanism & Building Sciences

Graduation Plan: All tracks

Submit your Graduation Plan to the Board of Examiners (Examencommissie-BK@tudelft.nl), Mentors and Delegate of the Board of Examiners one week before P2 at the latest.

The graduation plan consists of at least the following data/segments:

Personal information	
Name	Myrthe de Reus
Student number	4783018

Studio		
Name / Theme	Design of the Urban Fabric	
Main mentor	Machiel van Dorst	Urban studies
Second mentor	Martijn Lugten	
Argumentation of choice of the studio	The Design of the Urban Fabric aligns strongly with my research ambitions, as it places emphasis on the experiential, material, and infrastructural layers of the city. Throughout the past months, my focus has evolved toward understanding how public space can be designed through the lens of sensory navigation, particularly for individuals with visual impairments. Rather than designing for an abstract "average citizen," I aim to challenge the visual-dominant paradigm in urban planning by placing the focus on the experiences of those who rely on sound, touch, temperature, and scent to navigate. The studio's attention to the 'fabric' of the urban environment gives space to explore how multisensory cues can be embedded into the structures of public space, from paving materials and sensescapes to thresholds and transitions. By taking blindness as a lens, I seek to uncover how shared spaces can be made not only accessible, but also engaging and legible. I believe urban design should not merely respond to legal norms of accessibility, but also promote spatial agency, clarity, and comfort for people who experience the city differently. This fits within a broader ambition to question how inclusive our cities really are, not only in principle, but in the subtle choreography of everyday movement and experience. With this, I am interested in revisiting the overuse of the word inclusive design: what does proximity	

	mean for someone with limited vision? How can sensory environments make people feel safe and pleasurably in dense urban environments? My work operates at the neighborhood scale, using a bottom-up approach rooted in real lived experiences, combining spatial research, objective data mapping, and sensory design strategies. Through the Fabric studio, I hope to transform these insights into tangible design tools and spatial interventions that improve quality of life, because by improving the quality of life and the public space. It becomes a more enriched place for the ones with vision loss, but also for all the other users.

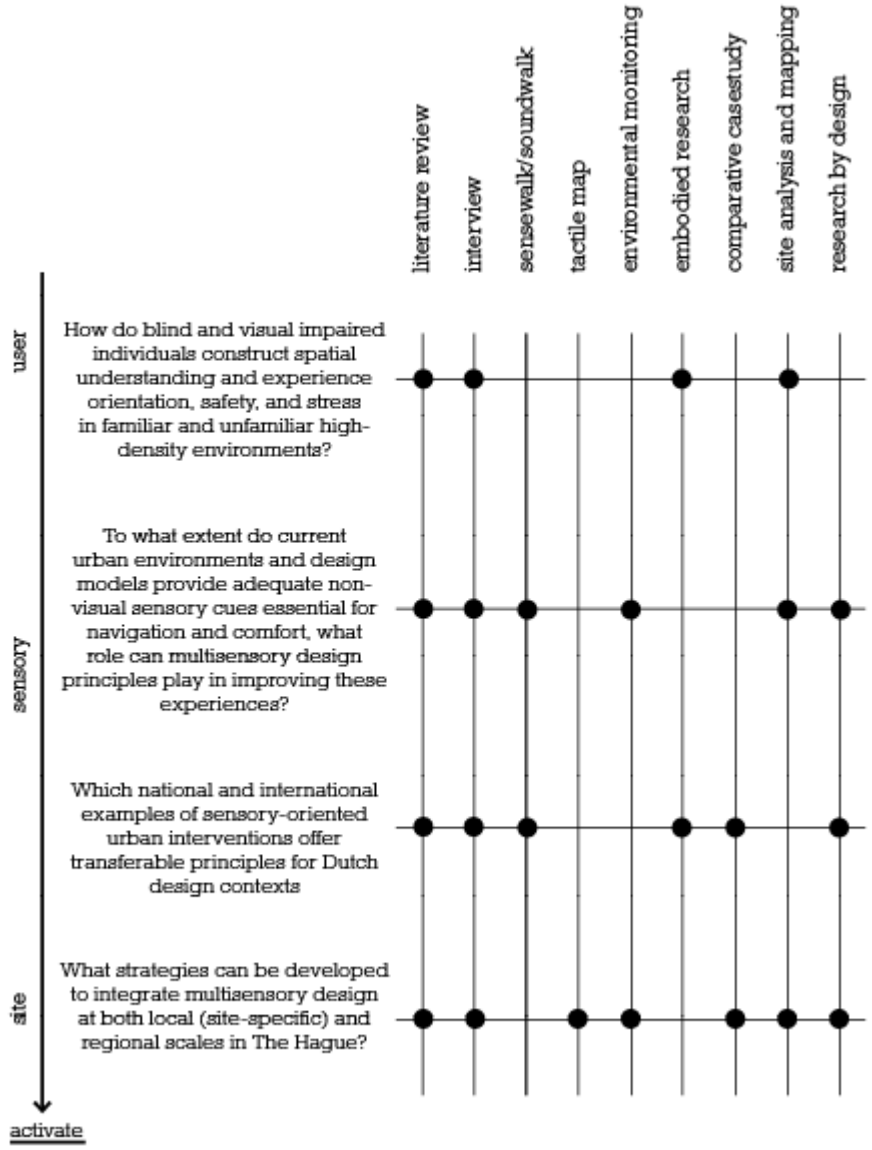
Graduation project	
Title of the graduation project	**THE CITY WITHOUT SIGHT** Exploring public space through the senses of the visually impaired and blind
Goal	
Location:	The Hague
The posed problem,	Public spaces in high-density cities are still predominantly designed from a visual perspective, often resulting in environments that are disorienting, exclusionary, or unsafe for blind and visually impaired individuals. This highlights the urgent need for a sensory-driven design awareness, one that moves beyond visual-centric norms and embraces an environment–behaviour approach. By acknowledging the diversity of sensory perception, urban design can begin to shape spaces that are not only safe and legible, but also meaningfully engaging through touch, sound, and scent.
research questions and	*RQ: How can the sensory design of public urban environments, grounded in an environment–behaviour approach, respond to the spatial and perceptual needs of visual impaired and blind in high-density cities?* **User – analyse**

	How do blind and visual impaired individuals construct spatial understanding and experience orientation, safety, and stress in familiar and unfamiliar high-density environments? **Sensory – expose** To what extent do current urban environments and design models provide adequate non-visual sensory cues essential for navigation and comfort, what role can multisensory design principles play in improving these experiences? **Site – propose** Which national and international examples of sensory-oriented urban interventions offer transferable principles for Dutch design contexts **Activate – politicize** What strategies can be developed to integrate multisensory design at both local (site-specific) and regional scales in The Hague?
design assignment in which these result.	Outcome 1: Building an understanding of the extent on how current urban environments respond to the perceptual and spatial needs of individuals with lower visual impairment or blind, and uncovering opportunities to reframe design approaches through multisensory engagement. *A wayfinding route through The Hague* *A clearly mapped walking route designed for blind and visually impaired users, using tactile paving, sound markers, and consistent spatial logic to enhance independent navigation.* Outcome 2: Exploring alternative urban design strategies by mapping and testing sensory cues (auditory, tactile, contrast) that enhance orientation,

	comfort, and spatial richness for a wider spectrum of users in dense urban settings. *A redesigned public space with sensory features. An existing urban space adapted with sensory elements such as textured surfaces, ambient sounds, and spatial rhythm.* Outcome 3: Formulating both a regional design vision and a site-specific intervention that combine principles of sensory-driven wayfinding with experiential qualities to generate a more legible, safe, and engaging urban public realm. *A set of implementable design guidelines. A clear list of practical principles for sensory-inclusive public space design, ready to be applied by urban designers and municipalities in any city.*

Process

Method description



To address the research questions in this thesis, a mixed-methods approach has been adopted, combining qualitative-, quantitative research, design research and sensory ethnographic techniques. Some methods were chosen at the beginning of the study based on approaches commonly used in related academic research, while others emerged during the course of the research to fit the information better. These methods resulted into a sensory public space design from both a theoretical and experimental view.

This section describes the different methods that are used to analyse and dissect each question. The use and reason of the method is described in each subquestion. A groundwork has been laid out through multiple extensive literature reviews.

The **literature review** was conducted to establish the theoretical and conceptual foundation of the research. The review focused on three core themes: sensory experience in public space, wayfinding and navigation for visual impaired individuals, and urban accessibility.

Sources were retrieved from academic databases including ScienceDirect, Semantic Scholar, and Google Scholar. The search period ranged from February 10 to XX, 2025. Selection criteria included: relevance to non-visual spatial interaction, user experience of the blind and visual impaired, and cognitive mapping in (un)familiar environments. Initial screening was based on titles and abstracts, followed by full-text analysis and thematic clustering. Preference was given to peer-reviewed publications from the last ten years.

The literature review served a dual function. First, it provided a baseline for defining key concepts such as sensescapes, spatial justice, and embodied navigation. Second, it helped identify knowledge gaps that were addressed through empirical methods, including interviews, sensewalks, and case study analysis. It also informed the design of research instruments—such as interview guides and the case selection framework—and shaped the theoretical positioning of the project, as described in the following subchapters. The first sub-question addresses the lived, first-person experience of navigating high-density urban space without full reliance on vision. It investigates how blind and partially sighted individuals develop spatial understanding through other senses, and how they emotionally and cognitively respond to conditions of disorientation, overload, and insecurity.

Given the embodied and experiential nature of this inquiry, the research applies qualitative and participatory methods grounded in phenomenological approaches to space and perception.

Methods

Semi-structured walk-along interviews

Interviews were conducted with blind and partially sighted individuals, accessibility professionals, and experts in sensory design. These interviews were partly constructed in walk-along format, which allowed participants to describe sensory conditions in specific situations. The semi-structured format supported both guided reflection and the emergence of unanticipated themes, following recommendations from Jackson (1988) on situated knowledge production.

Embodied research (blindfolded walkthroughs)

To investigate how disorientation and navigation are experienced without visual input, student peers performed walkthroughs under simulated low-vision conditions (e.g., blindfolds, tunnel-vision goggles). This method aligns with phenomenological research traditions (e.g., Pallasmaa, 1996), emphasizing the role of the body in sensing and interpreting space. Observations focused on movement, hesitations, sensory stress points, and environmental feedback.

Site analysis and mapping

This method supported the interpretation of user interviews and embodied observations by contextualizing key spatial features—such as path hierarchy, material transitions, or obstacle zones—on annotated base maps. These maps were used to cross-reference individual experiences with spatial conditions.

These methods were selected for their ability to reveal insights that remain

inaccessible through traditional visual or data-driven analysis. By foregrounding subjective perception, SQ1 lays the groundwork for understanding how spatial orientation and awareness emerge from complex, embodied interactions with the urban environment.

The second sub-question investigates the presence, quality, and effectiveness of non-visual sensory cues, such as sound, texture, contrast and spatial rhythm, in current urban public spaces. It further explores how these conditions may be enhanced through multisensory design strategies.

To answer this question, the research applies both objective environmental monitoring and subjective experiential methods, enabling a comparison between measurable environmental conditions and lived sensory perception.

Methods

Environmental Monitoring (Kestrel 5400 & Norsonic Nor140)

These devices were selected for their ability to capture microclimatic and auditory variables relevant to sensory navigation, factors often overlooked in conventional spatial analysis. Quantitative data was collected on temperature, humidity, wind speed, radiant heat, and sound levels (Hz and dB), during both sensewalks and short fixed-point recordings across The Hague. This method provides an empirical foundation to evaluate how sensory environments fluctuate within dense urban settings. The Kestrel device has been linked with the KestrelLink app which monitored the found data. Moreover with the use of the MyTracks app, it is possible to place the data on the exact location.

Soundwalks and Sensory Mapping

Following the method of R. Murray Schafer and further developed in soundscape research (Adams et al., 2008), soundwalks allow for an embodied assessment of how public space is perceived acoustically. These were combined with spatial annotations on tactile cues, surface materials, and thermal zones, generating interpretive maps that represent the sensory legibility of space from a non-visual perspective.

Comparative Analysis of Objective and Subjective Data

The juxtaposition of sensor data and embodied impressions helps reveal mismatches between how a space measures and how it is experienced. This comparative approach is essential in phenomenological research, where quantitative metrics alone cannot capture affective or cognitive responses to space.

Site analysis and mapping

Environmental monitoring results were visualized through spatial mapping. Each measurement point was layered over base maps of The Hague to identify patterns in sensory comfort, noise distribution, thermal variation, and tactile features. These maps helped reveal sensory gaps and informed further site-specific interpretation.

These combined methods generate a layered insight into how current urban environments support—or fail to support—non-visual sensory orientation. The

findings expose spatial blind spots in urban design logic and offer a basis for proposing more sensorially legible environments.

The third sub-question focuses on the cognitive and tactile translation of space, investigating how physical design elements—especially tactile and auditory cues—can support independent navigation for people with visual impairments. It builds on insights from SQ1 and SQ2 and moves toward the formulation and testing of design tools and strategies.

Because this question addresses spatial legibility, cognitive mapping, and user testing, the methods chosen combine both participatory design tools and applied evaluation strategies.

Methods

Tactile Mapping

Tactile maps were designed and used as a tool to study spatial cognition and navigational logic. These maps incorporated elements such as raised patterns, Braille labeling, clear landmark positioning, and scaled proportionality. The format was inspired by work such as Petrovic (2025) and Davidson (2023), who emphasize the role of touch in spatial memory. Participants engaged with these maps before and after walkthroughs to explore how space is anticipated, navigated, and remembered through tactile means.

Walk-along interviews / user testing

Participants were invited to test the maps and walk the corresponding routes. These sessions were used to evaluate the usability and intuitive legibility of spatial elements like pavement transitions, guiding lines, and sound-emitting features (such as fountains or traffic signals). Reflections were gathered immediately after walking, following the "think-aloud" and recall protocol, to trace their cognitive map formation.

Embodied Research (Researcher & peers)

In addition to user testing, the researcher engaged in simulated walkthroughs using the tactile maps under restricted vision conditions. This added a subjective layer to the testing process and helped identify unintended design limitations from a bodily perspective.

These methods generated insight into how spatial elements can be made legible without relying on vision, and how such tools can be evaluated and refined in dialogue with users. The findings inform the design outcomes of this thesis and highlight specific principles—such as continuity, material contrast, and sound anchors—that support non-visual wayfinding.

The last sub-question examines how sensory design principles have been implemented elsewhere, and to what extent these approaches offer relevant lessons for the Dutch urban context—specifically in terms of spatial navigation, comfort, and multisensory richness.

By comparing a range of existing projects, this part of the research connects the

"Expose" phase (uncovering current gaps and needs) with the "Propose" phase (developing spatial strategies). The goal is not to replicate existing models but to distill key design logics that can inform future interventions. methods

Comparative Case Study Analysis
A selection of international and national public spaces was studied based on their reputation for accessibility, sensory experience, or innovation in non-visual design. These cases were selected through literature review, expert recommendations, and project documentation. Criteria for inclusion included tactile infrastructure, auditory landmarks, spatial rhythm, and surface contrast.

Remote analysis (Google Street View / videos / plans)
For international examples that could not be visited in person, remote methods such as Google Street View and digital site analysis were used. These provided initial assessments of spatial structure, paving logic, and signage. Although not as detailed as physical observation, these tools enabled cross-case comparison based on consistent criteria.

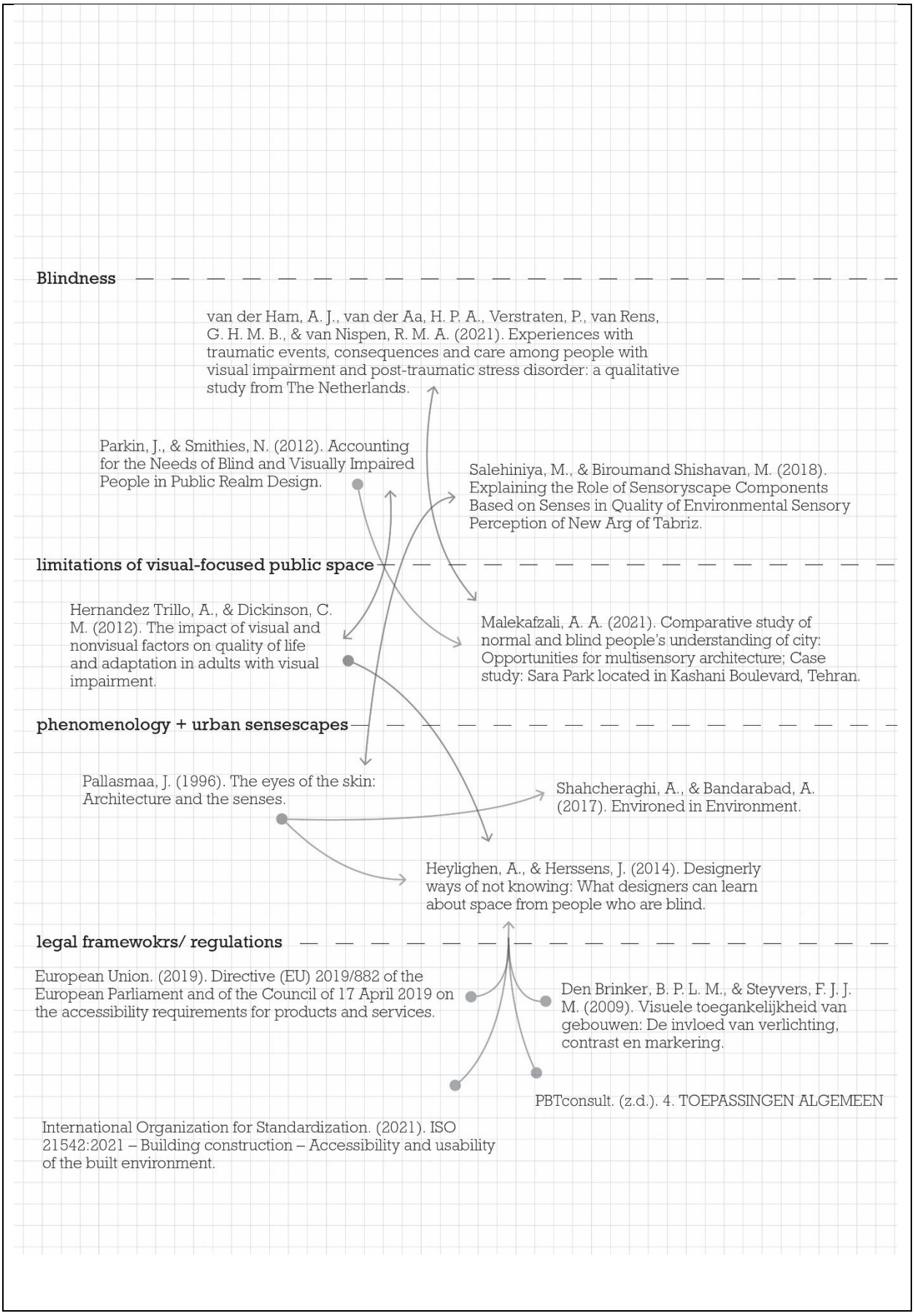
Site visits and field observation
Where possible, direct site visits were conducted to observe and map how sensory features are applied and experienced in practice. This included photographing elements, annotating material transitions, and recording ambient sound and environmental stimuli.

Analytical framework (criteria-based)
All cases were analyzed using a structured framework that compared features such as:

Type of sensory cue (tactile, auditory, thermal, etc.)
Spatial function (wayfinding, comfort, alert, transition)
Context (density, mobility, urban typology)
Relevance to the Dutch context (legal, climatic, cultural compatibility)

The comparative study generated a catalogue of transferable design principles, which later informed the research-by-design phase. These include strategies such as continuous tactile lines across program zones, multi-sensory wayfinding sequences, and sound-buffering transitions between high- and low-stimulation areas. The findings helped ground speculative design proposals in tested, real-world interventions.

Literature and general practical references


Blindness
van der Ham, A. J., van der Aa, H. P. A., Verstraten, P., van Rens, G. H. M. B., & van Nispen, R. M. A. (2021). Experiences with traumatic events, consequences and care among people with visual impairment and post-traumatic stress disorder: a qualitative study from The Netherlands.
Parkin, J., & Smithies, N. (2012). Accounting for the Needs of Blind and Visually Impaired People in Public Realm Design.
Salehiniya, M., & Biroumand Shishavan, M. (2018). Explaining the Role of Sensoryscape Components Based on Senses in Quality of Environmental Sensory Perception of New Arg of Tabriz.
limitations of visual-focused public space
Hernandez Trillo, A., & Dickinson, C. M. (2012). The impact of visual and nonvisual factors on quality of life and adaptation in adults with visual impairment.
Malekafzali, A. A. (2021). Comparative study of normal and blind people's understanding of city: Opportunities for multisensory architecture; Case study: Sara Park located in Kashani Boulevard, Tehran.
phenomenology + urban sensescapes
Pallasmaa, J. (1996). The eyes of the skin: Architecture and the senses.
Shahcheraghi, A., & Bandarabad, A. (2017). Environed in Environment.
Heylighen, A., & Herssens, J. (2014). Designerly ways of not knowing: What designers can learn about space from people who are blind.
legal framewokrs/ regulations
European Union. (2019). Directive (EU) 2019/882 of the European Parliament and of the Council of 17 April 2019 on the accessibility requirements for products and services.
Den Brinker, B. P. L. M., & Steyvers, F. J. J. M. (2009). Visuele toegankelijkheid van gebouwen: De invloed van verlichting, contrast en markering.
PBTconsult. (z.d.). 4. TOEPASSINGEN ALGEMEEN
International Organization for Standardization. (2021). ISO 21542:2021 – Building construction – Accessibility and usability of the built environment.

This research is guided by the hypothesis that public space can be transformed into a secure, legible, and joyful environment through the thoughtful integration of multisensory design strategies. While visual cues such as contrast and lighting remain central to spatial navigation, non-visual senses, including touch, sound, and smell, offer powerful tools for orientation and emotional experience, particularly for individuals with visual impairments.

Although people with sight typically rely on visual perception, they also subconsciously engage other senses to make sense of space. This indicates that design which embraces multisensory perception not only enhances accessibility for blind or visually impaired individuals, but also enriches spatial experience for everyone. Thus, this thesis proposes that exploring and designing with sensescapes, the sensory atmospheres of a place, can lead to more blind friendly and human-centered public environments. Even though the role of non-visual senses is acknowledged in theory, there is a lack of empirical and spatial research that translates this understanding into practical design strategies for public spaces.

Blindness and the Limitations of Visual-Centric Public Space

The lens of this thesis is that of individuals with visual impairments navigating and engaging in the public space. Low vision is defined as a reduced visual acuity in the situation where the individual is using his of her best possible optical correction. It is, mostly, a consequence of an untreatable ocular disease (Hernandez & Dickinson, 2012). Parkin & Smithies (2012) argue that contemporary urban environments have placed increasing demands on interaction and mobility, yet have failed to support all users equally. Most public spaces are still designed from an ocular-centric perspective, rendering them inaccessible to people who cannot rely on vision (Malekafzali, 2021). This contributes to the mental and physical health of an individual. When this occurs, it has a negative effect on the quality of life for the user (Hernandez & Dickinson, 2012).

Scientific literature increasingly acknowledges that sensory modalities, vision, hearing, touch, taste, and smell, are tools to produce spatial awareness (Shahcheraghi & Bandarabad, 2017). Yet, as Pallasmaa (1996) eloquently observes, the eye has become the privileged organ in architectural discourse and design, leading to the "suppression of the other senses" and a loss of embodied experience. This sensory impoverishment marginalizes those whose perception of space is already non-visual. Lofti and Zamano (2015) note that such exclusionary design leads to the alienation and spatial disempowerment of the blind, undermining their sense of place and belonging (Salehiniya & Niroumand, 2018).
The consequences are not merely experiential, but psychological and physical. Van der Ham et al. (2020) highlight that 80% of individuals with visual impairments have experienced at least one traumatic event, such as falling, abuse, or disorientation. These experiences often lead to chronic stress and social isolation.

Phenomenology and the mixture of urban sensescapes

Phenomenology is the philosophical study of experience from the first-person perspective. It explores how individuals perceive, remember, imagine, and emotionally relate to the world. In architectural and urban theory, phenomenology

allows us to move beyond purely formal or visual understandings of space to explore embodied, sensory, and temporal experiences (Stanford Encyclopedia of Philosophy, 2013).
Pallasmaa (1996), in The Eyes of the Skin, critiques the dominance of vision in modern architecture and advocates for a return to multisensory spatial experience. He argues that "the sense of self is strengthened by the experience of touch" and that sound, smell, and temperature shape how space is lived and remembered. For the blind, this multisensory engagement is not optional, but essential.

As Malekafzali (2021) and Pallasmaa both emphasize, blind individuals often develop heightened abilities to navigate through auditory, tactile, and olfactory cues. The built environment "speaks" through footstep echoes, material textures, temperature differences, scents, and even airflow. These cues create what can be called urban sensescapes—the complex, layered field of sensory information that constitutes the atmospheric life of a space.
Sound plays a critical role in spatial orientation. Environmental acoustics—such as the echo off a wall, the rustle of leaves, or the flow of a fountain—help blind individuals build spatial maps. According to INCE (1998), this can occur through two methods: the stepping method, where a sound grows clearer with movement, and the setting method, where unique environmental soundscapes mark distinct places. Natural sounds are especially important, as they are processed more efficiently than mechanical ones like traffic (Nijmeijer, 2022).

Similarly, smell creates lasting associations and emotional responses. Huang & Yuan (2023) argue that olfactory cues—such as the scent of flowers in a park, promote comfort, memory, and placemaking. Urban gardens and seating areas thus contribute to well-being not only through visibility, but through scent and atmosphere.
Tactile engagement, whether through materials, paving, or temperature, grounds the body in space. Textures underfoot or under hand can signal transitions, thresholds, or warnings. For blind users, these details are not aesthetic choices, but spatial necessities.

Translating Legal Frameworks into Multisensory Urban Design
Designing for blind and visually impaired individuals begins with understanding the legal and normative landscape shaping accessibility. Regulatory frameworks—from international to national levels—form the foundation for embedding multisensory cues like tactile paving, auditory signals, and visual contrast in urban environments.
At the global level, ISO 21542:2021 outlines accessibility and usability standards for buildings and surrounding environments (International Organization for Standardization [ISO], 2021). Though primarily focused on architectural design, its principles extend to urban spaces such as plazas and transitional zones. Key recommendations include:

- Tactile and high-contrast signage
- Audible navigation aids
- Even, glare-free lighting
- Barrier-free circulation spaces

These guidelines support a multisensory approach, enabling spatial legibility and orientation beyond visual input.
Zooming in, the European Accessibility Act (Directive EU 2019/882) provides a harmonized framework across EU member states, with a strong focus on perceivability through multiple sensory channels (European Union, 2019). Although the act targets products and services, its implications reach public space by requiring:

- Information accessible through tactile, auditory, and visual cues
- Adjustable contrast and text size
- Compatibility with assistive technologies

Member states must implement these standards by June 28, 2025, marking a significant shift toward multisensory inclusion in public life.
At the national level, the Dutch standard NEN 9120:2025 further localizes these principles, offering concrete urban design guidelines (Nederlands Normalisatie-instituut [NEN], 2025). It addresses:

- Lighting: Minimum 100 lux in access routes, with higher levels in orientation zones
- Contrast: At least 60% luminance contrast between floor and vertical surfaces
- Tactile paving: Standardized guiding (ribbed) and warning (dotted) tiles near crossings, entrances, or hazards
- Auditory signals: Used to complement tactile and visual information, particularly in transport nodes or intersections

These recommendations reflect a growing awareness of the need to accommodate multiple modes of perception in everyday navigation.
To bridge theory and practice, Berry den Brinker, a researcher at Vrije Universiteit Amsterdam, contributed to Zicht op Ruimte, a manual for visual accessibility in the built environment. It includes guidelines for optimal lighting, contrast ratios, reflection control, and text placement (den Brinker, Appituley, & Smeets, 2011).
Further practical guidance comes from tactile paving protocols (PBTconsult, n.d.):

- Guide lines must be 30 cm wide, tactile and visually distinguishable
- They must follow safe, obstacle-free routes (e.g., transit hubs), and are not permitted on roads or bike paths
- Warning surfaces should be applied at crossings, stairs, or other danger points
- Tiles must visually contrast with the surrounding surface

Looking internationally, the Americans with Disabilities Act (ADA), enacted in 1990, remains a benchmark in accessibility legislation (Americans with Disabilities Act [ADA], 1990). It mandates:

- Clear, unobstructed paths with tactile warnings at hazardous areas
- High-contrast, tactile signage (including braille)
- Adequate lighting to ensure visibility
- Auxiliary aids, such as assistive listening systems or support personnel

All these laws, acts and or rules create frameworks that provides a comprehensive basis for multisensory design strategies. These key points are legal standards that offer necessary direction, however they often emphasize technical compliance over experiential quality. This thesis critically reflects on these standards and explores how they can be reinterpreted through urban design practices to promote autonomy,

sensory richness, and dignity for blind individuals navigating public space, bridging the gap between compliance and genuine spatial empowerment.

Reflection

1. What is the relation between your graduation (project) topic, the studio topic (if applicable), your master track (A,U,BT,LA,MBE), and your master programme (MSc AUBS)?

This graduation project investigates how visually impaired and blind individuals experience public space, and how these experiences can be enriched by shifting from visual-centric design principles to a multisensory approach. By doing so, it aims to contribute to more legible, navigable, and engaging urban environments for a broader range of users.
Within the Urbanism track, the project critically addresses the relationship between people and space, acknowledging that urban environments must accommodate a wide diversity of needs, rhythms, and abilities. It challenges the often-unquestioned assumption of the "average user" and instead explores how spatial design can respond to alternative forms of perception and mobility. The studio topic further supports this by offering the opportunity to focus on both site-specific interventions and large-scale wayfinding strategies, linking micro and macro perspectives within urban design. While terms like "inclusive design" are frequently used in the field, their meaning is often diluted or misapplied. This project questions the feasibility of total inclusivity and instead advocates for contextual, user-specific interventions that enhance spatial justice by acknowledging sensory diversity.

At the level of the MSc Architecture, Urbanism and Building Sciences programme, the project reflects the programme's multidisciplinary ethos. It integrates social, cultural, and spatial dimensions through a human-centered lens. Moreover, it demonstrates how empirical research, sensory analysis, and design methodologies can be combined to generate new knowledge within urban design. The focus on sensory urbanism represents an innovative contribution to the programme's ambition to explore future-oriented, equitable, and experiential forms of urban space.

2. What is the relevance of your graduation work in the larger social, professional and scientific framework.

The relevance of this graduation project lies in its challenge to the dominant visual-centric paradigm within urban design. By highlighting the spatial experiences of people with visual impairments, it exposes critical gaps in how public spaces are currently conceived, navigated and valued. The environments in these are designed in such a way that people with vision loss feel disoriented, unsafe. This leads to exhaustion and isolation in (high-density) urban environments. Through the use of different sensecapes, the spatial clarity of the public space can be improved while at the same time enrich the public space for both the sighted and sightless individuals. Socially, the project advocates for spatial awareness by drawing attention to underrepresented user groups whose needs are frequently overlooked in mainstream planning processes. The use of the word ‘’inclusive’’ should be taken under a loop as well as it is impossible to create something that is 100% inclusive. Professionally, it

contributes to the development of more responsive, human-centered design practices that go beyond aesthetic or functional considerations and address the full spectrum of sensory perception.
Scientifically, it engages with emerging discourses in sensory urbanism, phenomenology, and environment–behaviour research, offering a framework through which sensory diversity can be operationalized in urban analysis and design. The project adds to a growing body of research that explores how multisensory approaches can inform spatial quality, accessibility, and attractiveness, ensuring the shift in the way we design public spaces right now.