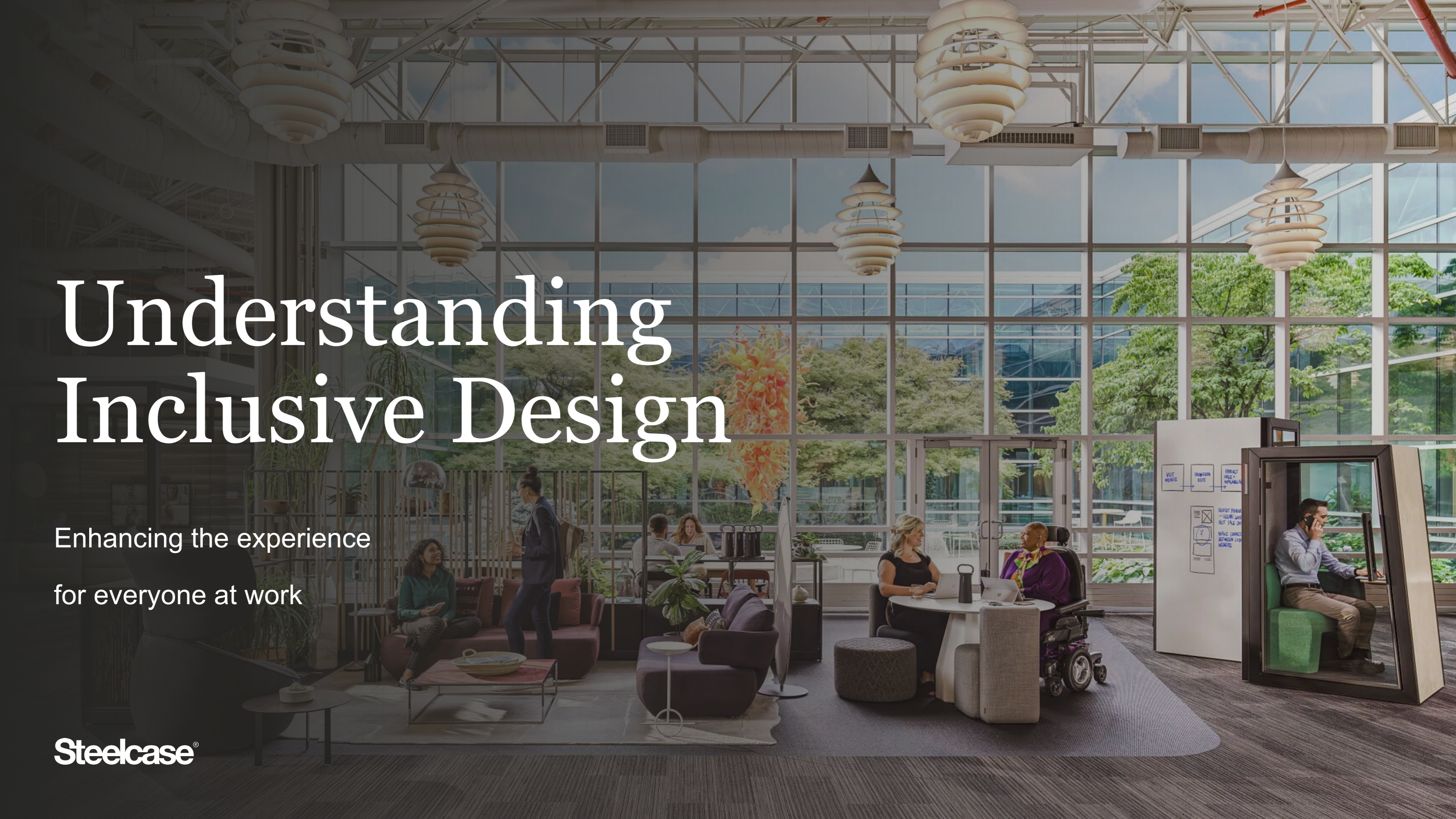


Understanding Inclusive Design

Enhancing the experience
for everyone at work

Steelcase®



Steelcase Global Research

Ongoing
research
since 2020

Our most
recent study

15+

Primary Studies

68,925

Employees +
Leaders

+5,925

Employees

11

Countries

Steelcase Global Research

Better is Possible

+22%

higher wellbeing scores
for employees who
feel like their needs
are considered in
the workplace

60%

of companies have
made disability-related
adjustments to the
workplace in the past,
and plan to continue

Only 28%

of companies made
adjustments for individuals
with disabilities across the
floorplan, *the majority are
case-by-case*



Shifts within Design Practice

Equal Experience

“One Size Fits All”

Equitable Experience

“Many Choices Fit One”



Source:

[Robert Wood Johnson Foundation](#)

“If design can be the
source of exclusion, can it
also be the **remedy**?”

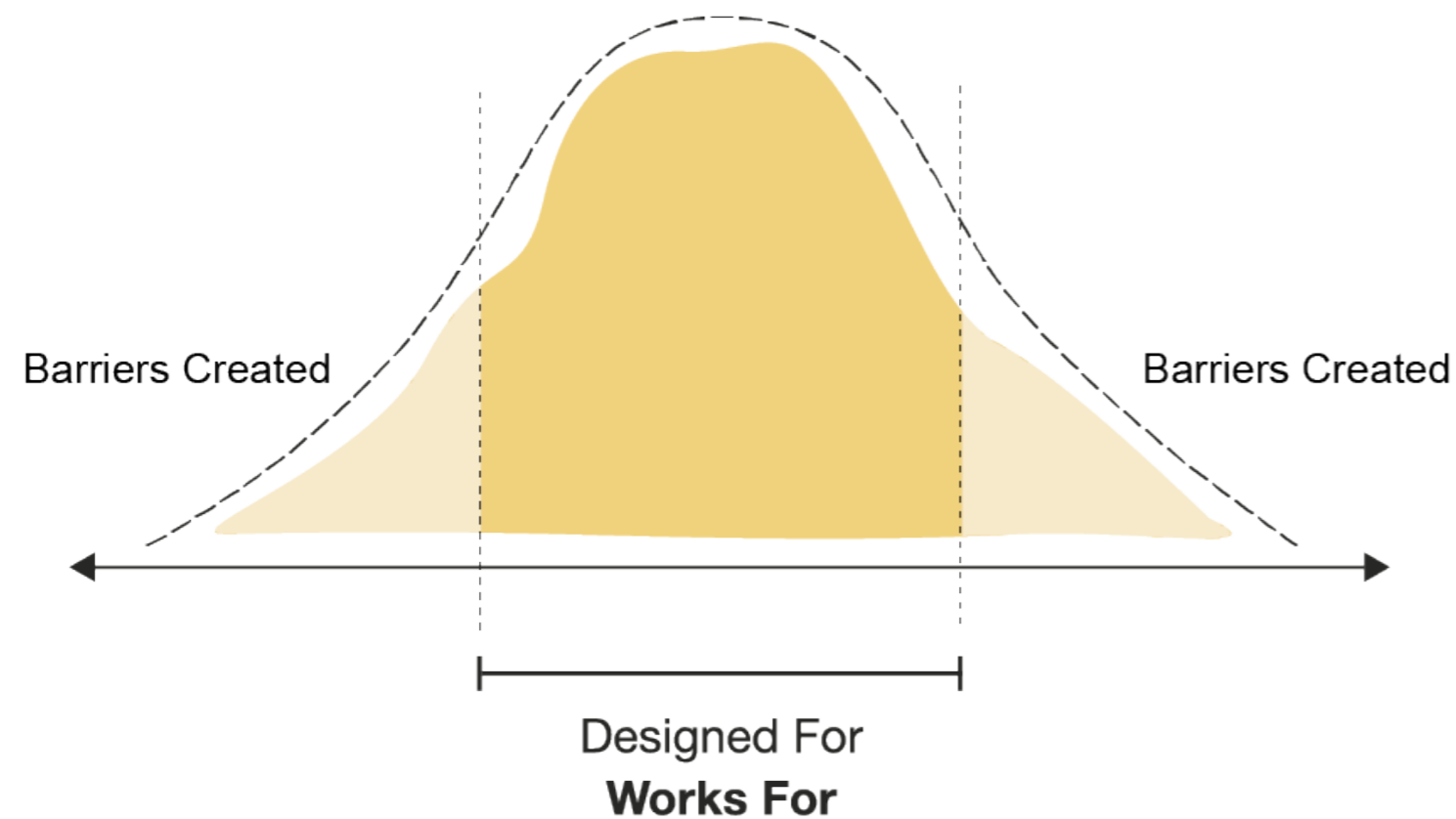
Kat Holmes,
Mismatch (2018)

Inclusive Design Defined

Shifts within Design Practice

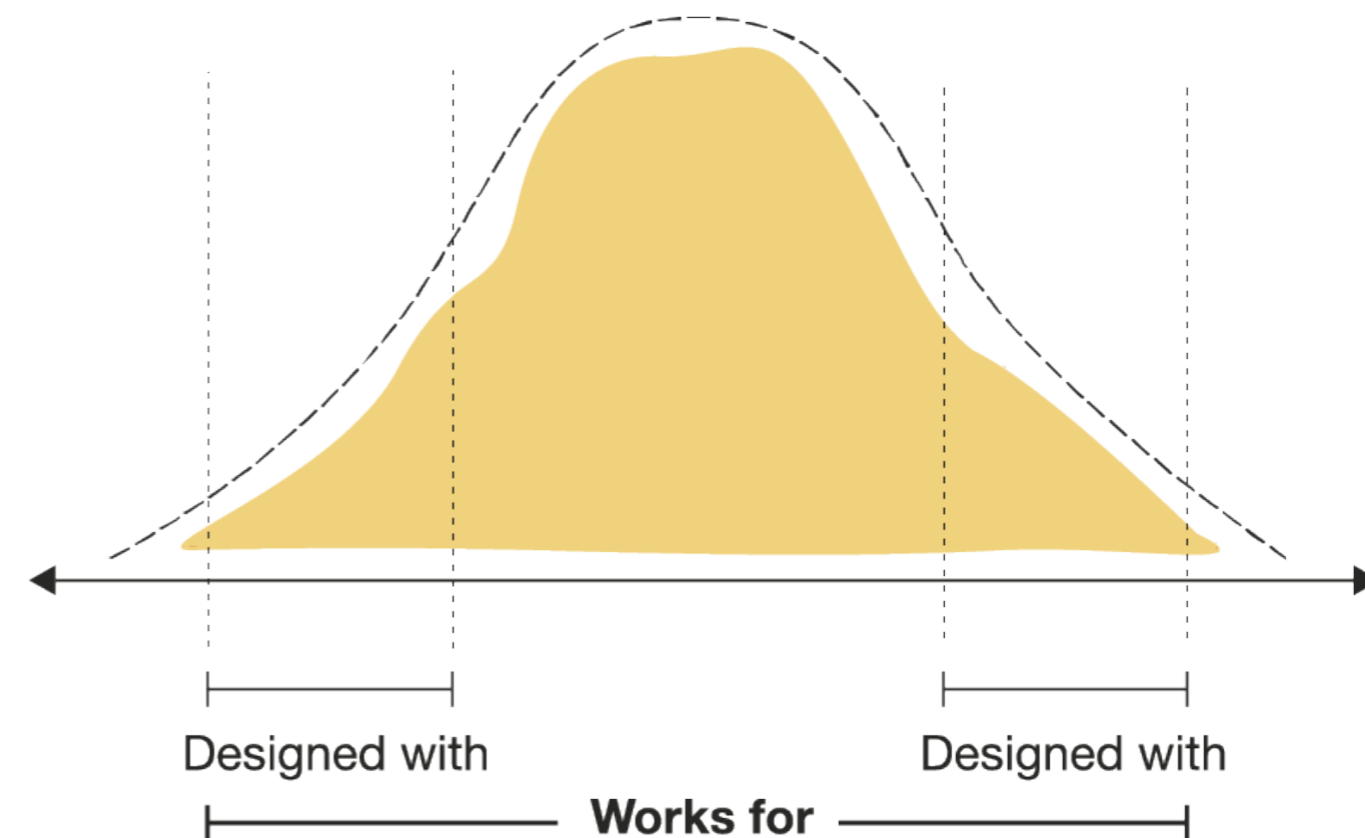
Traditional Design

Design for the “default, average, normal” experience



Inclusive Design

Design with traditionally excluded perspectives, scale to many



[*Adapted from the Microsoft Inclusive Design Toolkit](#)

Inclusive Design Case Study: Closed Captioning



1947



1970



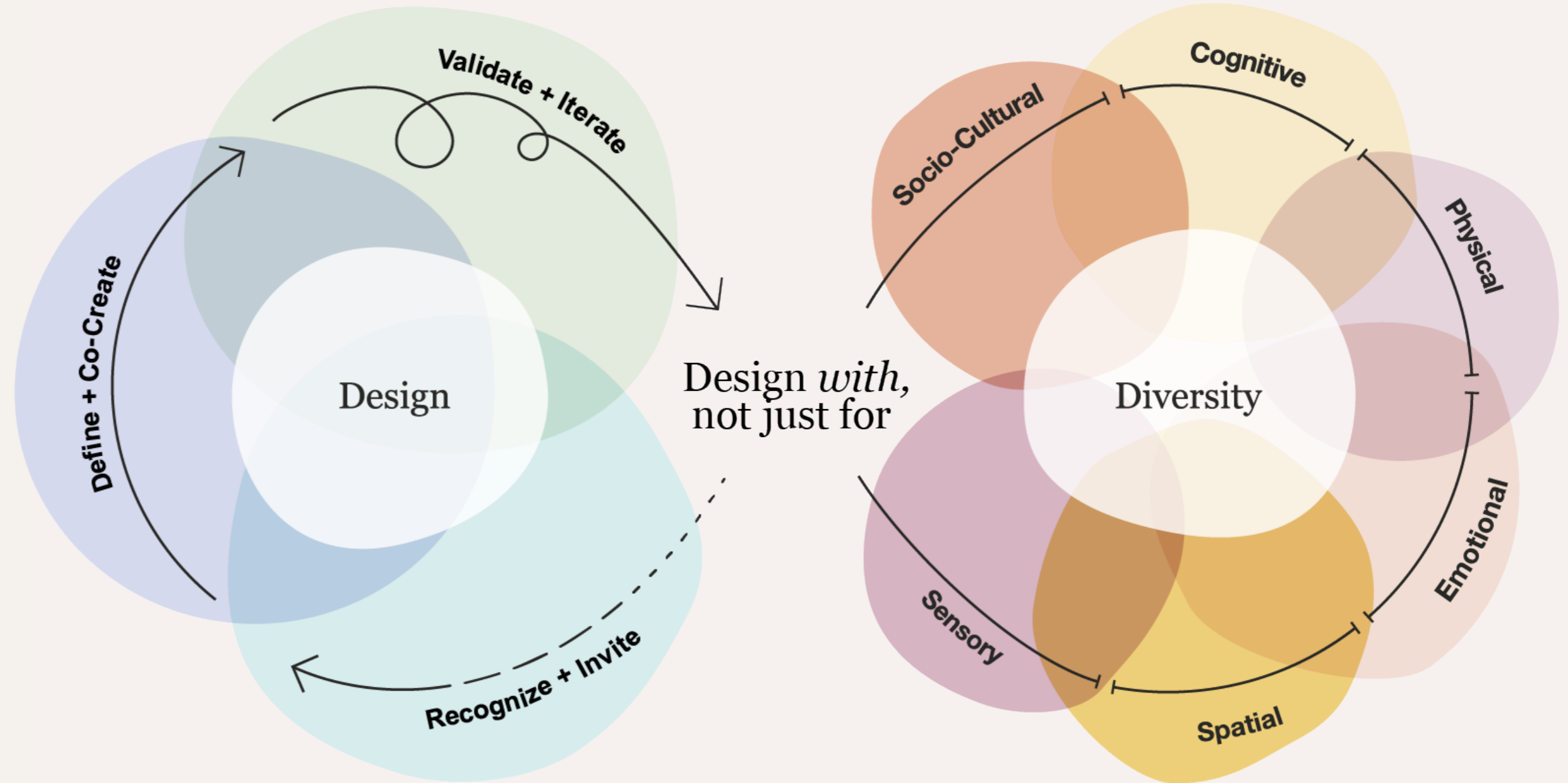
1996



Now

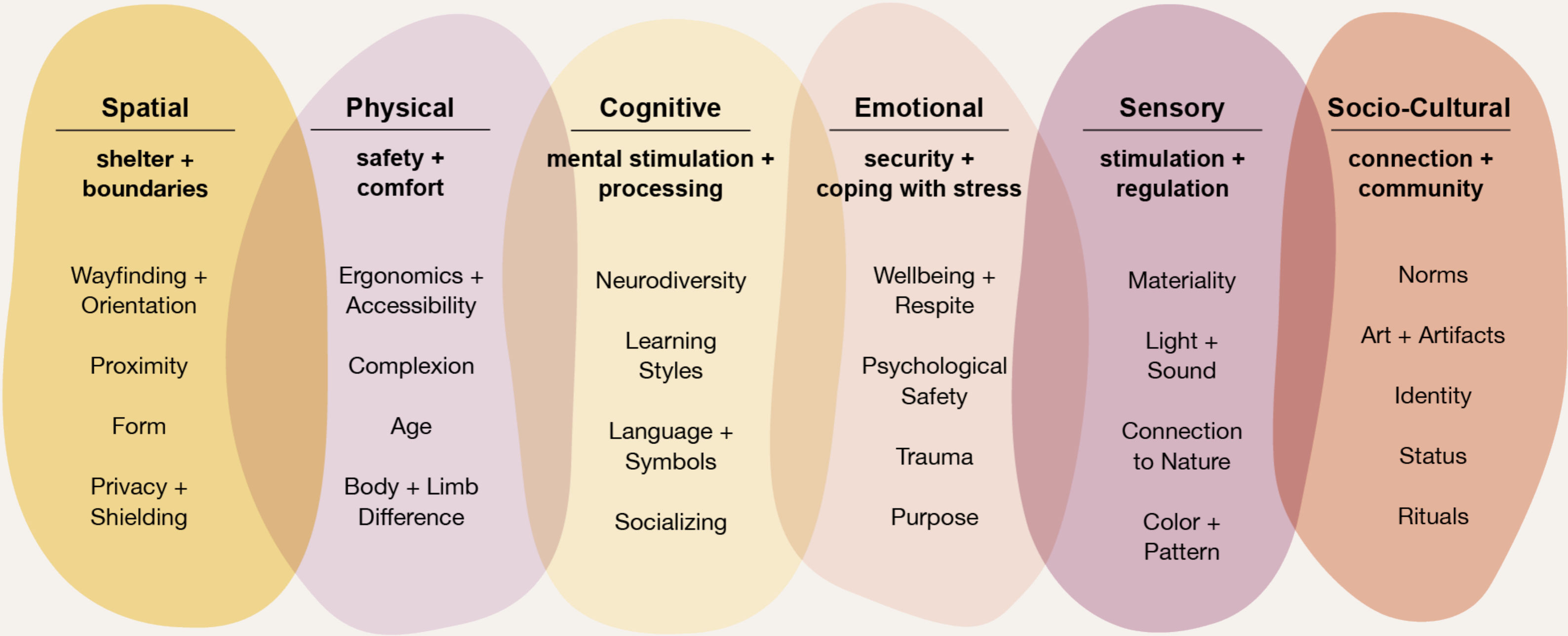
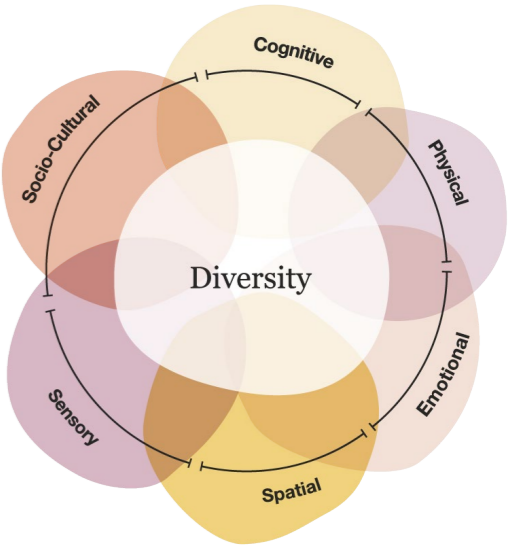
Inclusive Design

The process of using participatory methods to inform design and create new ways for traditionally excluded communities to engage in activities of their choice.



Diversity

Spectrum of Human Beings, Conditions + Experiences

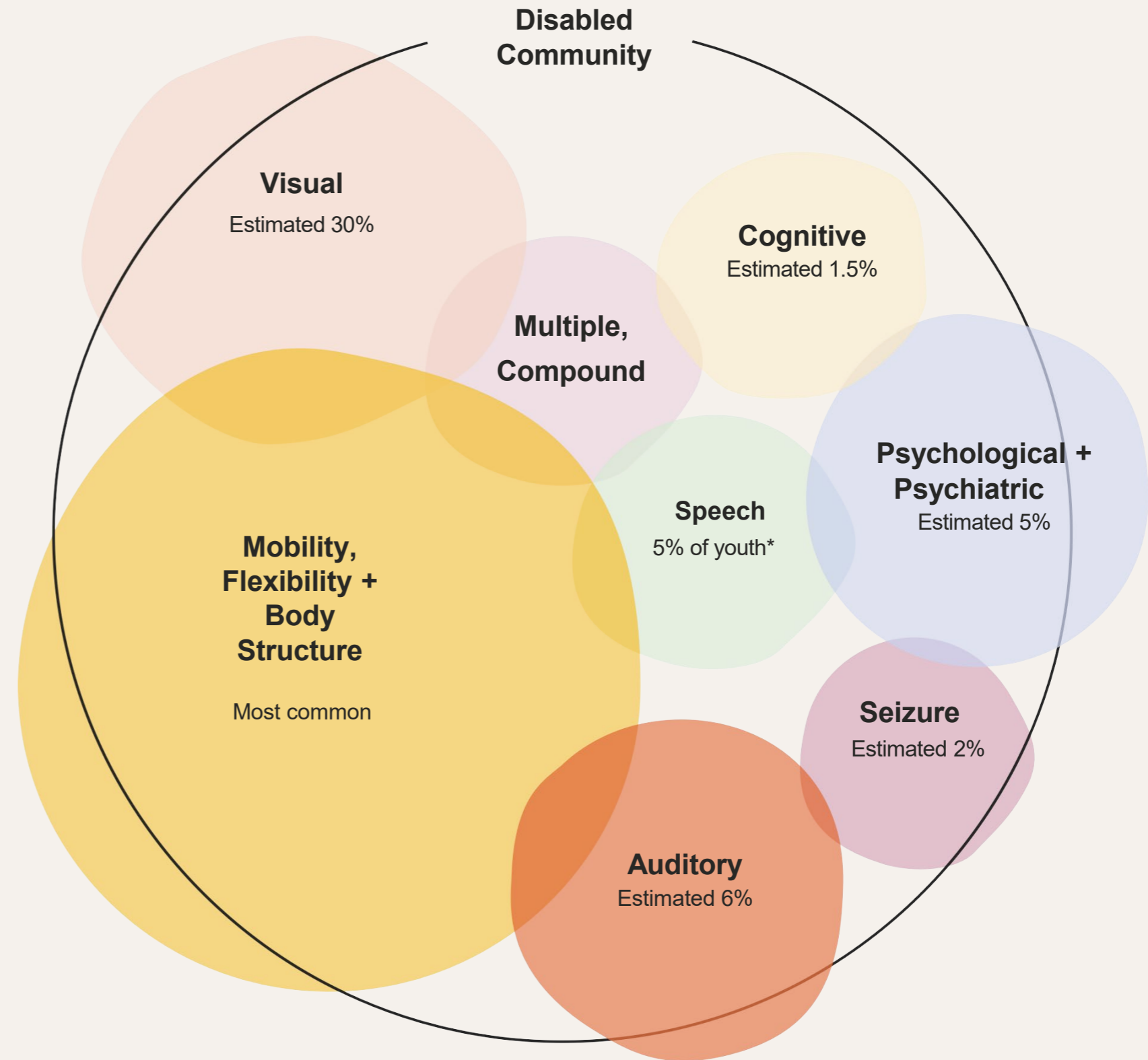


Disability

Limited by a physical, mental, cognitive or developmental condition.

Results from a mismatch, or the interaction between persons with limitations and environmental barriers that hinders their full and effective participation.

- 1 billion (25%) of people around the world
- 90% of disabilities are nonapparent

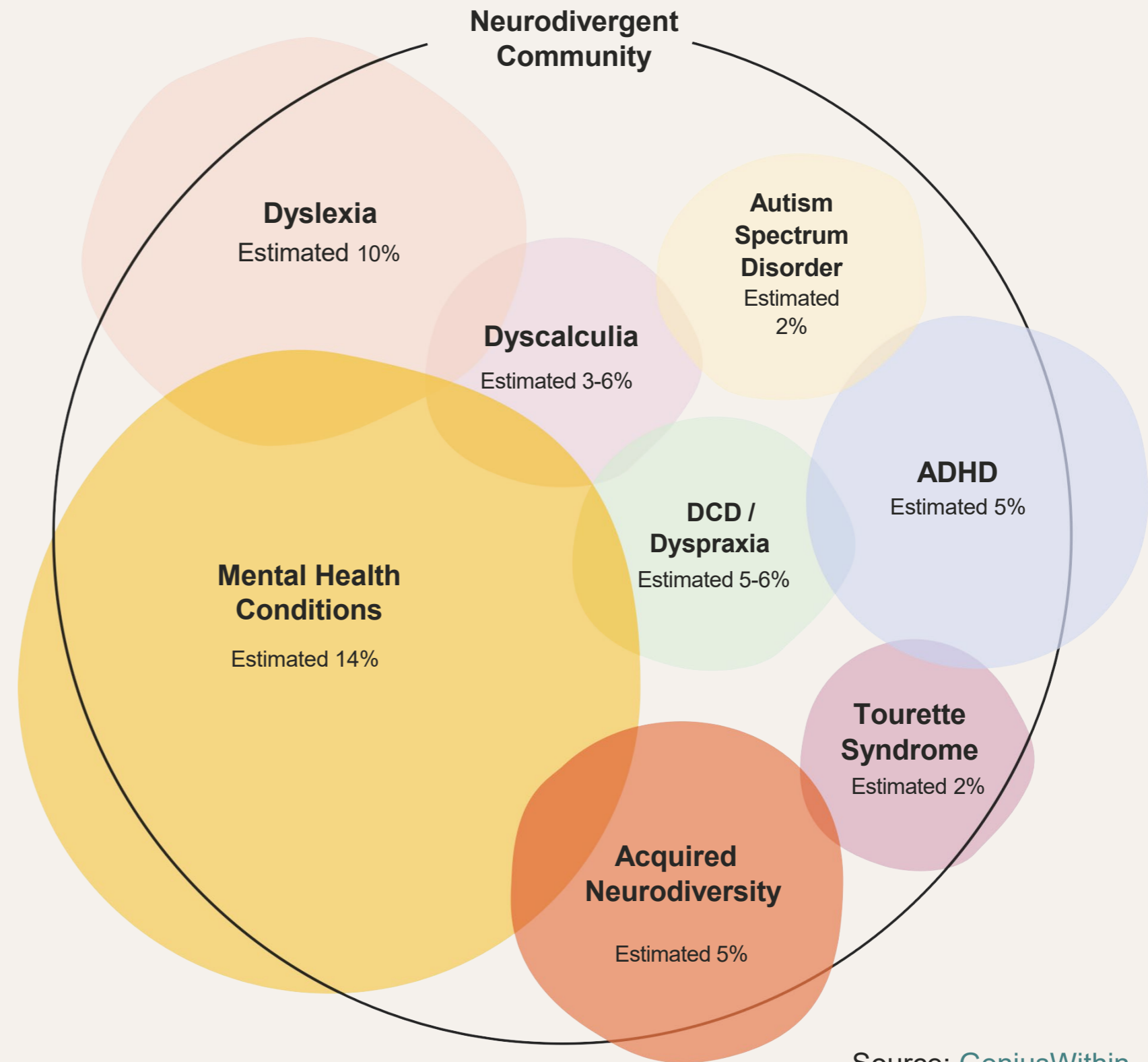


Source: [G3ict Body of Knowledge](#)

Neurodiversity

Full range of variations in cognition, learning, behavior and socialization

- 15 – 20% of the global population is neurodivergent,— however, significant barriers prevent a complete understanding of representation.
- Disclosure is trending highest among Gen-Z and Millennial professionals | [Source](#)



Source: [GeniusWithin](#)

“Inclusive design
prioritizes people as the
heart of the design
process”

Whitney Hill,
Founder of SPORK!

Inclusion by Design

Inclusive Design Drivers



Trauma-Informed Design

Design approach that recognizes the impact of trauma and responds by designing and maintaining supportive + healing environments to actively resist re-traumatization



Universal Design

Design philosophy guided by 7 principles that consider universal needs without the need for adaptation. For some, this is interpreted as “one-size-fits-all”.



Accessible Design

Factors in a person’s environment that, through their absence or presence, limit functioning and create disability. Also, the qualities that make an experience open to all



Biophilic Design

Design approach that embeds elements of the natural world into the built environment to improve connections to living systems + circadian rhythm

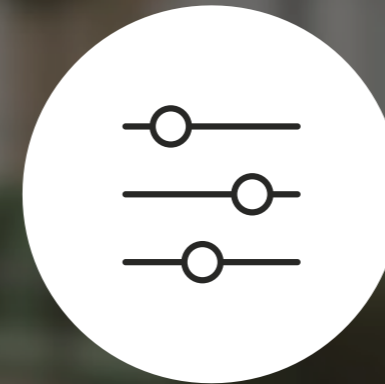
Inclusive Design Pillars



**Recognize Exclusion,
Understand Barriers**



**Include,
Listen + Evolve**



**Create Equitable
Experiences**

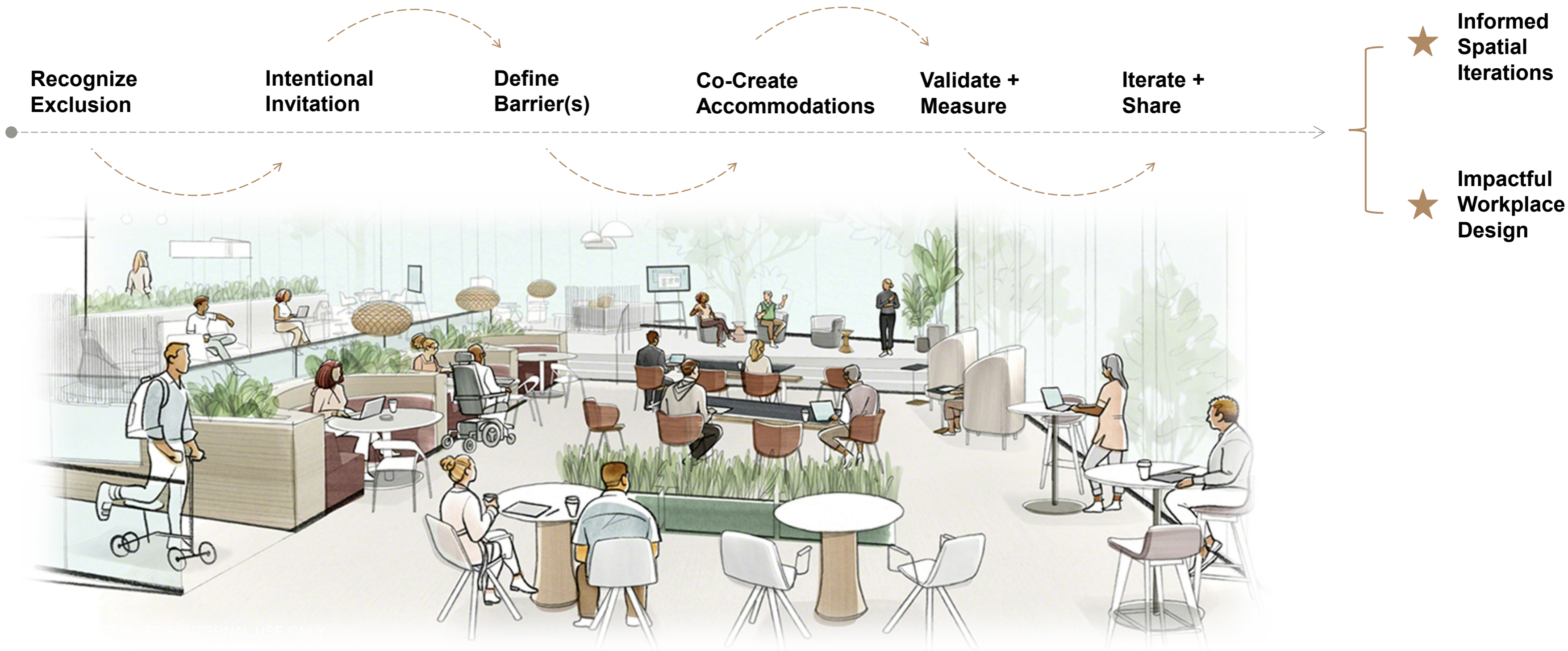


**Design to Empower
+ Accommodate**

Inclusive Design in Action

Journey Map

Inclusive design is a process and practice.



Recognize
Exclusion

Intentional
Invitation

Actions

- Learning + Development
- Data driven, authentic personas
- Disaggregation of data

Timing

- Before inception
- While assembling a project team
- Throughout usability testing
- Post-launch

Questions

- How might we demonstrate our values and commitments throughout our design process?
- Who might we need to bring to the table and work alongside?
- Who might be negatively impacted from this design decision?



In 2022, International WELL Building Institute (IWBI) launched the [Equity Rating](#).

The rating promotes inclusive design with historically underserved populations, including people who are:

- Women and girls
- BIPOC, or racially or ethnically minoritized
- First-generation immigrants
- LGBTQIA+
- Disabled
- Neurodivergent
- Primary caregivers

Intentional
Invitation

Define
Barrier(s)

Key Collaborators

- Accessibility Advocates
- Employee Resource Groups
- Community with lived experience

Actions

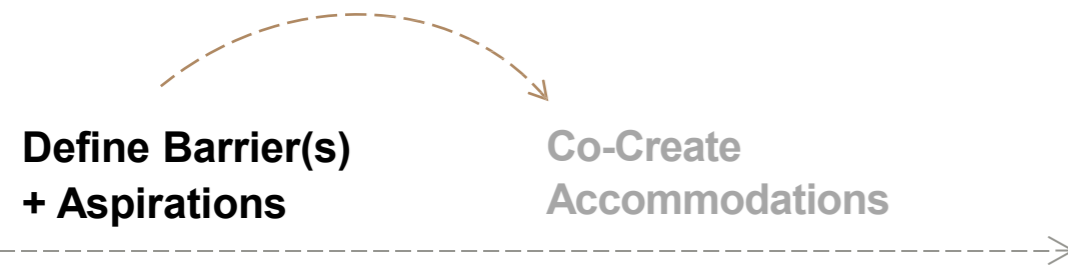
- Hire translators, and interpreters when needed
- Use accessible spaces
- Offer ways to engage in person, and virtually
- Provide materials in advance, and/or allow adequate time for reflection and questions
- Provide visual descriptions

Forums

- Open, community meetings
- Accessible, targeted surveys
- Compensated focus groups, in collaboration with advocates



Image: Open, community meeting flyer, captured in Shanghai, China.



Actions

- Discovery Workshops
- Hack-a-thons
- Design Charrette
- Inclusion Assessment + Audit

Balance Tensions

- Utilize our [5 Inclusive Design Tensions](#) to help examine design aspirations, and challenge “one-size fits all” thinking, available via Work Better

Questions

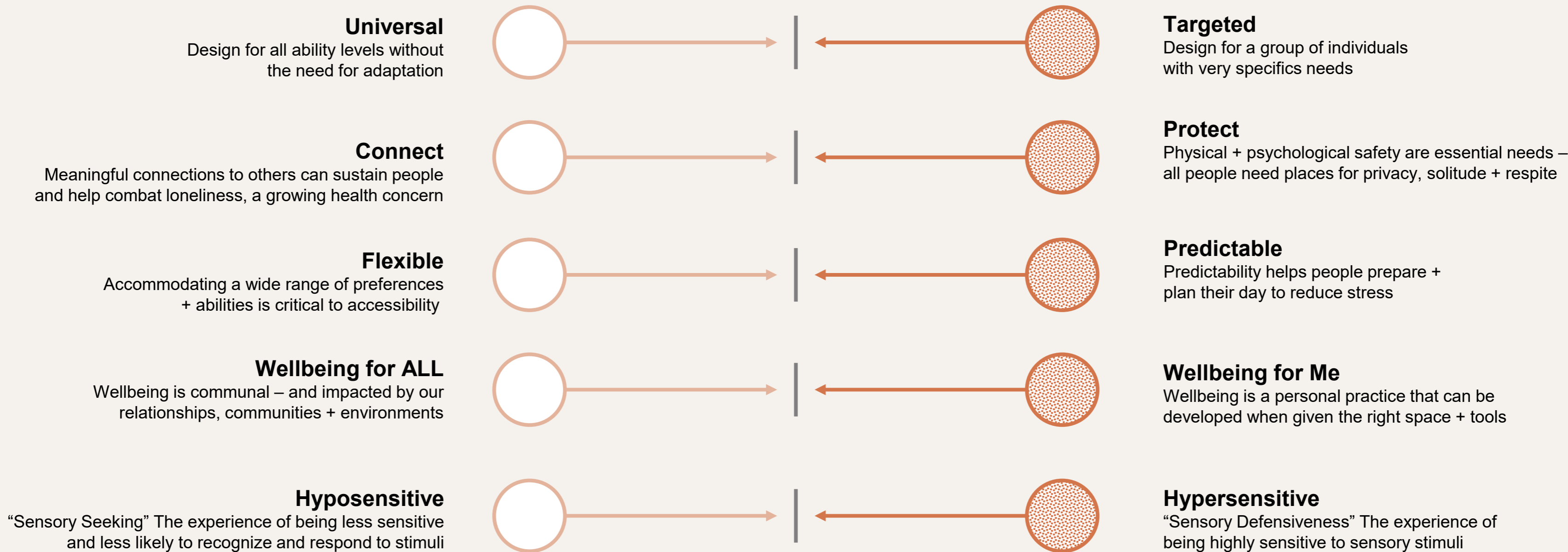
- At times, environments like the workplace can feel like a mismatch with our capabilities and need. What accommodations would you like to see in the workplace and why?
- How might we design for the diversity we have – and hope to foster in the future? | Steelcase Case Study



Image: Steelcase Global Business Center

Design Tensions

Five Key Tensions to Consider When Designing for Inclusivity



Co-Create
Accommodations

Validate +
Measure

Uncovering Barriers | [Link](#)

- First Impressions
- Diverse Settings
- Range of Furniture and Technology
- Sensory Choice and Control

Benchmark Solutions

- Special Olympics Inclusion Center | [Link](#)
- Microsoft's Inclusive Design Tech Lab | [Link](#)
- Georgetown University, OSEI | [Link](#)

Design Strategies

- View our design strategies, explore best practices during design exploration



Design Strategies

Design Strategies

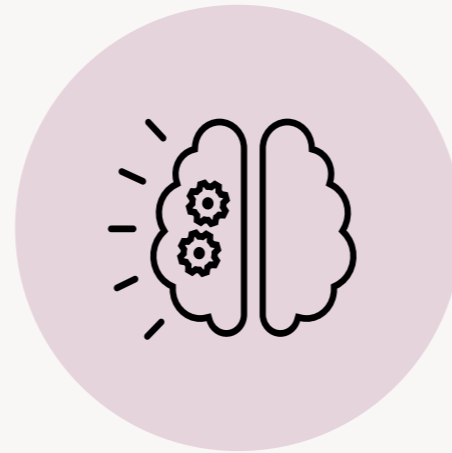
Best Practices + Considerations



**Space
Planning**



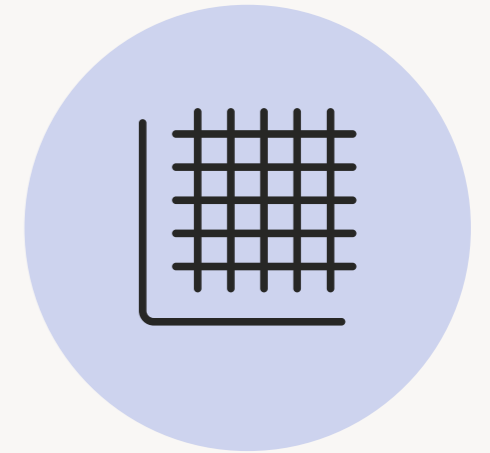
**Furniture +
Technology**



**Sensory +
Stimulation**



**Wellness
Destinations**



**Aesthetics +
Materiality**



Space Planning

Integrate equitable accommodations that signal how to comfortably navigate and use a space.

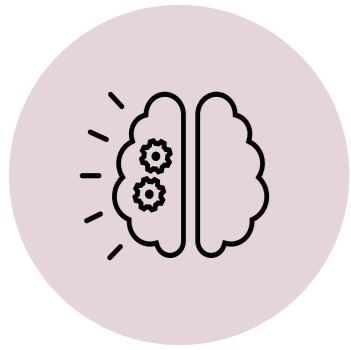
- Creating focal points within the space – be it an architectural element or graphics – can aid in wayfinding and mapping of the space making them easier to orient and navigate
- Limit clutter and complexity within an individual's depth of sight
- Provide choice + control for views, privacy levels, acoustics, by designating areas of focus, breaks + rejuvenation
- When planning spaces in an open environment, pay close attention to context adjacencies - as they may lead to undesirable visual or acoustic challenges



Furniture + Technology

Leverage a variety of settings, devices + assistive technology to support productivity and comprehension as individuals move, rest, stim and self-soothe.

- Providing ergonomically comfortable and adjustable furniture is fundamental
- Support different body types and mobility differences by providing a range of seating options in the same space
- Arranging furniture in circles/ arcs maximizes views to all participants
- Offer both analog + digital assistive tools (writable surfaces, timers, sound scaping technology, closed captioning, visual dashboards)
- Be intentional and clear about on-camera views, placement, and protocols



Sensory + Stimulation

Provide equitable access to protection, nature and design ways to change and regulate surroundings.

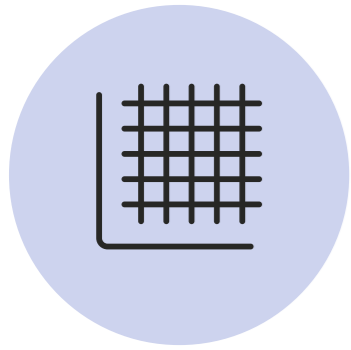
- Build a design strategy that includes visual, acoustic, and territorial privacy
- Prioritize designated areas for rejuvenation, focus, and collaboration
- Utilize sound-absorbing shielding and boundaries, as well as sound dampening or sound scaping technology throughout floorplan
- Ensure equitable access to daylight, adjustable task lighting + controllable window treatments
- Identify potential sources of scent, presence of allergens, and materials that transfer temperature



Wellness Destinations

Prioritize access to nature and micro-environments, spaces created to promote comfort, productivity and well-being.

- Employ biophilic design and integrate natural elements to enable the right level of stimulation within the setting (visual, tactile/auditory, connection to nature)
- Provide wellness hubs nearby for individual focus/rejuvenation, counseling, prayer/meditation, lactation rooms, individual exercise or stretching
- Create spaces that encourage social interaction and moments of play (games/puzzles/sports)
- Create spaces that provide a sense of ownership, personalization and individual customization



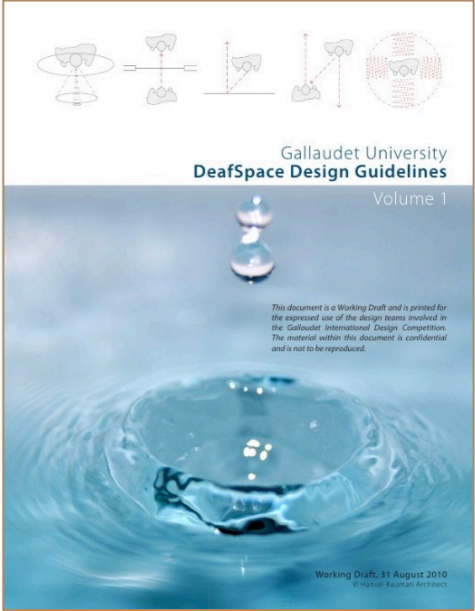
Aesthetic + Materiality

Co-create spaces with a range of styles, colors, textures, and surfaces that reflect the diversity we see in culture, sensitivities, and perception.

- Explore different sensitivities to and perceptions of color, textures, surface materials, and patterns throughout design and selection.
- Consider how symmetry, repetition and placement may impact a person's ability to use and navigate a space.
- Consider the saturation level of colors, contrast, proportion, and placement to avoid sensory overload and eye fatigue.
- Incorporate and position materials to absorb sound and limit echoes and atmospheric noise, like soft flooring, acoustic tiles, upholstered furniture, and flexible fabric screens.
- Consider the placement of glass doors/walls, reflective and high gloss surfaces.

Case Studies

DeafSpace Design Guidelines

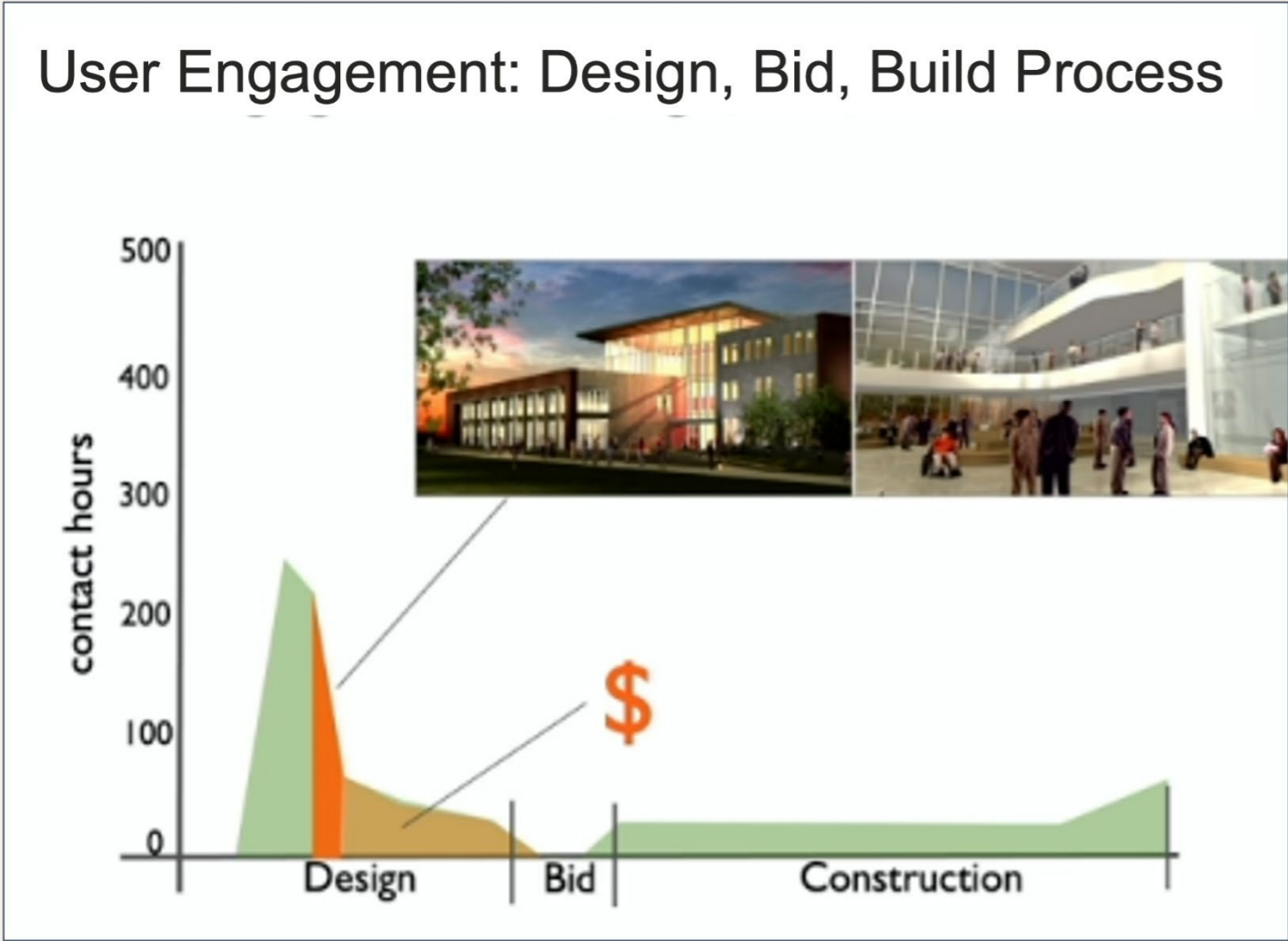


[+ See full report here](#)

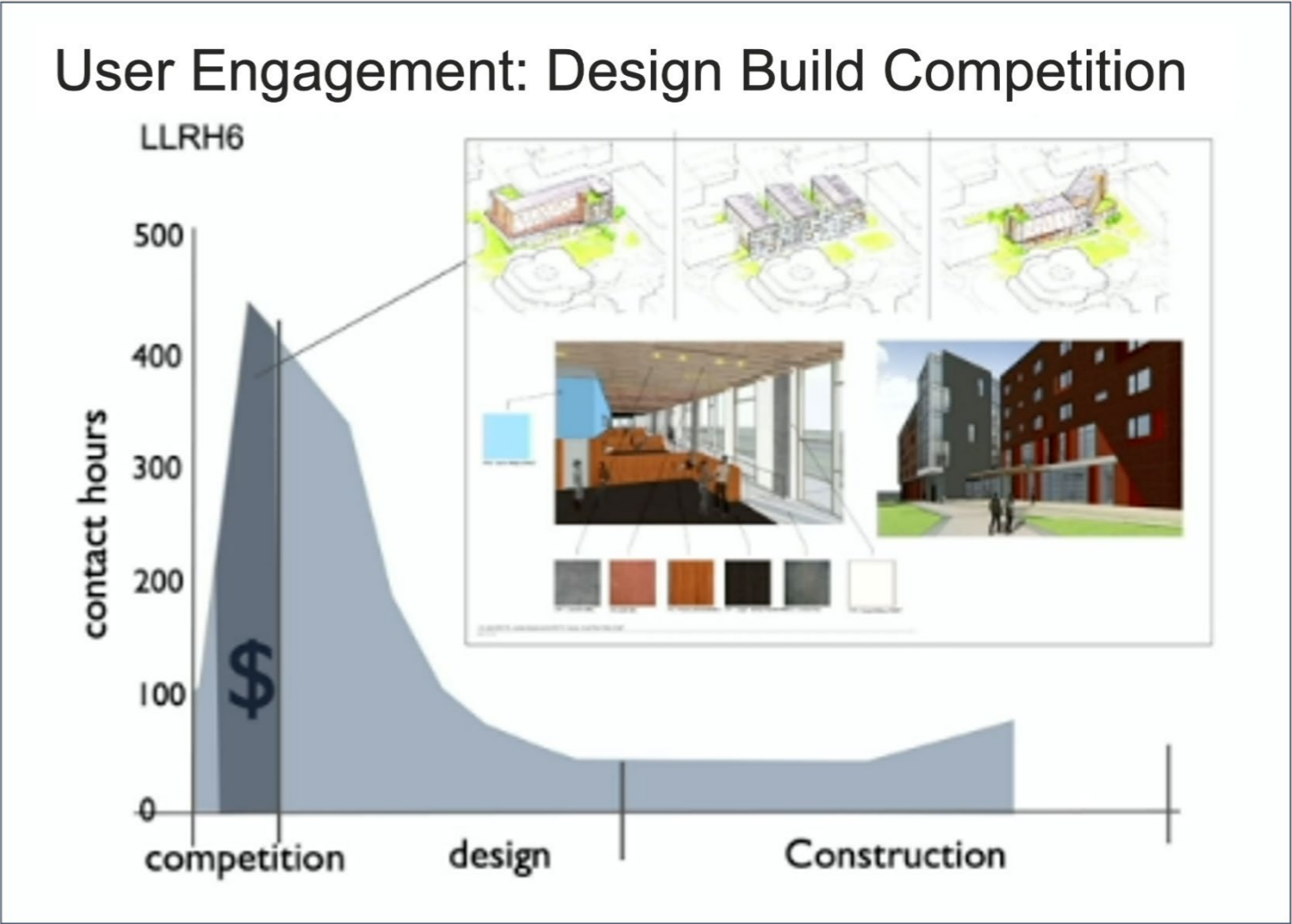
Inclusive Design Pivot

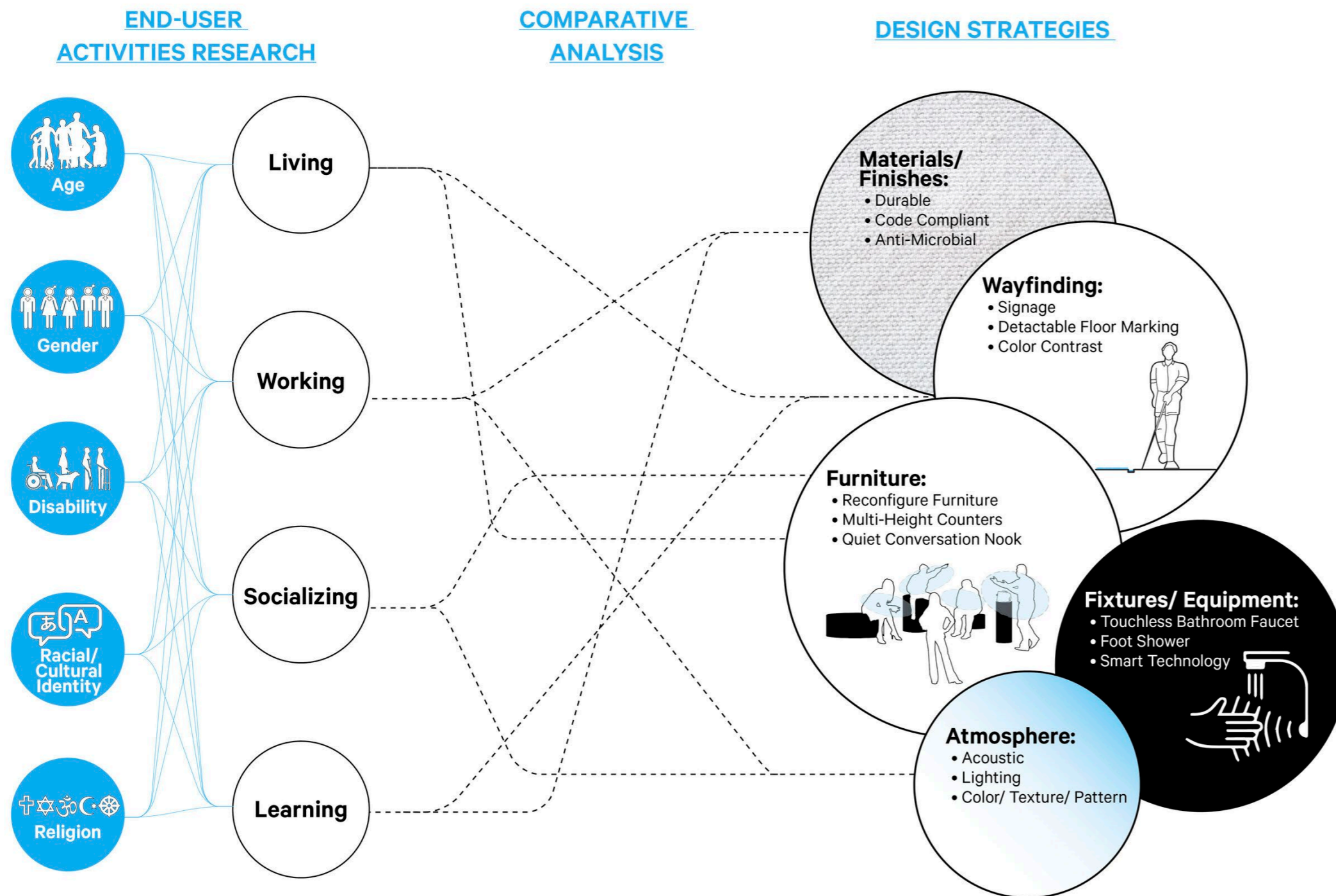


User Engagement: Design, Bid, Build Process



User Engagement: Design Build Competition





MIXDesign

MIXdesign is a think tank and design consultancy dedicated to creating design recommendations and prototypes that respond to the specific needs of traditionally marginalized individuals whom architects, interior designers and clients have long overlooked.

MIXdesign has championed innovative approaches, like Stalled!, to design for “non-compliant bodies” and create multi-sensory public spaces that can enhance the human experience for everyone.



[+ Watch Stalled! Video Here](#)

Microsoft's Inclusive Tech Lab

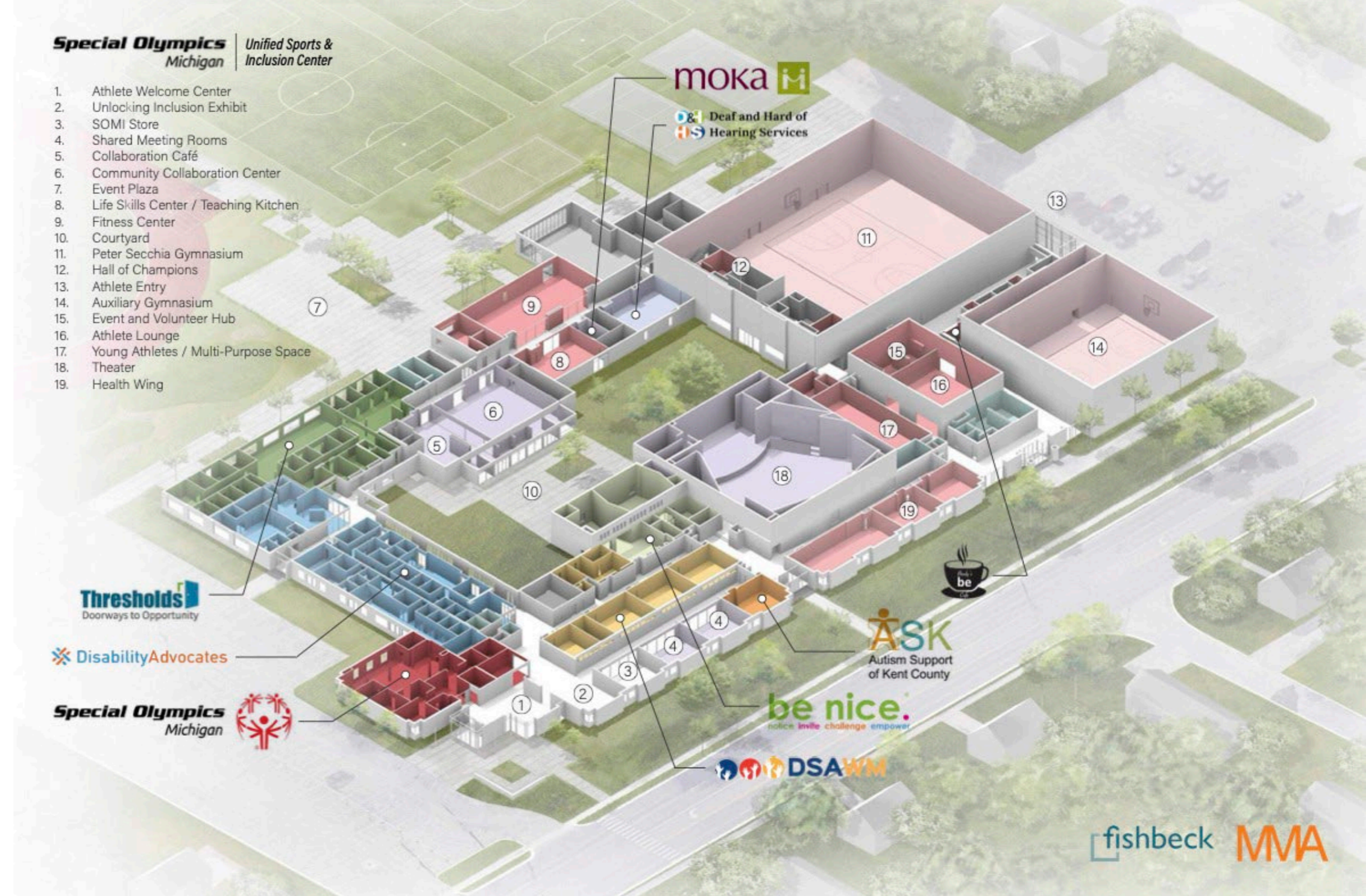
A hub for product development where they work with members of the disability community to design, test, share, and create more inclusive and accessible products for Microsoft.



Source: [Introducing the new Microsoft Inclusive Tech Lab, May 2022.](#)

Inclusive Design Journey with Special Olympics Michigan

- Facilitated human-centered inclusive design workshops
- Leveraged findings to generate space, wayfinding, and experience considerations that support collective goals
- Integrated stakeholder aspirations into the design of shared spaces



Place of Pride | Steelcase.com

Special Olympics Michigan partnered with Steelcase to create spaces designed for a first-of-its-kind inclusion center.

“The point of this building is to highlight ability,” says Jen VanSkiver, chief officer of strategic growth for Special Olympics Michigan (SOMI)

[Read Full Article](#)

Implementation Considerations



Communication Circles



Fixed vs. Flexible Furniture



Shielding & Acoustics



Seating Diversity



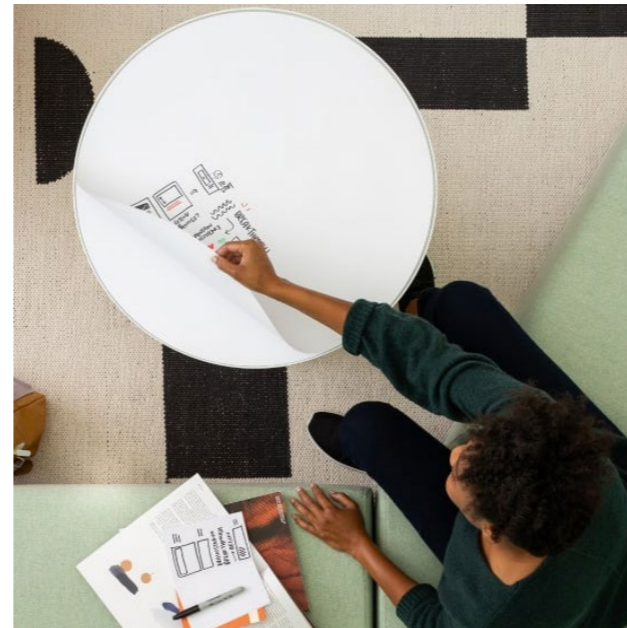
Table Diversity



Support Movement



Power Access



Writable Surfaces



Limit Protruding Objects



Future Planning

Applications

Spaces For All

Work Better Article

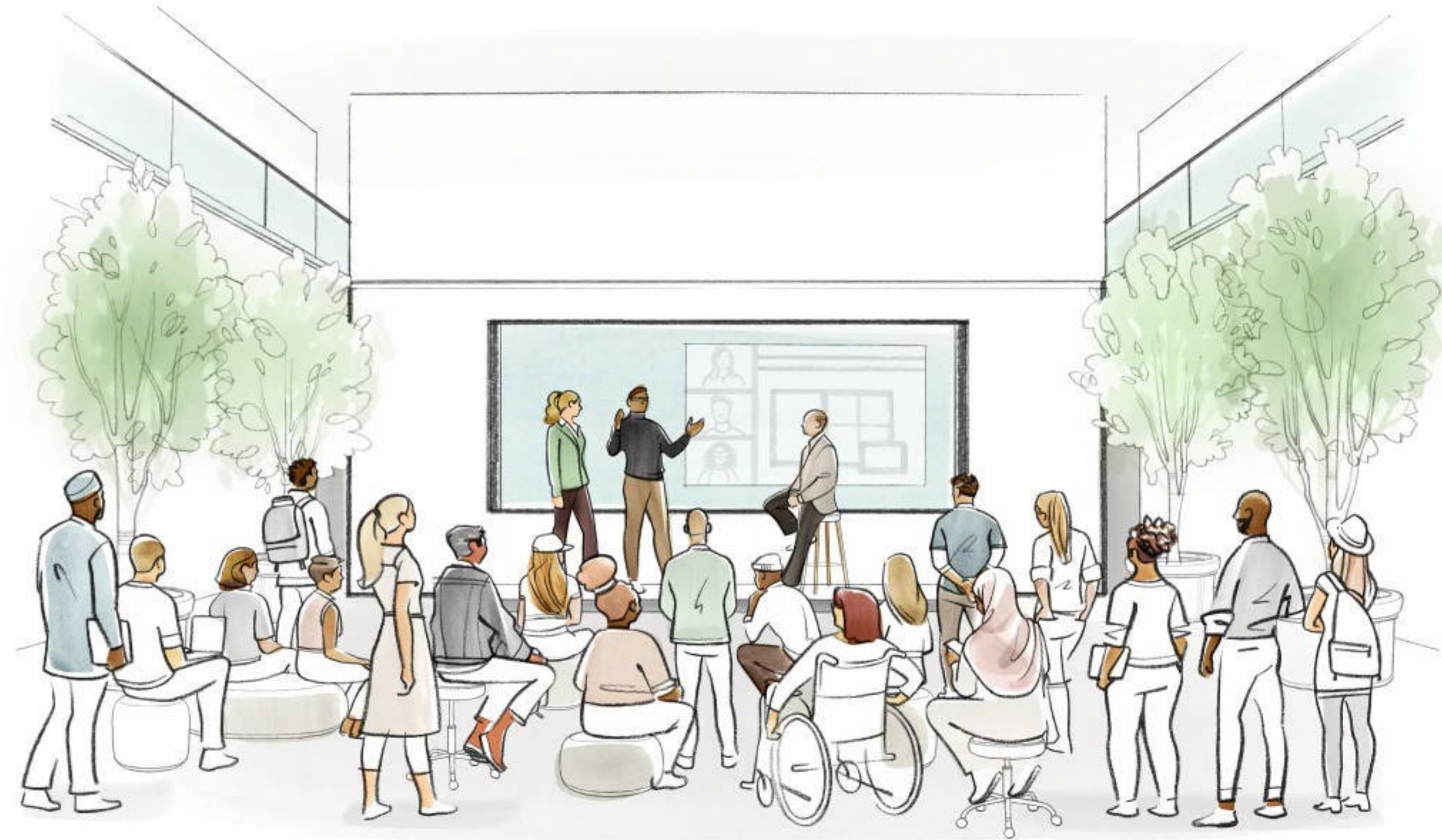
[Link to Article](#)



Old View

Design Intent

A diverse group of employees assemble, yet the space offers only one way to experience the event.



New - Entrance View

Design Intent

A diverse group of employees need a space just as diverse - to support multiple ways to participate.



Meeting Room

Design Intent

Meeting spaces provide options for people who prefer a small setting – or for those who benefit from closed captioning, sign language interpreters and language translation.



Enclaves

Design Intent

(Left) Designed for hyposensitivity – with vibrant colors, textures and space to move and fidget.

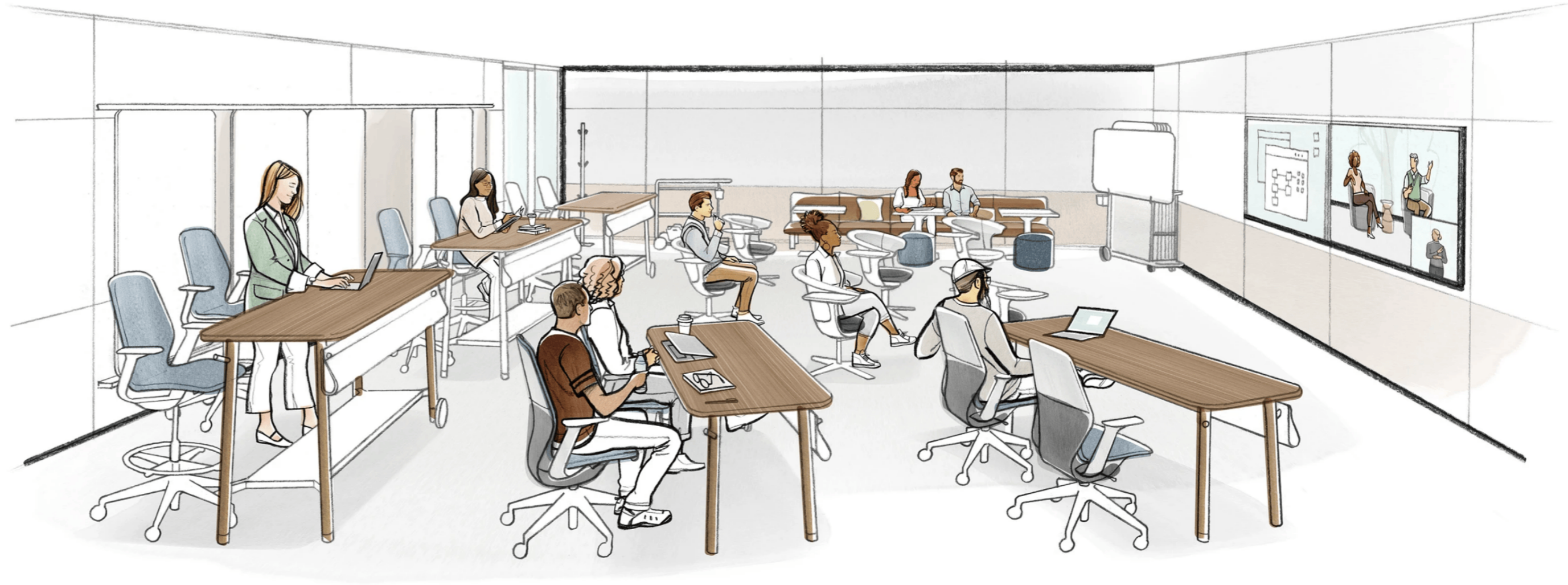
(Right) Designed for hypersensitivity, provides a controlled environment to focus and decompress.



Classroom

Design Intent

Reservable classroom allows large teams or groups to gather, or walk-in without disrupting the Town Hall.



Making Space for Well Beings

Work Better Article

[Link to Article](#)



Restorative Room

Design Intent

For anyone who needs
to step away to get
more control over
the stimulation
around them





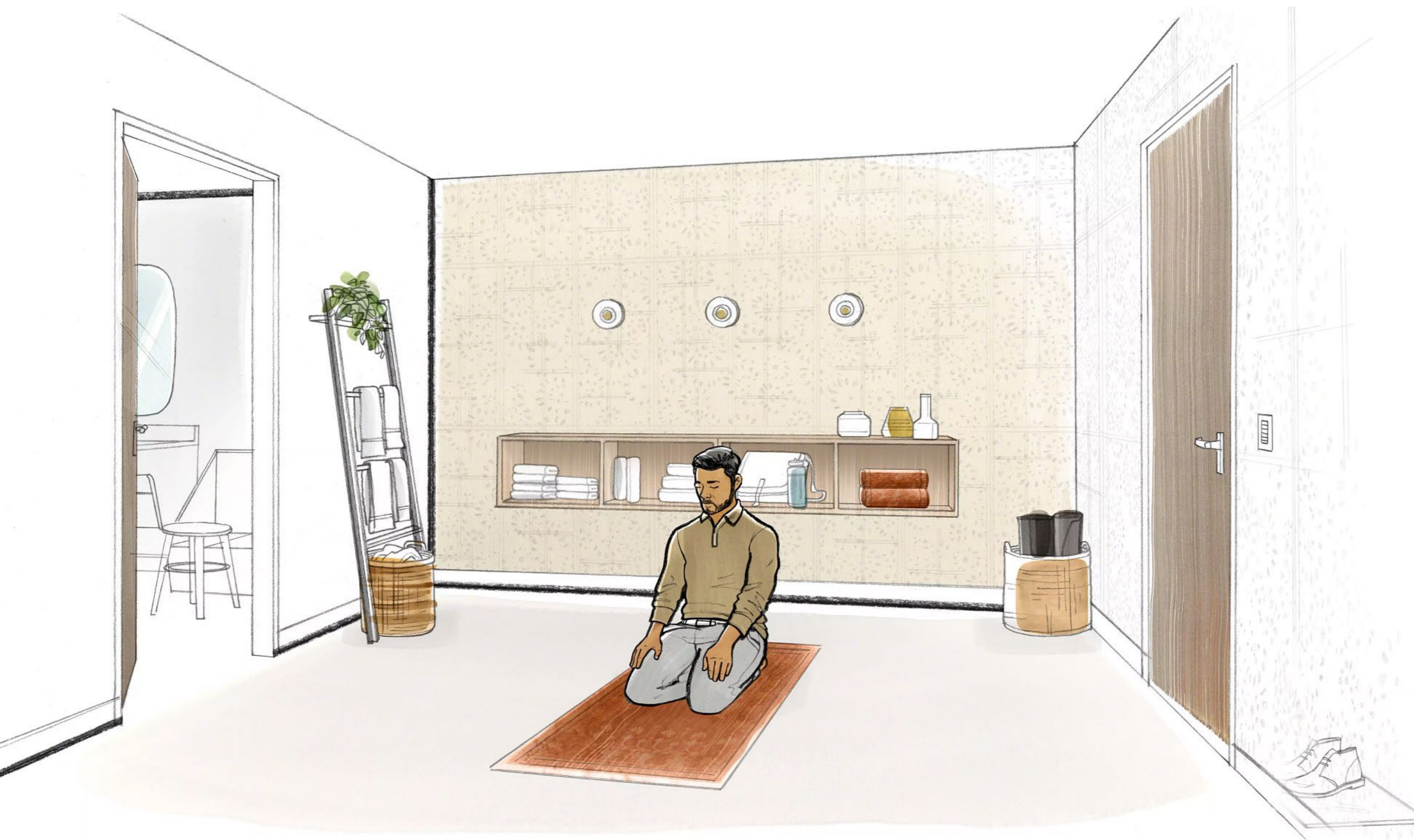
Wellness Room

Design Intent
For someone managing
their health care

Lactation Rooms

Design Intent
For privacy, comfort
and a space to multitask
while pumping





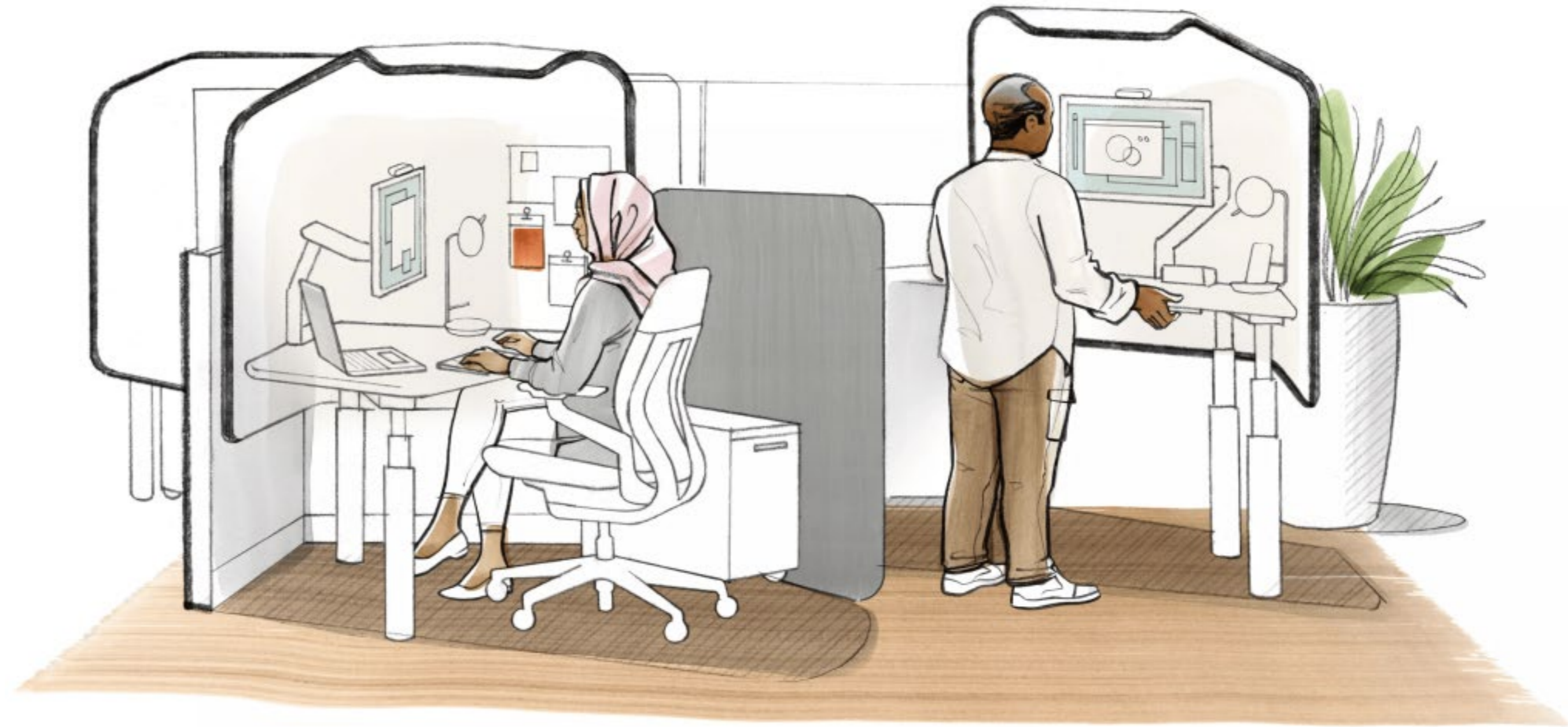
Reflection Room

Design Intent
For diverse spiritual
rituals, meditation
or quiet reflection

Workspace

Design Intent

For personal needs of
shielding, movement,
and posture change at
the workstation



Entrance + Transition Spaces

Design Intent
For a barrier free
entrance, with clear
visibility into the space,
and ample places to wait,
rest and work



Focus Enclave

Design Intent

For employees who are seeking a personal refuge for their own focus, heads down, or remote work























Moving from inspiration to action

- 1

Work alongside community
- 2

Proactively design for choice and control
- 3

Design for the full range of human beings, conditions + experiences

	Permanent	Temporary	Situational	Cognitive
Touch	 Wheelchair User	 Physical Injury	 New Parent	 Tactile Sensitivity
Sight	 Low Vision	 Cataracts	 Dark Environment	 Visual Distraction
Hearing	 Hard of Hearing	 Infection / Injury	 Auditory Distraction	 Autism
Speech	 Non-Verbal	 Illness	 Foreign Language	 Interpreter
Thinking	 Dyslexia	 Migraine	 Stress	 Cognitive Overload

[*Adapted from the Microsoft Inclusive Design Toolkit](#)



“No one space or product can be labeled inclusive without understanding what intentional steps were taken toward inclusivity”

Place of Pride, Steelcase 2022.

Sources

1. [Steelcase WorkSpace Futures Research](#) | Steelcase
2. [Health Equity Infographic](#) | Robert Wood Johnson
3. [MisMatch](#) | Kat Holmes
4. [Microsoft Inclusive Design Toolkit](#) | Microsoft
5. [History of Closed Captioning](#) | National Captioning Institute
6. [The "Chip Bill", Closed Captioning](#) | Gallaudet University
7. [The Era of Adaptive Experiences](#) | Gotoresearch
8. [Body of Knowledge on Accessibility and Disability Inclusion](#) | G3ict
9. [What is Neurodiversity?](#) | GeniusWithin
10. [Designing a Neurodiverse Workplace](#) | HOK
11. [Millennials with Disabilities](#) | Inc. Magazine
12. [Celebrating ADA Day](#) | Spork!
13. [Trauma Informed Design](#) | Trauma-informed Design Society
14. [Universal Design](#) | NC State
15. [Understanding Barriers to Accessibility](#) | Ontario's Universities
16. [14 Patterns of Biophilic Design](#) | Terrapin
17. [WELL Equity Rating](#) | International Well Building Institute
18. [Balancing Tensions to Create Spaces for All](#) | Steelcase
19. [Uncovering Barriers](#) | Steelcase
20. [Place of Pride: Our Inclusive Design Journey with Special Olympics MI](#) | Steelcase
21. [Special Olympics's New Inclusion Center](#) | Steelcase
22. [Microsoft's Inclusive Design Tech Lab](#) | Steelcase
23. [Georgetown University, OSEI](#) | Georgetown University
24. [DeafSpace Design Guidance](#) | Gallaudet University
25. [Stalled! Case Study](#) | MIXDesign
26. [Inclusive Tech Lab](#) | Microsoft
27. [Making Spaces for WellBeings](#) | Steelcase

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