Sensory Design as a Practice

A Neuro-Inclusive Approach to Implementing Multi-Sensory Design Across Scales | Part 2

Perkins&Will

Version 1 | 2026

Sensory Design as a Practice

A Neuro-Inclusive Approach to Implementing Multi-Sensory Design Across Scales | Part 2

Neuro-inclusion is a global effort. One we are committed to expanding through deeper international and intersectional perspectives.

Acknowledgements

We welcome your feedback, questions, and insights. To connect or learn more, reach out to primary author **Larissa Sattler** and Director of Human Experience Research **Erika Eitland** at Perkins&Will.

Special thanks to our community partners and peer reviewers, whose support made this research possible — and whose guidance ensured it was conducted *with* the neurodivergent community, not about them: Severino Alfonso, JT Bachman, Debbie Beck, Sarah Christensen, Hala El Khorazaty, Carolyn Fritz, Julie Gauthier, Cristina Lozano, Sam McChurch, Kimberly Seigel, Katie Stranix, and Loukia Tsafoulia

Authors:

- **Larissa Sattler,** (she/her), AIA, LEED GA, LFA
- **Erika Eitland,** (she/her), MPH, ScD
- **Jacob Williams,** (he/him), MGXD
- **Kristina Marchand,** (she/her), E. Todd Wheeler Healthcare Fellow, LEED AP BD+C
- **Samuel Orlando,** (he/him) LEED GA
- **Danielle Baez,** (she/her), MUP

Suggested Citation:

Sattler, L., Eitland, E., Williams, J., Marchand, K., Orlando, S., & Baez, D. (2026). Sensory design as a practice: Implementing multi-sensory design across scales | Part 2 (Version 1). Perkins&Will.

WHO WE ARE DESIGNING FOR

Neurodiversity is *not one thing.*

Neurodiversity describes the infinite variation in neurocognitive styles within our species (Walker, 2021). It is not a synonym for autism. The identities below represent a range of neurotypes, each are distinct, with a unique relationship to space, sensation, and the built environment.

Neurodivergent identities include, but are not limited to...

Acquired Neurodivergence (Stroke, Post Traumatic Stress Disorder, etc.) • Attention Deficit Hyperactivity Disorder (ADHD) • Autism • Developmental Coordination Disorder (DCD) / Dyspraxia • Dyscalculia • Dyslexia • Learning Disability • Sensory Processing Disorder • Synesthesia • Tourette Syndrome

These identities may influence...

Sensory processing • Attention and focus • Spatial navigation · Motor coordination • Emotional regulation • Verbal and written communication • Social interaction • Memory and sequencing

Imagine

Imagine every room entered, every corridor navigated, every public space occupied demanding a continuous, exhausting negotiation between the nervous system and the environment.

The flicker of fluorescent light.

The roar of an HVAC unit mistaken for silence.

The scratch of a chair on a hard floor that nobody else seems to hear.

These are not inconveniences. They are a constant, invisible tax paid by neurodivergent people in focus, in energy, in dignity every single minute of every single day.

And it was built that way. Not out of malice, but out of omission. For generations, the neurodivergent experience was simply not in the brief.

Now imagine if it were.

Imagine a child who could simply listen to their teacher without summoning extraordinary willpower to filter out the acoustic and visual chaos around them. A patient healing in a hospital room that doesn't assault their senses at their most vulnerable. An employee who doesn't spend half their cognitive bandwidth surviving the open-plan office before they've written a single word. A family moving through a museum together, not managing a countdown to the nearest quiet room, but just being there. Curious. Present. Belonging.

Architects and designers shape how the world may feel. That power is also a responsibility. Yet, as we know more, we must do more to support the people that occupy these spaces. A single sensory room, however well-intentioned, is not inclusion. It is an afterthought rendered in drywall. An acknowledgment that the rest of the building was not made for everyone.

The neurodivergent community does not need a designated refuge from our architecture. They need architecture that was designed with them in mind from the very first line drawn.

CONTENTS

Sensory design is not a room you retreat to.

It is the environment you never have to escape.

READ PART 1

PART 2

The Reframe

From a room to a practice—what sensory design actually looks like

The question this section answers is not whether to have a sensory room. It is whether a sensory room, on its own, constitutes a neuro-inclusive building.

What follows is a practical and spatial reframe: a spectrum of design strategies that distribute sensory consideration across an entire building, and a constellation of named space types that together form a network of support rather than a single node of accommodation.

2.1 — BEYOND THE SINGLE ROOM

From sensory rooms to a *sensory design practice*

Sensory rooms have played an important role in advancing awareness of sensory needs within the built environment. Their introduction marked a critical departure from purely normative assumptions about how spaces should be experienced, drawing attention to the ways in which stimuli can directly affect emotional and neurological well-being.

However, the conditions that led to the widespread adoption of sensory rooms have shifted significantly in recent years.

For many users, sensory rooms continue to offer meaningful moments of neurological regulation, respite, and relief, particularly in environments that are otherwise overwhelming. These spaces help individuals modulate stress responses, restore cognitive balance, and enhance focus. This is particularly critical in high-demand environments like healthcare, education, and workplaces, where cognitive overload and emotional fatigue are common (Peavey, 2025). A systematic scoping review examining 19 papers focused on sensory rooms within mental health settings, noted stress levels significantly decreased following use of a sensory room (Doroud et. al., 2024).

Yet, there are several practical challenges with a sensory room approach to neuro-inclusive design. First, it places the burden of adaptation on the individual — who must first recognize their own need, then know a sensory room exists in a building that integrates them inconsistently, if at all. Second, the person needs the ability to easily and accessibly navigate to a sensory room, especially through a potentially maladaptive environment that they are trying to avoid. Third, when a person enters a sensory room, they need to not feel othered, stigmatized or isolated. When those who cannot tolerate the dominant conditions are expected to self-opt out, it further entrenches the notions of typical versus atypical bodies and minds. However, for those who can make it to a sensory room, it may provide relief if it is tailored to their neurocognitive profile, well-maintained, and properly-sized.

By contrast, a building that embeds sensory-friendly design across classrooms, offices, circulation, programs, and shared spaces represents a broader commitment to neuro-inclusive design. Multi-sensory design is the use of neuro-inclusive architecture to distribute sensory choice throughout our built environment. This approach considers how sensory experiences like balance, body awareness, internal sensation, predictability, and spatial clarity influence everyday experience and may include varied lighting conditions, gradients of acoustic performance, spaces that support stillness and movement, and opportunities for self-regulation without social withdrawal. Such an approach acknowledges neurodiversity as an intrinsic aspect of human variation and treats accessibility not as an exception, but as a baseline condition.

What a single room requires of its users:

01 **Recognize the need**

A person must first assess that they need support and know that a sensory room exists in a built environment that is inconsistently integrating these across public and private spaces.

02 **Move through the building**

They must then move toward the sensory room, through the environment that might very well have produced the sensory overload.

03 **Enter without stigma**

They must enter a space that marks them as unable to tolerate conditions others around them seem to accept. When those who cannot tolerate the dominant environment are expected to self-opt out, it further entrenches notions of typical versus atypical bodies and minds.

Check it out!

Every design decision has an implication on at least one of the eight senses. **This primer ↗** highlights the specific ripple effects on people's experience in the built environment.

2.1 — BEYOND THE SINGLE ROOM

What sensory rooms get right, *every space can borrow*

How can we take elements of effective sensory room design and apply them on a broader scale, so the benefits are independent of physical access, duration of use, quality, or availability of the individual space?

Transferable Strategies

Wall Assemblies

1. Create a built-in “nook” or compressed space for those seeking shelter and a sense of security.

Lighting

2. Integrate both direct and indirect lighting to reduce glare and accommodate light sensitivity, particularly for users who are reclined or laying down.

Furniture

3. Design multiple surface types—side tables, counters, or a sit-to-stand desk for various activities and personal choice.
4. Provide lockable storage for sensory aids, equipment, or personal belongings.

Ceiling Finishes

5. Consider acoustic paneling or baffle systems with high Noise Reduction Coefficient (NRC) for speech privacy and noise blocking.

Doors and Thresholds

6. Incorporate a transition threshold or buffer zone that allows users to decompress and gradually shift into the sensory environment.

Floor Finishes

7. Specify carpet or flooring with inset area rugs for individuals who prefer to sit on the floor.

Check it out!

For more strategies, and their relative costs, see the **Appendix (pp. 64-67)** ↗

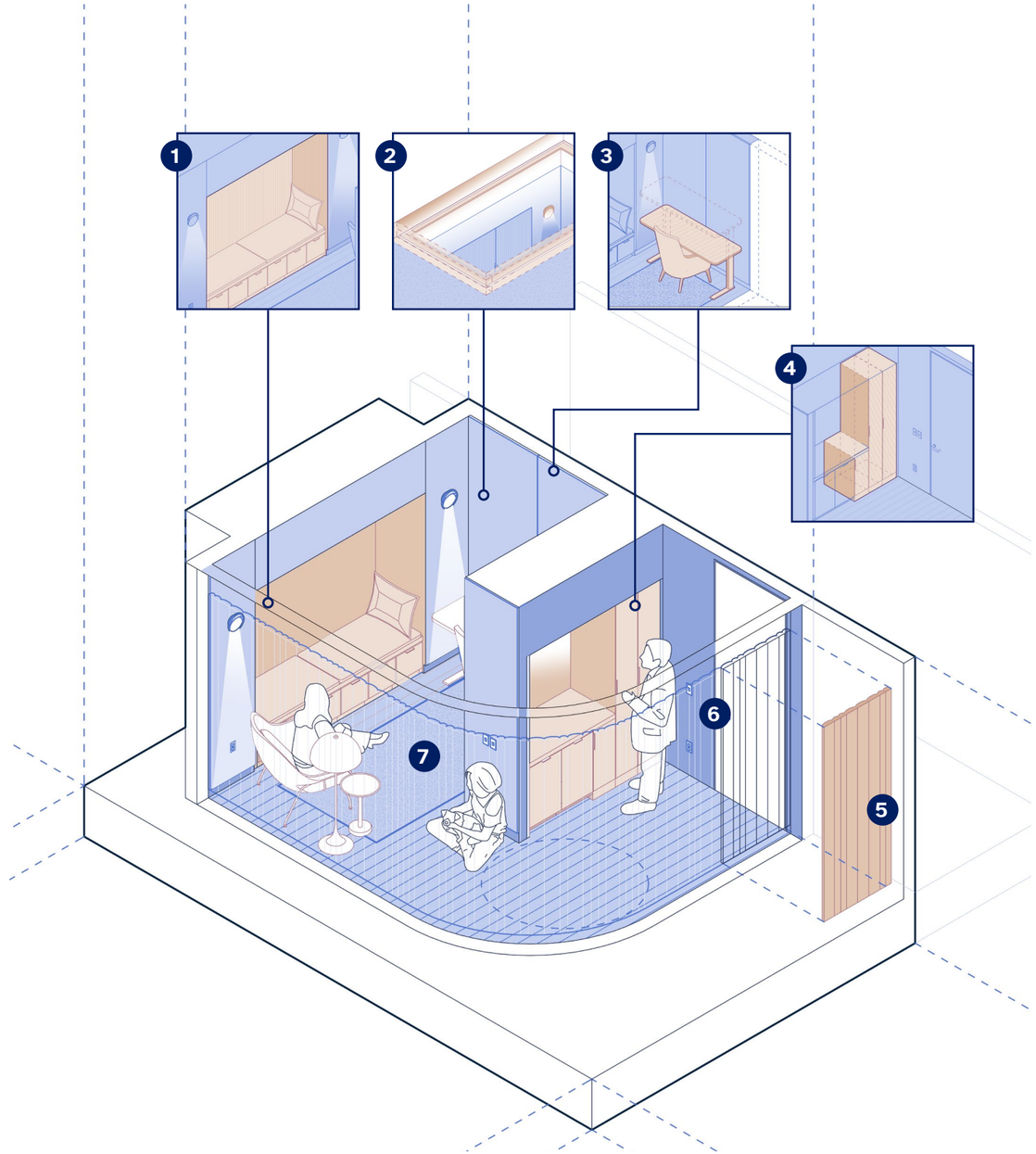


Figure 1: Sensory room design strategies shouldn’t be confined to a single space. They are the starting point for designing buildings that truly serve everyone.

Visuals courtesy of Samuel Orlando, Perkins&Will

2.2 —— A SPECTRUM OF SENSORY DESIGN OPTIONS

Design smarter by *curating strategies for sensory impact*

Sensory design helps us engage in intentional placemaking that responds to all **eight senses.** The goal is to provide opportunities for sensory choice throughout an environment rather than an isolated intervention. Research on sensory interventions within the built environment has demonstrated meaningful benefits for user well-being, emotional regulation, and behavioral outcomes—particularly within educational and healthcare settings (Flanigan, R., 2025). The strategies in this section are labeled with the most relevant sensory systems and *most* impactful design phases.

Key		Most Impactful During		Categories
[V]	Visual	RE	Research	Lighting & Visual Environment
[A]	Auditory	PU	Pursuits	Acoustics
[T]	Tactile	PL	Planning	Materiality & Surface
[G]	Gustatory	PR	Programming	Movement & Spatial Layout
[O]	Olfactory	SD	Schematic Des.	Thermal & Interoceptive Environment
[P]	Proprioceptive	DD	Design Dev.	Olfactory Environment
[Ve]	Vestibular	CD	Constr. Doc.	
[I]	Interoceptive	CA	Contract Admin.	
		PO	Post-Occupancy	

Lighting & Visual Environment

The spectrum, intensity, and distribution of light directly shape how people feel, focus, and function.

1.1 Anti-glare and Indirect Lighting [V]

DD PO

Bouncing light off walls or ceilings reduces hard contrasts and visual strain through cove lighting, wall washers, or uplighting (Noble & Isaacs, 2025).

1.2 Circadian Lighting [V] [I]

RE DD PO

The spectrum, timing, and intensity of light directly regulate alertness, sleep onset, and emotional regulation (International WELL Building Institute, n.d.).

1.3 Color Temperature [V] [I]

CD PO

Warm light (2,700K–3,500K) supports calming; blue-heavy light (5,000K–6,500K) increases alertness but can heighten anxiety and sensory discomfort (Li et al, 2021; Chen et al, 2022).

1.4 Diffused Natural Light [V] [I] [O]

PR SD

Translucent glazing, light shelves, clerestory windows, and north-facing orientations provide restorative daylight without glare or thermal discomfort (Xirou, 2024; Zaikina, 2025)

1.5 Dimmable and Personally Controlled Lighting [V] [I]

CD PO

Allows users to tune brightness and color temperature to their own threshold, including smart lighting systems (Bernard, 2025).

2.2 —— A SPECTRUM OF SENSORY DESIGN OPTIONS

Lighting & Visual Environment

1.6 Lighting Zones and Soft Fade Transitions [V] [Ve] [I] CD PO

Gradual transitions between light levels reduce startle response and support smoother sensory movement through a building (Zaikina, 2025).

1.7 Pattern & Visual Complexity [V] [P] CD

Surface patterns scaled to human proportion reduce visual fatigue; expressive patterns should be reserved for landmark wayfinding moments (Yesiltepe, 2021; International WELL Building Institute, n.d.).

1.8 Color Contrast [V] [P] DD

Deliberate contrast supports spatial legibility and wayfinding while avoiding patterns that cause perceptual disturbance (Wang, 2025).

Nicklaus Children's Hospital: Miami, FL

[V] Visual
[A] Auditory
[T] Tactile
[G] Gustatory
[O] Olfactory
[P] Proprioception
[Ve] Vestibular
[I] Interoception

Acoustics

Sound is continuously experienced even if not intentionally designed for. Neurodivergent people, people with auditory processing differences, and those navigating environments in a second language are among those most affected by poor acoustic design.

2.1 Acoustic Zoning [A] [I] PR PO

Graduated sound zones allow users to anticipate and self-select environments based on personal auditory tolerance (Mostafa, n.d.).

2.2 High-Performance Sound Isolation [A] DD

Wall, floor, and ceiling assemblies with high STC values isolate distinct program types from one another (USG, 2006).

2.3 Spatial Volume and Ceiling Height [A] [V] SD

Varied ceiling heights and acoustic canopies localize sound, reduce reverberation, and bring clarity to key program areas. Large volumes of space tend to have high reverberation values making speech difficult to understand (Scherpenhuyzen, 2024).

2.4 Vibration & Impact Noise Control [A] [T] [Ve] DD PO

Carpet, rubber isolators, and floating floor assemblies reduce percussive noise from footsteps, furniture, and dropped objects (USG, 2006).

2.2 —— A SPECTRUM OF SENSORY DESIGN OPTIONS

Acoustics

2.5 Sound Absorbing Finishes [A] [T]

DD CD

Carpet, acoustic tile, fabric-wrapped panels, and felt surfaces reduce reflected sound and lower ambient noise levels. This provides vocal clarity in classrooms, quiet zones in focus areas, and allows for loud volumes in areas of play without disturbing adjacent spaces (USG, 2006).

2.6 Exterior Noise Buffers [A]

PR SD

Natural berms, sound barriers, and strategic building mass reduce unpredictable external noise before it enters the building envelope (Straight, n.d.).

2.7 Sound Masking [A] [I]

DD CD

Localized, adjustable white or pink noise masks unpredictable ambient sound and overlapping voices; specified carefully to avoid disturbing high-frequency hiss (Sound masking 101, 2025).

2.8 Quiet Zones and Acoustic Retreat [A] [I] [V]

SD

Designated low-noise areas normalize the need for auditory relief without requiring full withdrawal from the environment (Van Dort, 2022).

[V] Visual
[A] Auditory
[T] Tactile
[G] Gustatory
[O] Olfactory
[P] Proprioception
[Ve] Vestibular
[I] Interoception

Materiality & Surface

Material selection and surface textures shape how people subconsciously experience safety and comfort. Warm, matte and predictable textured surfaces reduce sensory load and bodily vigilance, while subtle tactile variation supports orientation and proprioception—allowing a wider range of uses to move, touch, and dwell without overstimulation.

3.1 Natural Textures [T] [V] [O]

DD CD

Wood, cork, wool felt, and stone offer subtle tactile variation that is generally perceived as regulating through subtle variation rather than activating (Ríos-Rodríguez, 2024). On the other hand, “untrue” materials—printed wood vinyl tiles or stone look wall stickers—can create confusion and disorientation (Finn, n.d.).

3.2 Touch Zones [T] [P]

SD DD

Deliberately designed surfaces for optional tactile engagement provide neurological and emotional input without requiring justification.

3.3 Wall and Surface Treatments [T] [V]

DD CD

Slatted wood, clay plaster, fabric-wrapped panels, and felt tiles provide tactile depth and visual calm through consistent rhythm.

2.2 —— A SPECTRUM OF SENSORY DESIGN OPTIONS

[V] Visual
[A] Auditory
[T] Tactile
[G] Gustatory
[O] Olfactory
[P] Proprioception
[Ve] Vestibular
[I] Interoception

Materiality & Surface

3.4 Material Gradients as Wayfinding [T] [P] [V] [Ve] SD

Transitioning surface materials across zones signals functional shifts through the body, supporting intuitive navigation (Armstrong Flooring, n.d.). For example, transitioning from a quiet zone to an active zone could include material palette transitions that lead from soft carpet to natural cork to wood flooring.

3.5 Avoiding Aversive Textures [T] [I] DD CD

Material selection at frequent contact points — armrests, door handles, countertops, floors — accounts for tactile sensitivity.

3.6 Surface Temperature [T] [I] DD CD

Materials with low thermal conductivity at frequent contact points reduce unintended tactile disruption from cold or warm surfaces (Ho, 2017).

Framehouse Dragør:
Dragør, Denmark

Designed by Schmidt Hammer Lassen Architects

Movement & Spatial Layout

Spatial layout can support movement by providing clear, legible paths and generous clearances that allow the body to self-direct pace, direction and posture without constraint. When spaces offer predictable circulation, smooth transitions, and room to adjust personal space, they continuously engage the proprioceptive and vestibular senses.

4.1 Access to Nature [Ve] [P] [V] [O] [I] PR

Natural settings invite self-directed movement and provide rich proprioceptive, vestibular, olfactory, and visual input that supports nervous system regulation (Jo, 2019).

4.2 Wide, Unobstructed Corridors [Ve] [P] [T] [V] SD

Transforms circulation into an active zone for movement and regulation; accommodates assistive mobility devices and side-by-side walking (Spence, 2020).

4.3 Dynamic Seating [Ve] [P] [I] DD CD

Rocking, swaying, and shifting posture provide vestibular and proprioceptive feedback while improving attention and validating personal movement autonomy (Cardoso, 2021).

4.4 Open Space [Ve] [P] [I] [A] PR SD

Freedom of movement without negotiation or social correction allows pacing, distance regulation, and larger body movements.

2.2 —— A SPECTRUM OF SENSORY DESIGN OPTIONS

[V] Visual
[A] Auditory
[T] Tactile
[G] Gustatory
[O] Olfactory
[P] Proprioception
[Ve] Vestibular
[I] Interoception

Movement & Spatial Layout

4.5 Sloped and Varied Terrain [Ve] [P] [T]

SD DD

Subtle changes in grade and textured ground surfaces provide vestibular and proprioceptive stimulation through natural movement (Springs, 2026).

4.6 Rhythm and Repetition [Ve] [P] [V] [A]

DD CD

Predictable spatial and material patterns guide movement through space, reducing sensory vigilance and navigation stress (Finn, n.d.).

4.7 Stability Underfoot [Ve] [T] [P]

DD CD

Non-slip, level flooring in high-use areas reduces vestibular uncertainty and supports confident, independent navigation especially for older adults (Cleworth, 2024).

4.8 Opportunities for Load-Bearing Movement [P] [Ve] [I]

DD CD

Moveable furniture, adjustable workstations, and active storage integrate proprioceptive regulation into everyday use without stigma.

4.9 Defined Personal Territory [P] [I] [A]

DD CD

Furniture arrangements that clearly delineate individual space reduce proprioceptive and social vigilance in open-plan environments (Environmental psychology: The intersection of privacy and place, 2026).

Thermal & Interoceptive Environment

When ambient temperatures remain within a comfortable, predictable range, the nervous system expends less effort monitoring and correcting internal stress responses. This allows for interoceptive signals to remain calm and coherent.

5.1 Thermal Zoning [I] [T]

CD PO

HVAC zoning, operable windows, ceiling fans, and radiant heating allow individuals to find thermal comfort without disrupting others.

5.2 Personal Climate Control [I] [T]

CD DD PO

Individual control over airflow and temperature supports interoceptive self-awareness and reduces chronic thermal discomfort.

5.3 Access to Water and Food [I] [G] [O]

DD CD

Readily accessible hydration and nourishment points reduce interoceptive distraction and dysregulation triggers.

5.4 Low-Stimulation Retreat Spaces [I] [A] [V]

PR SD

Low-stimulation spaces support stillness and allow individuals to attend to internal signals without external sensory interference (Science News Today, 2025).

5.5 Clear Restroom Proximity and Wayfinding [I] [V] [P]

PR SD

Short, legible, non-stigmatizing routes to restrooms reduce anxiety and support timely response to bodily needs (Ducharme, 2024).

2.2 —— A SPECTRUM OF SENSORY DESIGN OPTIONS

Olfactory Environment

Ventilation, material selection, and cleaning protocols are olfactory decisions with equity implications that extend across neurological, cultural, and disability communities.

6.1 Fragrance-Free Material Specifications [O] [I]

CD DD

Low- or zero-VOC paints, adhesives, flooring, and furniture reduce chemical off-gassing that triggers sensory overload (Environmental Protection Agency, 2025).

6.2 Ventilation and Air Filtration [O] [I]

CD PO

High-performance HVAC with HEPA or activated carbon filtration maintains neutral, predictable air quality throughout the building (ASHRAE, 2026).

6.3 Scent Zoning [O] [A] [I]

PR

Kitchenettes, cleaning closets, and print rooms physically separated and independently ventilated to prevent odor migration into work or retreat spaces (Crowder, 2024).

6.4 Material Aging and Maintenance Protocols [O] [I]

CD CA

Off-gassing prior to occupancy and scent-free cleaning product policies extend olfactory comfort beyond opening day.

6.5 Biophilic Scent Considerations [O] [V] [I]

DD CD PO

Natural scents from plants and outdoor air introduced intentionally, with species selection accounting for pollen and compound sensitivities (Han, 2022).

[V] Visual
[A] Auditory
[T] Tactile
[G] Gustatory
[O] Olfactory
[P] Proprioception
[Ve] Vestibular
[I] Interoception

Children's National Medical Center: Bunny Mellon Healing Garden: Washington D.C.

2.3 —— A CONSTELLATION OF SPACES

Sensory design lives *everywhere.*

Sensory rooms have played an important role in advancing awareness of neurodivergent needs within the built environment. However, they are not sufficient as a primary strategy for neuro-inclusion. When relied upon in isolation, sensory rooms unintentionally constrain how designers think about sensory inclusion if treated as the primary solution.

Neuro-inclusion requires more than a room. It requires a new practice.

Snuffelen + Doezelen

(SNUF-feh-elen)
—to seek and explore

(DOO-zeh-elen)
—to relax

Snoezelen

(SNOO-zeh-elen)

Two therapists, Jan Hulsegge and Ad Verheul, catalyzed the concept of the sensory room in the Netherlands in the late 1970s with the introduction of the Snoezelen (Snoezelen, n.d.). Originally, these multisensory environments were designed for users with profound disabilities. The idea? That intentional sensory stimulation throughout a thoughtfully designed space could support comfort, engagement, and well-being.

This novel approach sets in motion a design response toward neuro-inclusivity, shifting away from the clinical and behavioral conventions of the previous paradigm, toward a more holistic, experiential role.

It would not be until over a decade later that the first “Snoezelen” was built in the United States (Snoezelen, n.d.). Today, it has been adapted and disseminated throughout many building typologies, predominantly in healthcare, education, and community settings. A concurrent enrichment of our knowledge of sensory needs was similarly growing. With that added awareness, sensory rooms become both a visible and tangible response to neuroinclusivity in the built environment.

However, while sensory rooms become prolific design tools, it prompts evaluating whether our understanding of neurodiversity has kept pace. What is the real payoff of these interventions? Who are sensory rooms serving? We understand sensory support in our environment as increasingly important as research into neurodiversity, disability advocacy, and sensory processing continues to evolve.

How might the philosophy of the Snoezelen be incorporated into this paradigm without being limited to a single room, moment, or user?

2.3 —— A CONSTELLATION OF SPACES

Like stars in a constellation, *no single space works alone.*

Zhengzhou College of Finance and Economics:
Zhengzhou, Henan Province

How to read this section

The Snoezelen was the starting point for an entire constellation of sensory environments. Each star in the constellation on the following pages has its unique goals, common design elements, and known implementation challenges.

The spaces that follow are inconsistently defined across research and practice—a limitation that itself reflects how early this field is. We present them not as fixed typologies but as a starting constellation: named, distinct, and most powerful when deployed together.

These spaces are most effective when a person never has to seek one out because the building has already distributed what they need.

Spaces in this section:

2.3.1 **Indoor Spaces** Informal Sensory Corners · Movement Break Rooms · Nap Pods · Prayer/Meditation Rooms · Sensory Corridors · Wellness Rooms	2.3.2 **Outdoor Spaces** Biophilic Courtyards · Sensory Gardens · Therapeutic Horticulture Spaces
2.3.3 **Specialist Spaces** Calming Rooms · De-escalation Rooms	2.3.4 **Additional Spaces** Focus Booths · Fidget-Friendly Lounges · Social Scripting Rooms · OT/PT Gyms · & More

2.3.1 —— INDOOR SPACES

Spaces in this Section:

Spaces that support regulation, rest, and focus from within the building envelope

- Informal Sensory Corners
- Movement Break Rooms
- Nap Pods
- Prayer / Meditation Rooms
- Sensory Corridors
- Wellness Rooms

CARTI Cancer Center:
Little Rock, Arkansas

Informal Sensory Corners

Can also be known as:

Calming corners, relaxation stations, or sensory breakout zones

Space Goals:

- Typically implemented in classroom settings to support student emotional regulation, resilience, and learning without removing them from the learning environment (Ilcyn, 2023; Watson Institute, 2025).
- Through trauma-informed design this space gives students a safe, non-punitive space to de-escalate, refocus, and re-engage with their fellow students (Ilcyn, 2023; Maich, 2019).

Common Elements:

- Equipped with handheld sensory materials, mindfulness activities, and reflective tools to help de-escalate and recenter an individual (Lau, 2025)
- Spatially defined by a rug, partition, shelf or canopy within another room. It is critical that visibility be maintained between the teacher and student to promote safety
- Soft furnishings such as bean bags, cushions, or pillows to minimize ligature risk during de-escalation (Watson Institute, 2025)
- A “relaxation menu” that lists approved calming activities (e.g., deep breathing, meditation, counting, reading quietly, etc.) (Watson Institute, 2025)

Challenges:

- Many classrooms are crowded, making it hard to create an informal sensory corner as a separate area without disrupting traffic flow or instruction.
- Without shared understanding of the intended use of the space among teachers, the calming corner may be used inconsistently or incorrectly therefore reducing its effectiveness.

2.3.1 —— INDOOR SPACES

Movement Break Rooms

Can also be known as:

Sensory gyms, motor labs, gross motor playrooms, sensorimotor rooms, wiggle rooms, or active sensory rooms

Space Goals:

- Structured opportunity for physical movement, distinct from general fitness facilities in their explicit focus on sensory regulation, emotional self-management, and cognitive readiness rather than exercise or athletic performance (National Autism Implementation Team, n.d.).
- Build body awareness, promote self-regulation, and boost brain function through movement (Hubing, 2016).

Common Elements:

- Include space for sensory circuits that allow for areas of alertness, body self-awareness, and calm (National Autism Implementation Team, n.d.)
- Include equipment for proprioceptive and vestibular input: balance boards, trampolines, resistance bands, monkey bars, crash pads, or climbing walls
- Durability and clear safety zoning are prioritized (The OT Toolbox, n.d.)
- Clear visual structure and zoning to support localized movement activity
- Soft boundaries for impact protection and to reduce ligature risk

Challenges:

- Design should support self-regulation, not just physical activity, to avoid the potential for over-stimulation.
- Spaces should include age appropriate structures and tools to avoid feeling too playground-like for older children and adults. Similarly, it should not be too sterile for younger children.

Nap Pods

Can also be known as:

Rest pod, nap rooms, nap stations

Space Goals:

- Daytime naps, when taken in environments that remove the friction of noise, light, social visibility, and lack of privacy, are proven to reliably reduce fatigue, improve mood, boost alertness, and enhance cognitive performance (Dutheil et al., 2021).
- Designed to support short duration rest, under one hour, for individuals experiencing cognitive or sensory fatigue
- Support mood regulation, improved alertness, memory and learning (Shadab, 2025)
- Support circadian rhythms for neurodivergent individuals whose sleep patterns may be altered or inconsistent (Turner, 2026)

Common Elements:

- Near-darkness lighting conditions to promote natural rest and reduce stimulation
- Visual and social privacy to minimize disruption
- Compact, enclosed pods—often prefabricated furnishings (Metronaps, n.d.; My office pod, n.d.)
- Reliable way to signal or control occupancy (e.g., occupancy indicator locks or illuminated indicators)
- Booking or scheduling system to ensure fair and organized access
- Integrated timers with gentle wake functions to support smooth and comfortable transition back to awake
- White noise or calming audio for acoustic noise and relaxation

Challenges:

- Cultural and organizational misalignment with napping during the work day can lead to stigmatization of nap spaces.
- Shared surfaces, such as pillows and blankets, can create an unhygienic environment. Furniture and materials should be easily cleanable.

2.3.1 —— INDOOR SPACES

Prayer/Meditation Rooms

Can also be known as:

Reflection room, contemplation space, multifaith room, worship space, interfaith room, sacred space, non-denominational chapel

Space Goals:

- Provide a private, nonsectarian environment for prayer, spiritual practice, and quiet devotion that does not favor any single faith (Interfaith America, n.d.; Salitsky, 2021).
- Enable religious practice without exclusion allowing people to practice their faith with dignity.

Common Elements:

- Secure and accessible storage for mats, shoes, sacred texts, and other prayer items (Royal Institute of British Architects, n.d.)
- Programmatic flexibility as to support multiple orientations of prayer and multiple postures for worship, such as kneeling or bowing (Salitsky, 2022)
- Calm, neutral finishes with no fixed religious iconography. Instead the space should rely on materiality, light and scale to convey a sense of the sacred (Salitsky, 2022)
- Access to hand and foot-washing facilities for ritual ablution (Royal Institute of British Architects, n.d.)
- Faith supportive features such as discreet Qibla direction indicator and movable privacy screen for gender separation (Royal Institute of British Architects, n.d.)
- Sound proofing materials to allow for quiet reflection and contemplation

Challenges:

- This is a fairly recent typology with no commonly agreed upon requirements for programming, which can lead to inconsistent outcomes (Salitsky, 2022).
- Prayer rooms/meditation rooms are frequently conflated with quiet rooms or wellness rooms despite serving a categorically different need.
- The design should enable users to feel comfortable sharing space while acknowledging religious differences (Salitsky, 2022).

Sensory Corridors

Can also be known as:

Sensory paths, pacing corridors, active transition spaces; Outdoor specific: sensory walks, sensory trails, nature-based paths

Space Goals:

- Provide an active opportunity for regulation and refocus instead of passive transit space.
- Provide a transition space between areas of different level of stimuli. For example, from a quiet library to a noisy cafeteria.
- A Stanford study found that walking (whether indoors or outdoors) increases creative ideation, with the creative benefit persisting even after participants sat back down, making a well-designed pacing corridor a meaningful cognitive investment for any user, not just those with identified sensory needs (Oppezzo & Schwartz, 2014).

Common Elements:

- Embedded structured sensory-motor experiences along circulation route, such as tactile wall panels and mirrors (Berger, 2026)
- Wider than a standard corridor for active play and side-by-side caregiver walking
- Floor decals or painted movement prompts guiding jumping, balancing, stretching, and wall push-ups
- Clear wayfinding throughout
- Sound-absorbing materials to manage echo

Challenges:

- Spatial constraints may reduce the amount of sensory friendly tools that can be placed within a corridor while still maintaining accessibility.
- Sensory elements within the corridor should not obscure critical wayfinding and navigation, especially on fire safety routes.

2.3.1 —— INDOOR SPACES

Wellness Rooms

Can also be known as:

Quiet room, restorative space, mother's room, retreat, refuge, calming space

Space Goals:

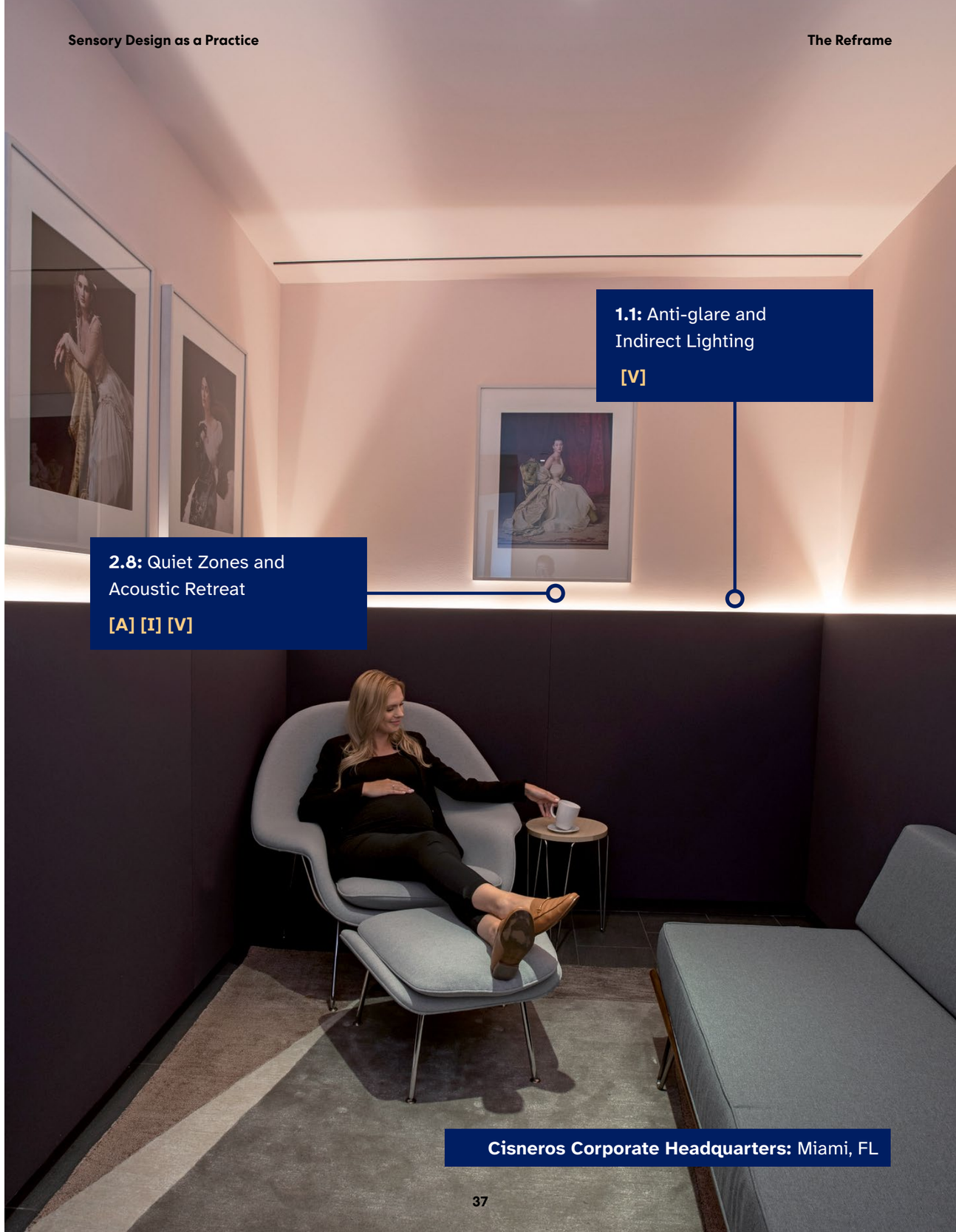
- Provide relief from stress and sensory overload (British Standards Institution, 2022).
- Space for respite, contributing to reduced stress and enhanced mental health (British Standards Institution, 2022).
- Indoor or outdoor space for the purpose of relaxation and restoration, which may serve multiple functions, but should not be used for work (International WELL Building Institute, n.d.).

Common Elements:

- Dedicated, non-clinical, low-stimulation spaces with dimmable lighting, comfortable seating, and minimal noise for rest, emotional regulation and decompression
- Visual simplicity, neutral palettes, and minimal sensory input
- Lightweight movable chairs, or floor mats that accommodate a range of postures and uses, letting users calibrate to their needs
- Acoustic buffering (NRC-driven materials, minimal background noise)
- Clear signage for intended purpose and use

Challenges:

- These should be designed to accommodate multiple interpretations of wellness—meditation, lactation, stress relief, or medical needs—without favoring one use.
- "Wellness rooms" fall into a gray area in United States building code and therefore their accessibility requirements remain ambiguous.



— CASE STUDY: STELLA - Office of Things - UVA

A space that employs *sensory design*

This case study employs layered sensory strategies that support nervous system regulation and user autonomy, creating a versatile place to step away and relax, take a quick nap, or engage in conversation with others.

STELLA — Office of Things: University of Virginia School of Architecture

CONTEXT

STELLA – a Space for Emotive Listening, Learning and Awareness – is the first iteration of this scale of restorative space by Office of Things, operating between the scale of a piece of furniture and a room. (Building Resiliency Through Small Scale Restorative Spaces). The mobile pod, introduced in 2021, was meant to address the anxiety that accompanied the transition back to in-person learning at the University of Virginia School of Architecture. STELLA has continued its use beyond the pandemic and has become a valuable member of the architecture school, prompting conversations about mental health in design education.

"People tend to think of sensory rooms purely as places for decompression or de-escalating an excess of stimulation. But I think it can go both ways, it can address sensory needs across the full spectrum, from hypo- to hypersensitivity. It's something more fluid than a room, really — more like a counterpart to whatever larger environment it's a part of."

— KATIE STRANIX
Assistant Professor of Architecture - University of Virginia
STELLA Researcher - Office of Things

DESIGN

Three programmable lighting modes:

Powered by Neopixel LED strips behind frosted diffusers, STELLA offers distinct experiences across the arousal spectrum, from slow meditative transitions that encourage breath regulation to dynamic "shooting star" sequences for higher-energy states. Paired sound sequences reinforce each mode.

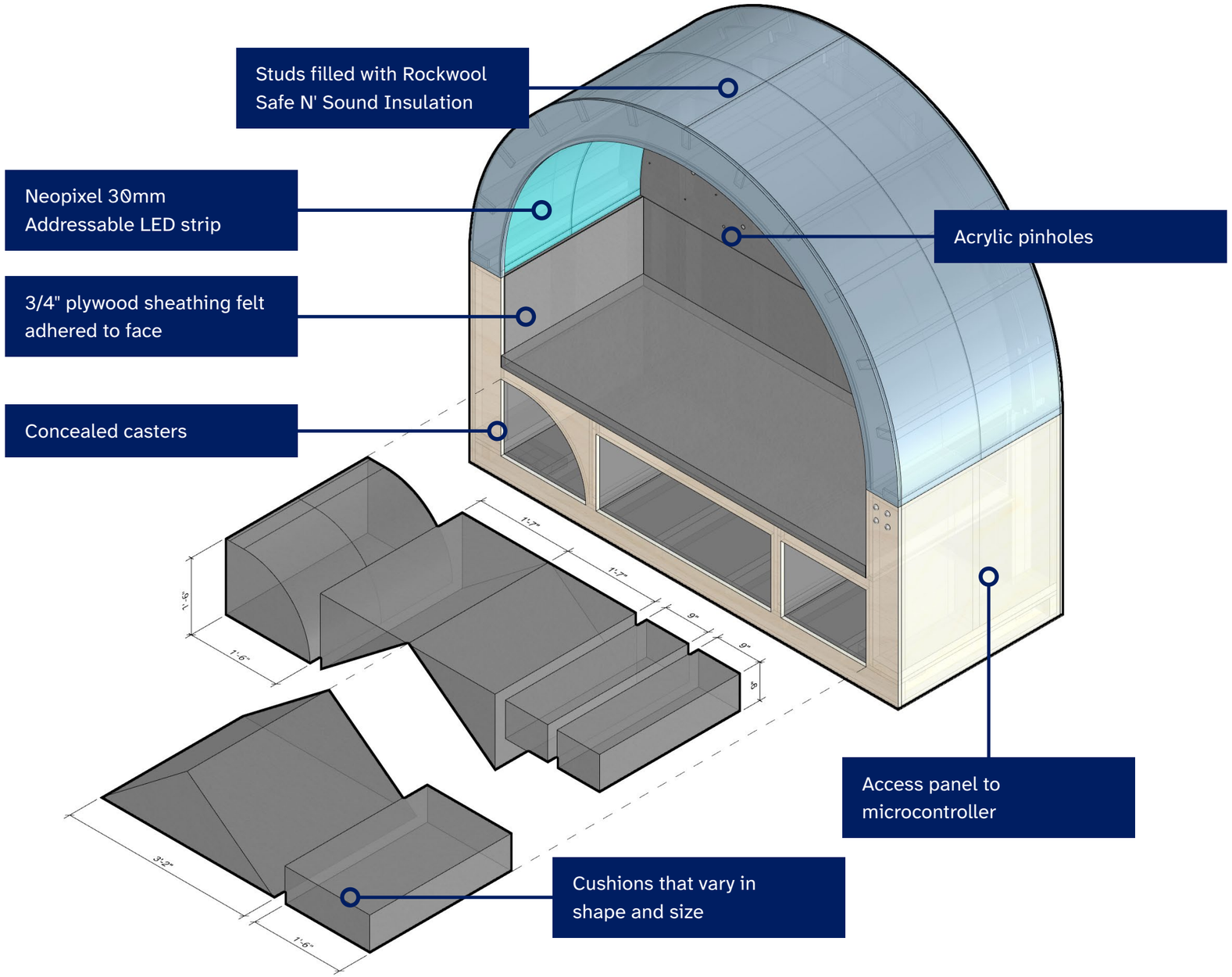
Modular pillow system:

Varied geometric forms invite proprioceptive exploration and postural reconfiguration, accommodating diverse bodies and sensory needs. Pillows range in form from 45-degree triangles creating a more upright position to rectangles for lower back support and quarter circles for more relaxed upright postures.

Flexibility & Responsiveness:

STELLA's mobility and reconfigurability support user autonomy at every scale, addressing both hypo- and hyper-arousal needs. Meditative lighting sequences—barely perceptible transitions that slow breath and clear the mind—provide soft fascination, a key criterion in the Kaplans' restorative environments framework (1989), replenishing attention resources through low-demand distraction. Faster sequences, including slow pulses and "shooting star mode," serve higher-energy states.

CASE STUDY: STELLA - Office of Things - UVA



Drawing courtesy of Office of Things

OUTCOME

Overall, the design interevention cost **$5,000** to fabricate, including materials and student labor, excluding Professor Stranix and Bachman's labor.

In a post-occupancy survey, students using the pod reported improvements in stress, mood, and a sense of escape, prompting further research into sensory adaptations of the space. Efforts are currently under way to co-design other sensory relief spaces with undergraduate and graduate students throughout the school due to STELLA's positive impact.

2.3.2 —— OUTDOOR SPACES

Spaces in this Section:

Spaces where nature, air, and movement can support regulation

- Biophilic Courtyards
- Sensory Gardens
- Therapeutic Horticulture Spaces

Bunny Mellon Healing Garden:
Washington D.C.

Biophilic Courtyards

Can also be known as:

Healing courtyard, restorative courtyard, nature-integrated courtyard, green courtyard

Space Goals:

- Foster the innate human-nature connection through access to daylight, vegetation, water, fresh air, and natural materials (WELL Building Standard).
- Create conditions for "micro-restorative experiences" in which attention is gently drawn toward natural elements and momentarily diverted from pain, anxiety, or cognitive fatigue (Turgut & Jaglarz, 2026).
- Produce documented benefits including reduced stress, lowered blood pressure, and improved concentration (Browning et al., 2014; WELL AP M02, M07).

Common Elements:

- Direct visual connection to nature as the primary spatial organizing principle
- Enclosed wholly or partially by surrounding built forms
- Non-visual sensory engagement through sound, smell, and touch
- Water features serving dual roles as acoustic buffer and restorative element
- A clearly defined spatial center supporting orientation and grounding
- Balanced relationship between refuge and openness—protected without feeling confined
- Safe, level circulation paths for accessibility
- Natural materials, vegetation, and daylight access throughout (Browning et al., 2014)

Challenges:

- Distinction from decorative outdoor space depends entirely on intentionality—drawing on frameworks such as Terrapin Bright Green's 14 Patterns of Biophilic Design is essential to move beyond aesthetics (Browning et al., 2014).
- Must simultaneously support social interaction and individual refuge, requiring careful zoning and spatial hierarchy.
- Enclosed built form creates microclimatic risk—solar access, ventilation, and acoustic performance require close attention at the design stage.

2.3.2 —— OUTDOOR SPACES

Sensory Gardens

Can also be known as:

Multisensory garden, therapeutic garden, healing garden

Space Goals:

- Reduce stress, enhance well-being, support active therapy, promote inclusion, and calm feelings of high stimulation through contact with nature (Wajchman-Świtalska, 2021).
- Support biophilia—the innate human connection to nature—by offering people a chance to physically engage with plants, water, and natural textures (WorldHealth.net, 2024).

Common Elements:

- Zones organized by sense or activity—such as smell, touch, sound, relaxation, and active play—using plants arranged by their level of sensory stimulation (Wajchman-Świtalska, 2021)
- Accessible access to nature for all users of all abilities through barrier-free paths, appropriately spaced facilities, clear wayfinding, and inclusive educational material (Wajchman-Świtalska, 2021)
- Non-toxic, non-thorny plantings that invite direct interaction of touch and smell—herbs, varied bark textures, grasses
- Water features—fountains, streams, or ponds—that provide soothing sounds and opportunities for touch (Australian Plants Online, n.d.)
- Sound elements such as rustling leaves, wind chimes, or habitats that attract birds
- Opportunities for vestibular and proprioceptive stimulation through climbing structures, walking paths and grassy mounds
- Shaded areas with seating to support retreat and respite

Challenges:

- These spaces must simultaneously invite engagement and enable withdrawal — providing "places for both active engagement with the senses and calm retreat" (BSI, 2022).
- Maintenance should be planned from the outset, with plant selections matched to the garden long-term care requirements to ensure healthy growth and sustainability (Sensory Trust, n.d.).

Therapeutic Horticulture Spaces

Can also be known as:

Healing garden, restorative garden, wellness garden, horticulture therapy space, garden therapy plot, occupational garden

Space Goals:

- In therapeutic horticulture spaces, gardening itself—planting, tending, weeding, and harvesting—serves as the primary therapeutic mechanism. This is delivered through accessible, repetitive tasks, frequently supported by raised beds and grounding routines (Panțiru, 2024).
- Serve users managing mental illness, cognitive disabilities, and diverse neurotypes by reducing anxiety in a safe and structured natural environment (American Horticultural Therapy Association, n.d.; Joubert, 2024).

Common Elements:

- Zones for scheduled and programmed activities led by a horticultural therapist, occupational therapist or allied health professional (Hazen, 2007)
- Well defined perimeter to support wayfinding, recognizable placemaking and clarity of organization for all users (Hazen, 2007)
- Similar to sensory gardens, provide accessible access to nature for all users of all abilities through barrier-free paths, appropriately spaced facilities, clear wayfinding, and inclusive educational material (Wajchman-Świtalska, 2021)
- Avoid potentially hazardous plants, herbicides, fertilizers, and insecticides (Hazen, 2007)
- Raised beds with tool storage at accessible heights for wheelchair users and those with limited mobility

Challenges:

- In clinical settings, plant selection must be appropriate for the target population (e.g., allergen-free, non-toxic for pediatric or memory care settings).
- Intentional design and structured therapeutic programming together produce measurable outcomes — raised beds alone do not constitute horticultural therapy (Cooper Marcus, 2014).
- Similar to sensory gardens, maintenance should be planned from the outset, with plant selections matched to the garden long-term care requirements to ensure healthy growth and sustainability (Sensory Trust, n.d.).

— CASE STUDY: NICKLAUS CHILDREN'S HOSPITAL

Architecture *that heals*

Nicklaus Children's Hospital's new Surgical Tower expands one of the world's top pediatric facilities on a dense Miami campus. A healing garden at the entry routes families through nature on arrival — reducing stress at one of the most vulnerable moments of their lives.

Nicklaus Children's Hospital: Miami, FL

CONTEXT

The project presented compounding challenges that demanded a nuanced, human-centered lens from the outset. Children entering the space carry vastly different sensory profiles and prior experiences with healthcare — a reality that profoundly affects the entire family unit. The campus layout required families to pass by an emergency department to reach the surgical tower, a route with significant potential for secondary trauma. Transforming an existing office building meant working within fixed structural constraints while striving for a highly flexible, sensory-sensitive environment. And the client held ambitious aspirations —requiring the design team to balance research integrity with practical, buildable outcomes.

"We wanted to create a healing, sensory garden ... and have the entire tower wrap around it, like someone's hugging you."

— HALA EL KOHRAZATY, SENIOR INTERIOR DESIGNER
Perkins&Will

DESIGN

Sensory Garden

Rather than routing families through or near the emergency department, drop-off was redirected through an Outdoor Sensory Garden. At arrival, families experience greenery, natural materials, and sensory calm, setting an emotional baseline of safety before entering the building.

Neurodiversity-Sensitive Lighting

Traditional healthcare lighting can be acutely distressing for neurodivergent children. The design team eliminated direct overhead lighting in favor of indirect, layered illumination. A key innovation was the use of "sparkle lighting", subtle, distributed ceiling lights that serve simultaneously as ambient illumination and intuitive wayfinding. The system also incorporates circadian light programming, supporting patients' biological rhythms during extended stays, a critical consideration for children who may struggle with disrupted sleep or heightened alertness.

Sensory Nooks and Family Refuges

A crowded hospital lobby can be overwhelming for any child, and acutely so for neurodivergent patients. The team introduced dedicated sensory nooks and family separation alcoves throughout the building, particularly in the main lobby. These spaces offer varying levels of stimulation, privacy, and shelter, giving families the ability to step back from communal activity, prepare a child for a procedure, or simply provide comfort in a bounded, lower-stimulus environment.

Multisensory Inpatient Room ("Wonder Room")

On every inpatient floor, children have access to a Wonder Room, which features dynamic programmable lighting, interactive walls for active engagement, and dog-friendly design to support animal-assisted therapy. Built for ease of cleaning and daily transformation, the space ensures that long-stay patients experience genuine variety rather than institutional sameness.

CASE STUDY: NICKLAUS CHILDREN'S HOSPITAL

COMMUNITY

Areas that encourage:

Emotional support, connectivity, community, gathering, hope

ACTIVE

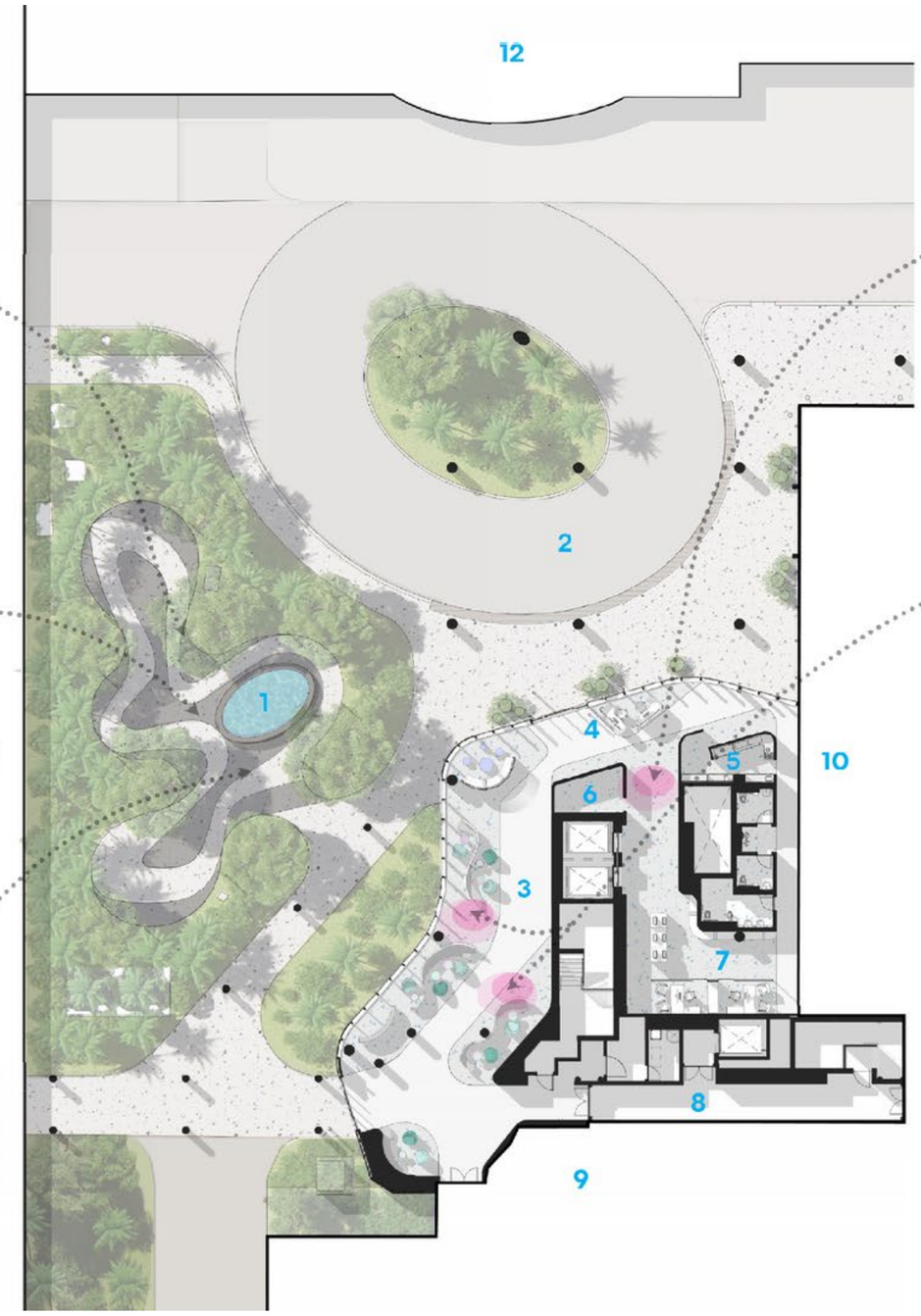
Areas that encourage:

Spontaneity, tactility, energetic movement, stimulation

CALM

Areas that encourage:

Relaxation, lounging, restorative activities, low stimulation



LEARN ABOUT SUSTAINABILITY

and how it affects the environment and world

SEATING WITH FOCUS RESPITE AREAS

Versatile lounge spaces, including areas to plug in, read and work

PLAYFULNESS

Child-friendly playful areas within seating and millwork

1 Healing Garden
2 Drop off
3 Lobby
4 Reception
5 Food Kiosk
6 Wheelchair Alcove
7 Surgical Intake
8 BOH
9 Ambulatory Clinical Building
10 Emergency Department
11 Parking
12 Research & Admin Building

2.3.3 —— SPECIALIST SPACES

Calming Rooms

Can also be known as:

Peace room, calm-down corner, decompression space, regulation room

Space Goals:

- Offer a low-stimulation, student-directed environment for self-regulation and coping skill development before returning to the classroom (Buckner, 2022; CASEL, 2020).
- Support emotional awareness and positive behavior through age-appropriate strategies, furnishings, and equipment.
- Provide a trauma-informed safe space for de-escalation in educational settings (WestEd, 2022).

Common Elements:

- Soft, durable seating (bean bags, floor cushions) that can be easily moved or removed
- Adequate floor space for alternative forms of movement and seating
- Dimmable or warm-toned lighting, sound absorbing materials, soft neutral colors
- Spaces for self-regulation tools: fidgets, coloring materials, breathing prompts, headphones, journals
- Sign-in sheet, timer, and posted rules with clear protocols to maintain student-led, non-punitive use

Challenges:

- Design alone is insufficient—effectiveness depends on a trained practitioner, mental health professional or mentor to guide students through the process of de-escalation (Buckner, 2022; CASEL, 2020).

De-escalation Rooms

Can also be known as:

Crisis room, seclusion room, behavioral health stabilization room, safe room

Space Goals:

- Provide a short-term, staff-supported environment for patients in acute behavioral or emotional distress.
- Serve as therapeutic environments that balance patient safety with comfort and reduce the need for physical restraint or involuntary medication through environmental design (Facility Guidelines Institute, 2022).

Common Elements:

- Rounded edges, recessed handles, tamper-proof fixtures, durable materials, cleanable furnishings, no removable parts to help prevent risk of self-harm (Center on PBIS, n.d.)
- Soft, calming, muted color palette that reduces visual stimulation and supports emotional regulation (Facility Guidelines Institute, 2022)
- Acoustic separation from surrounding clinical areas
- Opportunities for self regulation such as rocking chairs or integrated wall textures
- Clear staff sightlines with supervised privacy to maintain safety

Challenges:

- Balancing security requirements with therapeutic comfort is the central design tension—spaces must be rigorously safe (ligature free finishes, fixtures, and furnishings) without feeling punitive or institutional (Mohammed & Williams, 2022).
- Growing psychiatric practices criticize isolation as having negative mental health implications. De-escalation rooms should promote inclusion without isolation (Ascone et al., 2026).

2.3.4 —— ADDITIONAL SPACES

And the list of possibilities goes on...

Ultimately, these spaces shift design from “accommodating differences” to proactively enabling inclusive, human-centered environments for everyone.

Low-distraction library zones

Strictly quiet areas designed for sustained focus with individual carrels, partitions, and noise-reducing materials to minimize distraction. Architectural gestures emphasize controlled sightlines, muted colors, and clear behavioral cues.

Low-sensory dining areas:

Cafeteria alternatives with reduced noise, softer lighting, and less visual clutter.

Phone/focus booths

Small, enclosed modular pods that provide a high level of acoustic and visual isolation for focused work or calls.

Multi-modal workstations

Desks with adjustable lighting, standing options, and privacy screens. These can be complimented with alternative forms of seating such as cross-legged chairs or wobble stools.

Decompression antechambers:

Small buffer zones between loud/busy areas and classrooms or offices, giving individuals time to transition.

Social scripting rooms:

Specialized spaces set up to practice social scenarios in academic and therapeutic settings. Often designed with flexible layouts, role-playing zones, and observation or coaching sightlines.

Small-group breakout rooms:

Intimate spaces that support collaboration while reducing the overwhelm of large, open environments.

Fidget-friendly lounges:

Informal areas with swings, rocking chairs, wobble stools, and tactile objects favoring loose layouts rather than fixed arrangements.

Animal-assisted therapy spaces

Calm, hygienic rooms designed for interaction with therapy animals.

Comfort corners in cafeterias:

Partitioned, quieter sections within larger dining spaces that allow users to remain in the communal environment while minimizing sensory exposure.

OT/PT Gyms

Occupational and physical therapy spaces with specialized equipment, such as swings, mats, climbing systems, and adaptive tools, for sensory integration.

— CASE STUDY: ECHOES

Responsive Architecture

Through the use of responsive technologies, a toolkit developed for public use, deep community collaboration, and a carefully considered material palette, the project demonstrates how architecture can actively listen, adapt, and care for its users (Kokkalas, 2026).

ECHOES: Perama, Greece

CONTEXT

Echoes is an immersive, three-part project—comprising of a physical installation, a video documentary, and a research exhibition—designed to raise awareness of and foster acceptance for neurodivergent spatial experiences by bridging art, technology, and human perception. Recognizing that sensory input profoundly shapes how autistic individuals engage with the world, the project foregrounds the role of architecture in well-being and agency (Tsafoulia, n.d.).

"Going beyond a segregated space, the embracing of dynamic unique sensory profiles to create a spatial tool for equity."

— LOUKIA TSAFOULIA & SEVERINO ALFONSO
SYNESTHETIC RESEARCH AND DESIGN LAB

DESIGN

Dynamic Environment

A series of cameras and sensors tracking a person's facial, body and breathing cues create a dynamic environment for exploration. Set at various elevations within the interior walls, these RealSense d435i cameras and mmWave radar sensors enable data collection. When changes are sensed, the installation responds in kind through audio visual means.

Community Outreach

The project began with an open call for interviews, leading to multiple focus groups. Later conversations focused specifically on autistic individuals, with outside expertise of an occupational therapist providing support and leading discussions through art therapy.

Soft Fascination

Echoes material palette relates to the team's vision of both conceptual and literal softness, with prominent cork paneling on the interior, and steam bent wood framing. The two materials are both functional to its de-constructability while providing a connection to the natural world. Cork walls create a dark warm space, lit up by the synthetic moon above. The panels provide a unique tactile experience and acoustic dampening, furthering a feeling of enclosure as the backdrop to the user's mellow conversation with Echoes.

CASE STUDY: ECHOES

OUTCOME

As a safe, affirming environment with responsive light and sound that support self-regulation, Echoes enables bodily and perceptual awareness while empowering participants. **As stated by Tsafoulia, Echoes' success in fostering agency is closely tied to the team's approach of treating participants as co-authors rather than subjects.**

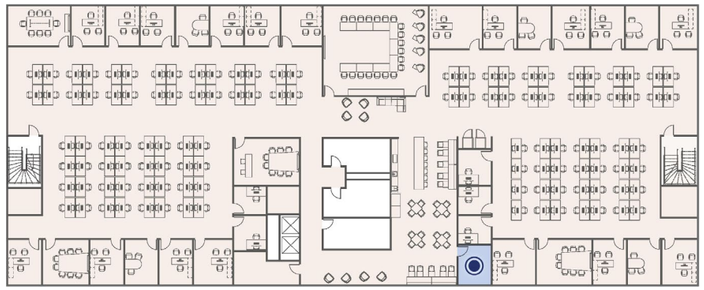
Images courtesy of Synesthetic Research & Design Lab

2.3.5 —— PUTTING IT ALL TOGETHER

From one node to *a constellation*

— Where sensory support concentrates

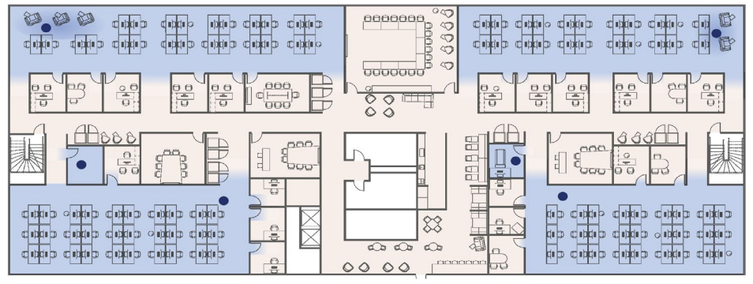
A Single Room



The conventional model

One sensory room, tucked off the break area of a workplace is a single point of accommodation in an otherwise undifferentiated plan. An individual node, on its own, cannot deliver neuro-inclusion.

A Spectrum of Strategies

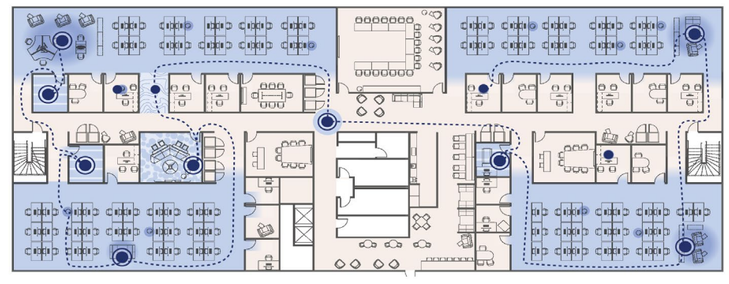


The connective fabric

The same floor plate, with sensory strategies distributed throughout, that consider: daylight, acoustic zoning, wayfinding, varied posture, and scent control. In this floor plan, relief is no longer one room to go find, but woven throughout the environment.

- **Strategies may include:**
  - 1.4 Diffused Natural Light [V] [I] [O]
  - 2.1 Acoustic Zoning [A] [I]
  - 2.2 High-Performance Sound Isolation [A] [I]
  - 4.3 Dynamic Seating [Ve] [P] [I]
  - 6.3 Scent Zoning [O] [A] [I]

A Constellation of Spaces



No single space works alone

Named spaces like nap pods, focus booths, sensory corridors, and movement breakrooms are set onto that fabric and linked into a network. Not one destination to seek out, but many, connected. The same setting, now designed for everyone.

- **Spaces may include:**
  - Nap Pods
  - Movement Break Rooms
  - Sensory Corridors
  - Low-distraction Library Zones

- **Additional strategies may include:**
  - 3.4 Material Gradients as Wayfinding
  - 4.2 Wide, Unobstructured Corridors

Floor Plan Diagram courtesy of Sarah Christensen and Carolyn Fritz, Perkins&Will

The Series

In Part 2, we reframed from concept to application. Moving beyond the single room, we explored how sensory design can be distributed across an entire environment, a spectrum of strategies mapped to the eight senses, and a constellation of varied, interconnected spaces that collectively support a wider range of sensory needs. But a strategy is only as strong as the process that delivers it. This asks the question, "How do we ensure these strategies are realized and shaped *with* the people they're meant to serve, not just for them?"

In Part 3, we will turn from what to build to how to build it, and who needs to be present when those decisions are made. Here, we will move through every phase of the design process, from research to post-occupancy, offering the tools and mindsets that keep neurodivergent people involved as co-designers, not recipients.

PART 1

The Context

Why does this problem exist, and why does it matter right now?

PART 2 THIS DOCUMENT

The Reframe

From a room to a practice—what sensory design actually looks like

PART 3

The Response

Putting sensory design into practice, at every phase

APPENDIX — GLOSSARY

When we use these terms, *here is what we mean*

If we are to make meaningful strides in sensory design, then precise language matters. In common usage, "neurodivergent" is sometimes treated as a synonym for autistic but this conflation obscures the full range of neurocognitive profiles that neurodiversity encompasses (e.g., ADHD, dyspraxia, Tourette syndrome).

This has real consequences for how research, policy, and design respond to people's needs.

The Human Spectrum

Neurodiversity / Neurodiverse

A group of people is neurodiverse. This describes the infinite variation in neurocognitive styles within our species (Walker, 2021).

Neurotype

Describes an individual's unique cognitive strengths and weaknesses. We are all born with a neurocognitive profile influenced by genetics and lifetime developmental changes (Inclusive Minds Foundation, n.d.).

Neurotypical

Refers to individuals whose cognitive functioning, thinking, perceptions, and behaviors align with mythical societal standards. It is often seen as the opposite of neurodivergent (Walker, 2021).

Neurodivergence / Neurodivergent

Describes individuals whose brains function differently from societal norms. This encompasses various neurological conditions, including those present from birth (congenital) and those acquired later in life (neurodegenerative) (Ramirez, 2023; Therapist Neurodiversity Collective, 2022).

The Design Response

Neuro-inclusion

The development of an environment where neurodivergent and neurotypical individuals can thrive, feel safe, and are included. A particular attention is paid toward the spectrum of sensory experiences (Morris, 2025).

Sensory Design

An environment that supports and intentionally enriches multiple human senses at multiple scales.

Sensory Room

A space that is purposefully designed to offer a controlled sensory experience to support emotional regulation, cognitive well-being, and reduce stress. It strategically activates and/or calms specific sensory inputs for those individuals who may need support self-regulating (NHS, 2020).

APPENDIX — COST BREAKDOWN

Sensory Room Strategies: *Cost Breakdown*

The following cost breakdown outlines design strategies and associated relative cost ranges to support best practices in neuro-inclusive sensory room design. Costs were developed using a combination of industry-standard data sources, including RSMeans, professional journals, case studies, input from qualified contractors, Perkins&Will project data, and information provided by representatives at Turf Design. Prepared in 2026, this analysis reflects material, labor, and construction conditions specific to that period and is intended as a planning-level reference rather than a fixed estimate. The dollar designations ($-$$$) indicate relative cost ranges to help distinguish between low-, moderate-, and higher-investment interventions; figures do not account for future inflation, escalation, or market volatility (Doheny, 2026; Piller, 2025; Flanigan, R. L., 2025; Mehta, 2025).

CATEGORY	STRATEGY	COST
Lighting	Locate lighting controls where users can easily find and operate them to ensure intuitive, independent use without requiring assistance.	$
	Specify dimmable lighting with multiple output levels so users can actively adjust brightness to suit comfort, task, or mood.	$
	Integrate both direct and indirect lighting to reduce glare and accommodate light sensitivity, particularly for users who are reclined or laying down.	$$
Doors and Thresholds	Provide locking mechanism with visual occupancy indicator to support privacy without creating uncertainty.	$
	Specify doors with soft closing hardware to reduce loud and sudden noises that may otherwise create a startle response.	$$
	Incorporate a transition threshold or buffer zone that allows users to decompress and gradually shift into the sensory environment.	$$
Ceiling Finishes	Conceal mechanical, electrical and plumbing systems to reduce visual clutter, distraction and noise from equipment.	$
	Use height and scale to introduce spatial zones for active play and calm retreat.	$
	Consider acoustic paneling or baffle systems with high Noise Reduction Coefficient (NRC) for speech privacy and noise blocking.	$- $$$

APPENDIX — COST BREAKDOWN

CATEGORY	STRATEGY	COST
Wall Assemblies	Specify wall finishes that have relief patterns such as fabric wrapped panels, cork, and felt for tactile stimulation.	$ - $$$
	Introduce biomimicry with framed wall art or surface applied graphics to inspire calm and meditation.	$$
	Create a built-in “nook” or compressed space for those seeking shelter and a sense of security.	$$
	Specify architectural partition systems with high Sound Transmission Class (STC) ratings to increase privacy and perceived refuge.	$$$
Floor Finishes	Use solid or subtly variegated colors rather than busy patterns to minimize over stimulation	$
	Specify carpet or flooring with inset area rugs for individuals who prefer to sit on the floor.	$ - $$
	Specify slip resistant surfaces with flush transitions to support confidence in movement.	$$
Furniture	Provide lockable storage for sensory aids, equipment, or personal belongings.	$
	Use scent free Green Seal approved or equivalent standard cleaning products for high touched surfaces.	$
	Include a multitude of seating postures such as recliners, benches, vibra-acoustic chairs, rocking chairs, swivel chairs, and static chairs for various proprioceptive needs.	$$
	Design multiple surface types--side tables, counters, or a sit-to-stand desk for various activities and personal choice. Avoid furnishings with sharp corners when possible to prevent injury.	$$
MEP and HVAC	Support thermal comfort through clearly labeled, user-adjustable thermostats within the room to allow users to self-regulate.	$
	Provide sound-masking or white-noise systems to improve acoustic privacy, with intuitive controls and clearly labeled adjustable levels.	$
	Engage MEP consultants early to coordinate enhanced mechanical noise control—including vibration isolation and duct lining.	$$

Perkins&Will

For the full list of citations:

CLICK HERE

OR scan the QR code below:

PRECEDE