

Toward a Neuroarchitecture Manifesto: Collective Reflections on Designing for Well-Being

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Abstract

This manifesto presents a collective reflection on the role of neuroarchitecture in shaping environments that support human experience and well-being. Developed through a collective process within the international course *Neuroscience for Architecture: Designing with the User in Mind* (2025), it proposes four interconnected pillars to guide design practice: human-centered and inclusive design; health and well-being as a core dimension of spatial design; science-informed and evaluative design practices; and the role of curiosity, creativity, and meaning in shaping human experience. Together, these principles emphasize the importance of integrating scientific knowledge, lived experience, ethical responsibility, and cultural understanding in the design of the built environment. The manifesto invites architects, designers, researchers, and communities to continue expanding interdisciplinary dialogue and to contribute to environments that support human flourishing, resilience, and meaningful relationships with place.

Introduction

This manifesto was developed in 2025 through a collective process involving architects, designers, and researchers engaged in the international course Neuroscience for Architecture: Designing with the User in Mind.

As participants in this process, we represent a diverse community of architects, designers, and thinkers from across the globe — Australia, Belgium, Brazil, Bulgaria, Canada, Czech Republic, India, Luxembourg, Morocco, Norway, Portugal, Romania, Spain, Sudan, Switzerland, Tunisia, Türkiye, the United Arab Emirates, and the United States — united by a shared interest in understanding how environments shape experience and well-being.

Despite our different geographies and cultural backgrounds, we are connected by a common intention: to explore ways of integrating scientific knowledge into interior design, architecture, and urban planning in order to create spaces that place the inhabitant's experience and well-being at the center.

This perspective is closely related to the emerging field of neuroarchitecture, an interdisciplinary area of research

and practice that brings together insights from neuroscience, environmental psychology, other human sciences, and design disciplines to better understand how built environments influence our brain, body, behavior, and overall well-being.

Through this manifesto, we come together to reflect on the values, insights, and commitments we hope to carry forward in our work. This document is not an end point, but rather a starting point for continued dialogue and interdisciplinary exchange among fields that engage with science and spatial design.

It is also an invitation: an invitation to question, to explore, and to keep expanding the conversation about how environments shape our experiences and well-being. We hope that these reflections may help guide our own professional paths and, perhaps, contribute in small ways to broader efforts toward creating healthier and more human-centered environments.

Our manifesto is organized around four interconnected pillars, each one reflecting a key principle that emerged from our collective reflections.

Human-centered and inclusive design

Today, digital systems and algorithms often reinforce familiar preferences and perspectives, which can unintentionally narrow our exposure to difference. We speak of inclusion, yet our ways of communicating, collaborating, and even designing spaces often remain exclusive. Our bodies and brains, as well as the spaces we inhabit, are complex. And our relationships (with others and our surroundings) even more so. This complexity calls for multidisciplinary collaboration, openness to difference, guidance from reliable scientific knowledge, and the courage to design with diversity at the core. No single space fits all. That is why we must listen to the users, the people who inhabit the spaces we create.

Diverse perspectives can contribute to more responsive and inclusive environments. That is why we should co-create with communities, making design a process of shared agency rather than top-down decisions.

In this sense, questions of participation are also questions of equity: if people perceive and navigate environments in different ways, these differences must be considered when shaping the spaces we share. Equity therefore calls for environments that support

accessibility in multiple ways — physical, sensory, and cognitive — so that different bodies and minds can engage and feel welcome.

Inclusive environments are not only a matter of fairness, but also an important condition for supporting well-being, as spaces that acknowledge human diversity can better respond to the needs, perceptions, and experiences of those who inhabit them.

From this perspective, neuroarchitecture further expands the discussion by drawing attention to forms of diversity that are not always immediately visible. Neuroarchitecture calls for designing not only for physical and cultural diversity, but also for neurodiverse profiles and cognitive changes that may occur across the lifespan, acknowledging that variations in perception, cognition, and sensory processing shape how environments are experienced. Sensory load, emotional resonance, and cognitive restoration become important considerations in the development of inclusive design strategies.

True accessibility enables autonomy, allowing people to navigate and inhabit environments with greater independence. When spaces support autonomy, they also expand agency, giving individuals the possibility to choose how they move, rest, interact, or withdraw.

From this perspective, design should move beyond minimum accessibility requirements and instead create environments that offer flexibility, choice, and spatial variety. Such environments can provide opportunities for refuge, connection, and exploration while remaining adaptable to diverse bodies, cognitive profiles, and social contexts.

Inclusion in neuroarchitecture extends beyond the creation of accessible environments; it also concerns who participates in the processes of design, research, and knowledge production. Advancing the field therefore requires openness to interdisciplinary dialogue and collaboration among architects, neuroscientists, psychologists, designers, and communities, recognizing that a deeper understanding of human–environment relationships emerges from multiple perspectives.

While inclusion calls for attention to diversity across individuals and contexts, it does not negate the existence of shared experiential patterns in how people interact with space. Across cultures, certain spatial conditions tend to influence us in broadly similar ways, such as contact with nature that supports restoration, spatial configurations that balance prospect and refuge and help regulate stress, and access to natural light that contributes to

circadian regulation. Although individual sensitivity to these conditions may vary, their underlying influence remains widely observed. Thus, designing for diversity can coexist with an understanding of common human responses to space.

Health and well-being as design's core

The built environment plays an active role in shaping experience. Around the world, unhealthy, inequitable, or sensory-imbalanced environments — whether overstimulating or lacking sufficient sensory input — can negatively affect bodies, minds, and communities. Recognizing the influence of the built environment on health and well-being is therefore essential for design. In this sense, our work seeks to contribute to environments that support healthier, more meaningful everyday experiences.

Because environments influence perception and behavior, every design decision carries implications for health and well-being. As knowledge about the relationship between environments and their inhabitants continues to grow, designers carry an increasing responsibility to consider the consequences of their choices. Design therefore cannot be treated as an afterthought or a privilege,

but as an essential component of environments that support mental, physical, and social health.

Because people inhabit environments over long periods of time, the effects of spatial conditions accumulate. Everyday exposure to noise, light, crowding, spatial layout, or access to nature can gradually influence stress regulation, cognitive functioning, emotional states, and patterns of social interaction. Recognizing these long-term influences makes the relationship between design and health impossible to ignore.

Insights from neuroarchitecture further strengthen this perspective by helping us understand the neural and behavioral mechanisms through which spatial conditions influence well-being. By examining how environments influence brain, body, and behavior, the field encourages designers to consider well-being as a complex and interconnected condition shaped by both spatial and social contexts.

Because our health is deeply influenced by environmental conditions, considerations of well-being cannot be separated from the health of the ecosystems that sustain life. From this perspective, design must align human health with planetary health, creating environments that reconnect people with nature while respecting ecological balance. Such

alignment supports not only ecological integrity but also emotional regulation and psychological restoration, reinforcing the interdependence between environmental and human health.

At a broader scale, neuroarchitecture must also engage with climate resilience and the responsible stewardship of natural resources as essential dimensions of systemic well-being. Designing for human health cannot occur at the expense of the planet's capacity to sustain life. This perspective calls for a shift away from short-term efficiency toward long-term, regenerative design approaches in which materials, systems, and spatial strategies are evaluated not only for their influence on human perception, cognition, and behavior, but also for their impacts on ecological and social systems over time.

The environments we design today will inevitably shape the heritage of tomorrow. Recognizing this, our ethical responsibility extends beyond present users to future generations. Design therefore carries a temporal dimension, calling for decisions that consider not only immediate needs but also the long-term environmental, social, and cultural consequences of the spaces we create.

Advancing the field also requires transparency and shared learning. Whenever possible, neuro-informed projects should serve as living case studies, with observations, performance outcomes, and lessons learned openly documented and shared. Such openness strengthens collective knowledge, encourages accountability, and contributes to the ongoing development of more responsible, resilient, and life-supporting environments.

Science-informed and evaluative design

In contemporary design practice, grounding decisions in reliable knowledge has become increasingly important. Scientific research offers valuable frameworks for understanding how environments influence experience, helping designers make more informed choices and strengthening accountability for the impacts of the environments we create.

In this context, design should not rely solely on intuition or precedent. Research in fields such as neuroscience, environmental psychology, sociology, and public health continues to expand our understanding of how environments influence perception, stress regulation, cognition, and

social behavior. Drawing on this growing body of evidence helps designers better understand the relationships between individuals and the environments they inhabit, informing more responsible design decisions.

At the same time, knowledge must also emerge from practice. Built environments should, whenever possible, be observed and evaluated after construction, allowing designers to learn from how spaces are actually experienced. Emerging tools such as electroencephalography (EEG), eye-tracking, and galvanic skin response (GSR), which are becoming increasingly accessible, offer new ways of studying interactions between the brain, the body, and space. Combined with qualitative observation and user feedback, these methods can help transform built projects into opportunities for learning and knowledge development.

As research findings and emerging measurement tools increasingly inform design practice, their application also requires careful ethical consideration. Neuroscience and other forms of scientific knowledge must never be used as instruments of control, persuasion, or manipulation. When taken out of context or applied without responsibility, scientific insights can reinforce asymmetries of power

rather than contribute to human well-being.

For this reason, integrating research insights into design requires transparency, critical reflection, and ethical responsibility. Within neuroarchitecture, scientific knowledge should serve to deepen our understanding of human–environment relationships and to support environments that respect human diversity, autonomy, and collective well-being. Its role is not to prescribe or control behavior, but to inform design decisions that enable healthier, more inclusive, and more supportive environments.

At the same time, architecture and design must remain deeply rooted in inhabitants' experience and local contexts. A science-informed approach does not exclude other ways of understanding environments. Alongside academic research, traditional and Indigenous knowledge, as well as other non-Western knowledge systems shaped through lived experience, intergenerational practice, and long-standing relationships with place, offer valuable insights into how communities inhabit and care for their environments.

Beyond design practice itself, we also recognize our role in fostering broader awareness of how environments influence human well-being. Through publishing, teaching, and professional

engagement, we seek to bring insights about human–environment relationships into everyday design conversations and decision-making processes.

This responsibility also involves translating knowledge across disciplines and communities. Bridging research and practice requires making scientific insights accessible and meaningful not only to designers, but also to policymakers, institutions, and the communities who ultimately inhabit the environments being shaped.

By strengthening these connections, we contribute to a culture of design that is more reflective, informed, and responsive to the complexities of lived experience across diverse contexts.

Curiosity, creativity and meaning

Expressions of identity, culture, and memory through art, rituals, and design are not merely decorative additions to the built environment. They are essential dimensions of spaces that resonate with individuals and communities, strengthening belonging and deepening relationships with place.

Beyond functional performance, environments also shape emotional and symbolic experience. Spaces

that evoke awe, joy, calm, or a sense of meaning influence attention, memory, and resilience. Designing for such qualities is not an indulgence, but an essential dimension of responsible design practice.

Because perception is grounded in embodied cognition, experience emerges through the dynamic interaction between brain, body, and environment. Design must therefore engage multiple senses and layers of perception. Spatial experience unfolds through movement, touch, sound, light, and atmosphere, shaping orientation, attention, emotional regulation, and behavioral responses. Recognizing this invites designers to move beyond predominantly visual approaches and to consider how environments are felt, navigated, and inhabited over time.

At the same time, the embodied and multisensory nature of experience cannot be fully reduced to quantifiable data. While certain aspects of human–environment interaction can be measured, others unfold through perception, memory, emotion, imagination, and cultural meaning, remaining only partially accessible to objective analysis.

Design therefore operates at the intersection of knowledge, interpretation, and creativity. When environments are shaped only by

metrics and performance indicators, they risk becoming technically efficient yet experientially impoverished.

For this reason, designers must engage not only with evidence and analysis, but also with sensitivity, empathy, cultural awareness, and creative exploration. Integrating scientific insight with contextual understanding allows spaces to support both measurable outcomes and the deeper experiential qualities that give environments meaning.

Curiosity and creativity therefore remain essential qualities in design practice, allowing designers to move beyond purely technical responses and engage with the more subjective dimensions of space. Approaching environments with curiosity allows designers to question assumptions, explore new possibilities, and imagine spaces that respond more deeply to inhabitants' needs.

We therefore understand design as a practice that must engage both evidence and imagination, analysis and interpretation. Beyond supporting health and well-being, architecture carries the responsibility to shape environments that resonate, are remembered, and foster engagement and belonging, enabling people to relate to and care for them over time. In this

sense, designing is not only about solving problems, but about creating the conditions for meaningful and enduring relationships between people and place.

The future of architecture therefore depends on a collective commitment to creating environments that are healthier, more inclusive, and more attentive to the relationships between people, place, and planet.

Conclusion

Ultimately, this manifesto is not a conclusion but an invitation: an invitation to rethink the environments we inhabit and the responsibilities we carry as those who shape them. The spaces we design influence how people live, interact, remember, and care for one another. Recognizing this responsibility calls for decisions guided by knowledge, ethical reflection, and attention to the diverse experiences of those who inhabit our environments.

By bringing together scientific understanding, experience, and cultural meaning, architecture can contribute to environments that support resilience and well-being across generations. In this sense, designing is not only a technical or artistic act, but also a practice of responsibility toward the people and ecosystems with which we share the world.