INTENTIONAL SPACES:
THE POWER OF PLACE

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THE CENTER FOR APPLIED NEUROAESTHETICS
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FOUNDATIONS

EXECUTIVE OVERVIEW: INTENTIONAL SPACES FOUNDATIONS

Global interest in the effects of built environments on health and wellbeing has been steadily growing. Researchers and practitioners across diverse fields are exploring how spaces and experiences can be designed to optimize sensory effects and deliver positive outcomes for wellbeing and human flourishing. Despite increasing evidence that thoughtfully designed environments can significantly enhance health, the practical application of this knowledge remains limited. This gap between knowledge and practice underscores the need for a coordinated, shared strategy to guide the field forward.

Recognizing the need to bridge research and practice, in 2021 the International Arts + Mind Lab Center for Applied Neuroaesthetics (IAM Lab) at Johns Hopkins University convened 13 experts from architecture, design, neuroscience, cognitive science, environmental psychology, and technology for a series of interdisciplinary focus group discussions. These conversations identified key opportunities to advance wellbeing through integrated approaches to design, architecture, and environmental planning. The resulting insights were published in the peer-reviewed article "Intentional Spaces": Thought Leaders on Intersections of Health, Architecture, and Design, which emphasized the potential of science-informed design strategies to support health equity (Golden et al., 2024)

Building on this work, in 2023 IAM Lab hosted the Intentional Spaces Summit, bringing together more than 300 participants from across sectors for two days of dialogue, strategic reflection, and shared learning. Participants explored how emerging research and design practices could be translated into real-world settings, including healthcare, education, workplace, and civic environments. The Summit demonstrated strong global interest in interdisciplinary collaboration and highlighted a clear demand for accessible, actionable guidance for designing spaces that support wellbeing. These conversations helped clarify the need for a shared framework: one that could align research, practice, and implementation over time and inform the development of what would become the Intentional Spaces Roadmap.

To sustain this momentum and move toward practical implementation, IAM Lab partnered with Thermengruppe Josef Wund (Wund), the world's leading developer and operator of thermal spas and bathing facilities. United by a shared commitment to health and wellbeing, IAM Lab and Wund launched an impact-focused, interdisciplinary initiative aimed at synthesizing expertise across sectors and developing design principles that could be meaningfully applied in real-world contexts. This initiative represents a foundational phase of the Intentional Spaces Roadmap, with this report serving as a core deliverable designed to translate interdisciplinary insight into a shared, practice-oriented framework.

The project began with a survey of 80 end-users of potential neuroaesthetic design knowledge, including designers, practitioners, and decision-makers working across sectors. Respondents expressed strong interest in neurobiology and brain-behavior research, while also cautioning against overly prescriptive design rules. Many emphasized the importance of empowering designers and communities with flexible, adaptable knowledge, as well as the need for concrete examples that illustrate principles in action. Across responses, there was broad agreement that any resulting framework should be translatable, understandable, and relevant across disciplines and settings.

Informed by this feedback, the IAM Lab team developed a comprehensive interview guide and conducted in-depth interviews with 15 researchers and practitioners working at the intersection of design and the built environment. Interviewees were asked to share their research findings and professional practices, reflect on interdisciplinary intersections, and identify foundational principles with the potential for near-term, real-world impact.

Intentional Spaces Foundations, this resulting report, offers a flexible framework to support designers, researchers, and decision-makers in navigating the complex factors that influence design for health and wellbeing. Rather than prescribing fixed solutions, the framework is intended as a starting point for intentional design and experimentation. It outlines core concepts and practical strategies while encouraging adaptive application through the integration of professional expertise, local context, and community and end-user input.

Foundations synthesizes qualitative insights gathered through interviews with researchers and practitioners specializing in sensory and experiential design. While some insights are not yet fully substantiated through formal research, they reflect valuable experiential

knowledge and shared norms emerging within the field. This report is not intended to serve as a comprehensive literature review. Instead, it highlights established principles and emerging trends, identifies areas for further exploration, and provides a foundation for future research, evaluation, and applied design efforts.

Together, these insights are organized into a clear, principles-based framework that anchors this report. Designing for health and wellbeing requires a thoughtful, holistic approach that acknowledges the complex ways people interact with their environments.

The framework introduced in Foundations is grounded in four core concepts that guide effective design. First, successful design draws on interdisciplinary insights and diverse ways of knowing.

By integrating knowledge from fields such as neuroscience, cultural studies, and environmental psychology with local expertise and community input, designers can craft solutions that are both evidence-based and responsive to the lived experiences of users. Equally important is understanding the interconnectedness of sensory modalities. Sensory experiences such as sight, sound, touch, and smell do not operate in isolation, but interact dynamically, shaping how spaces are perceived and used. How individuals experience space is also deeply influenced by context, including factors such as age, culture, health, and personal preferences. Effective design accounts for these differences, creating environments that support varied needs while empowering users to adapt their surroundings to suit their unique circumstances.

Taken together, these core concepts establish a shared foundation for intentional design and provide a common point of orientation for future research, practice, and implementation efforts.

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