



## **Consolidated Synthesis - SOCB International Conference 04 “Sustainable Inside and Outside”**

At the SOCB International Conference 04 in Vienna, sustainability was consistently redefined as a multidimensional condition that extends beyond environmental performance to include social justice, cultural continuity, psychological well-being, governance, and material innovation. Across both days, the conference shifted the discourse from sustainability as a technical objective to sustainability as an integrated, ethical, and systemic practice embedded in how cities are designed, inhabited, and remembered. A central thread across presentations was the rejection of siloed thinking in architecture and urbanism. Contributors from fields such as design, infrastructure, healthcare, and materials science emphasized that built environments are not neutral artefacts but active agents shaping inclusion, exclusion, dignity, and resilience. This was particularly evident in discussions on housing, infrastructure, and public space, where spatial design was directly linked to questions of social equity and long-term collective well-being.

From a governance and human-rights perspective, Her Excellency Ambassador Marcela Tovar Thomas highlighted how urban policy determines belonging in public space, demonstrating through case studies such as Bogotá’s Bronx district that control-oriented approaches often fail to address structural poverty and instead reproduce displacement. In parallel, material and ecological perspectives, such as Maximilian Pramreiter’s work on forestry and engineered timber, challenged assumptions of limitless renewability and stressed the need for circular, resource-conscious construction systems. Several presentations converged on the idea that sustainability operates across interconnected scales. Mamta Patwardhan and Vivek Bhole’s analysis of the BDD Chawls in Mumbai illustrated how densification can threaten social fabric if community structures are not preserved, while Livia Catao Loureiro and Davi de Lima Vaz Xavier’s work on flexible housing reframed informality as a form of spatial intelligence. Similarly, Triton Mobley’s work on highway infrastructure exposed how urban “progress” can encode displacement and racialised spatial injustice, reframing erased urban areas as sites of memory rather than absence.

Other contributions extended sustainability into experiential and human-centred dimensions. Mary Guzowski emphasized biophilic and net-positive design as a synthesis of ecological performance and sensory well-being, while Sandra Velásquez Montiel foregrounded the psychological and political effects of spatial design, arguing that architecture either reinforces or challenges social exclusion. In healthcare and large-scale infrastructure contexts, speakers such as Dieter Soerensen underscored how sustainability is operationalised through governance systems, financing structures, and lifecycle management rather than isolated design interventions. Across these perspectives, a shared conclusion emerged: sustainability is not a fixed goal but an ongoing, adaptive process shaped by relationships between people, materials, institutions, and environments. The conference collectively advocated for a shift from object-based design thinking toward systems-oriented, participatory, and care-driven approaches. Architecture and urbanism were ultimately framed not as the production of buildings, but as the continuous shaping of conditions for life.

### Reflections on Each Presentation

***Her Excellency Marcela Tovar Thomas*** - Ambassador of the Cancillería de Colombia to the Republic of Austria.

Presented a thoughtful and critical perspective on the relationship between urban development, drug policy, and human rights. One of the most impactful ideas in the presentation was that cities are not only physical spaces but also social and political environments shaped by decisions about inclusion, recognition, and power.

The speaker emphasized that urban policies often determine who is allowed to belong in public spaces and whose needs are ignored. The example of the Bronx district in Bogotá clearly illustrated how interventions based mainly on security and control can fail to solve deeper social problems. Instead of addressing poverty, homelessness, and addiction, these approaches often displace vulnerable communities and weaken existing social networks. This highlighted the importance of combining urban planning with social support and long-term care strategies.

The discussion of harm reduction was particularly meaningful, as it framed people who use drugs as individuals with rights and dignity rather than as problems to be removed from society. Overall, the speech highlighted the importance of creating cities that prioritize inclusion, care, participation, and social justice over exclusion and punishment.

***Maximilian Pramreiter*** - BOKU University

Presented a scientifically grounded perspective on the future of sustainable architecture and the role of wood technology in addressing environmental challenges. One of the most important ideas in his presentation was that sustainability is far more complex than simply replacing concrete or steel with wood. Instead, it requires a complete reconsideration of how forests, materials, and urban development are interconnected.

A particularly striking point was his explanation that the greenhouse gas balance of forests is already beginning to decline due to climate change, overharvesting, and ecological stress. This challenged the common assumption that forests are an unlimited renewable resource.

He emphasized that species shifts are already occurring, meaning that the types of trees available in the future may differ significantly from those traditionally used in construction. This insight highlighted the urgent need for innovation and adaptability within the wood industry. Pramreiter also stressed the importance of resource efficiency and circular design. Rather than maximizing extraction, he advocated using wood more intelligently, extending product lifecycles, and focusing on high-value applications. His discussion of cross-laminated timber and engineered wood technologies demonstrated how modern innovation can support more sustainable urban development while reducing environmental impact.

Overall, the presentation combined scientific research with practical solutions. It encouraged the audience to think critically about sustainability not as a simple trend, but as a long-term responsibility requiring technological innovation, environmental awareness, and careful management of natural resources.

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***Sandra Velásquez Montiel*** - Webster University

Presentation explored the relationship between architecture, psychology, and social justice. Her main argument was that space is never neutral. Every building, street, or public area either supports human dignity or contributes to exclusion and inequality.

She explained that materials alone are not enough; what truly matters is the intention behind their use. The same materials can create spaces that heal people or spaces that isolate and control them. One of the strongest points in her presentation was how design influences human behavior and emotions.

She described how welcoming environments with light, greenery, and open public areas encourage dialogue, relaxation, and social connection. In contrast, hostile urban designs, such as benches designed to prevent homeless people from resting, communicate rejection and alienation. Velásquez Montiel also connected architecture to politics and power. She argued that wealthy neighborhoods are often designed for comfort and safety, while poorer communities are neglected and made invisible.

Through examples from Vienna, Mexico, and Soviet housing projects, she showed how urban design reflects social inequality. Overall, the presentation emphasized that architecture is not only about aesthetics but also about ethics, inclusion, and the creation of humane and supportive communities.

***Ammar Kalo*** - Associate Professor at the American University of Sharjah

Presented a reflection on design education, material practice, and the act of making. His central argument was that design cannot be fully separated from fabrication, as true understanding emerges only when designers engage directly with materials, tools, and processes.

He highlighted the context of the UAE, where traditional craftsmanship and intermediate scales of production have largely disappeared. The landscape is divided between large industrial fabrication facilities and small informal workshops, leaving a missing middle where skilled craft once existed.

This gap, he argued, weakens the continuity between design thinking and material knowledge. Through his teaching practice, he promotes a “design through making” pedagogy in which students learn by building, testing, and even failing. By working directly with materials such as wood and metal, students develop a deeper awareness of what materials can realistically achieve rather than relying solely on digital representations.

His discussion also emphasized iterative learning, where sketching, prototyping, and full-scale construction form a continuous cycle. Overall, the presentation underscored that meaningful design emerges from an ongoing dialogue between concept and craft, where making becomes not just a stage in the process, but its foundation.

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***Claudiu Silvestru*** - iC consulenten ZT GesmbH

Presentation, “Building on What Matters: Socio-Cultural Screening and Value Synergies as a Foundation for Sustainable Transformation,” argued for integrating cultural, technical, and performance-based perspectives in early-stage building decision-making.

The central idea is that “phase zero” is the most critical moment in any project, where decisions are still flexible and relatively low-cost, yet already determine long-term outcomes. A key insight is the limitation of current tools such as technical due diligence, construction audits, and traditional significance assessments when used in isolation. While each provides valuable information, they often fail to communicate with one another, leading to fragmented decision-making, missed synergies, and stakeholder conflict.

The presentation advocates for a more integrated framework that combines these dimensions into a shared analytical system. Particularly interesting is the shift from “heritage” to “inheritance,” broadening the focus from officially listed monuments to the everyday built environment. This reframing emphasizes emotional attachment, identity, and lived experience as essential components of value.

Overall, the talk highlights that sustainable transformation is not purely technical but deeply cultural. Buildings are understood not only as physical assets but as carriers of meaning, requiring a balanced approach between performance and narrative-driven values.

***Dieter Soerensen*** - Healthcare Consultant

Presentation on sustainability in healthcare projects offers a practical view of how sustainability is embedded in hospital infrastructure delivery. Rather than focusing on abstract policy debates, the talk emphasizes real project processes, particularly the importance of early-stage briefing or “phase zero.”

The speaker argues that this stage is often underestimated, yet it determines whether sustainability can be meaningfully integrated into the project lifecycle. A central message is that sustainability in healthcare goes far beyond visible green technologies such as solar panels. Instead, it spans regulatory compliance, environmental assessments, funding mechanisms, supply chains, construction practices, and long-term operations.

Frameworks such as ISO standards, EPA regulations, ESG principles, and environmental and social impact assessments play a decisive role in shaping both project approval and execution. The presentation also highlights the influence of financial institutions, which increasingly enforce sustainability through risk management and compliance requirements. Overall, sustainability is presented as a continuous, integrated system embedded across all project phases rather than a single design feature or compliance exercise.

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**Mary Guzowski** - School of Architecture, College of Design, University of Minnesota

Presentation provided a thoughtful and inspiring perspective on sustainable architecture by emphasizing the relationship between ecological responsibility, human well-being, and meaningful spatial experience. One of the most compelling aspects of the presentation was the integration of biophilic design with net-positive and carbon-neutral strategies.

Rather than viewing sustainability only through technical metrics and environmental performance, the presentation highlighted the importance of beauty, atmosphere, and emotional connection within architectural spaces. The discussion demonstrated how architecture can create healthier environments by reconnecting people with nature through daylight, natural materials, sensory experiences, and spatial qualities such as prospect, refuge, and mystery. The idea that humans are “one species among many” established a strong ethical foundation for design and encouraged a more holistic understanding of sustainability.

Another significant aspect was the presentation of the graduate design studio methodology. The combination of passive climatic strategies, environmental analysis, physical modelling, and experiential design illustrated a balanced approach between quantitative and qualitative thinking. This educational framework encourages students not only to design efficient buildings but also to create spaces that support psychological and emotional well-being. Overall, the presentation successfully argued that sustainable architecture should move beyond technical performance alone and strive to create environments that are resilient, humane, beautiful, and deeply connected to nature.

**Mamta Patwardhan & Vivek Bhole** - Kamla Raheja Vidyanidhi Institute of Architecture and Environmental Studies

Presentation provided a thoughtful and critical examination of the redevelopment of the Bombay Development Directorate (BDD) Chawls in Worli, Mumbai. The research highlighted the tension between rapid urban densification and the preservation of social cohesion within long-established communities. What made the presentation particularly engaging was its focus on the human dimension of redevelopment rather than treating the project as merely an architectural or infrastructural intervention.

The discussion on how the original chawl corridors and shared open spaces evolved into vibrant social and cultural “third spaces” was especially insightful. These areas supported everyday interactions, celebrations, and community identity, demonstrating how spatial design can shape collective life. The presentation effectively argued that redevelopment should not only improve housing conditions but also retain the social networks embedded within these spaces.

Another strong aspect was the connection to Sustainable Development Goal 11 and the emphasis on inclusive and in-situ rehabilitation. The redevelopment strategy showed how vertical urbanism can potentially accommodate growth while avoiding displacement of working-class residents. Overall, the presentation successfully balanced the need for modernization with concerns about cultural continuity, livability, and spatial justice, offering a nuanced perspective on sustainable urban transformation in rapidly growing cities.

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***Triton Mobley*** - University of Pittsburgh.

Presentation offered a critical and deeply reflective exploration of how infrastructure, particularly the United States highway system, has shaped patterns of displacement and inequality. By tracing the historical development of highway expansion since the 1956 Federal Highway Act, the presentation highlighted how large-scale urban interventions often came at the cost of established communities, particularly working-class and marginalized neighbourhoods such as Overtown in Miami. A key strength of the presentation was its ability to connect archival research with contemporary computational and design-based practices.

Through the use of 3D modelling, LiDAR scans, audio manipulation, and digital fabrication, the research transformed historical data into spatial and sensory experiences. This approach allowed the audience to engage with the emotional and psychological dimensions of displacement, making visible the often-invisible consequences of infrastructural “progress.” The concept of “architectural voids” was particularly powerful, reframing erased urban spaces as sites of memory and loss rather than absence.

Similarly, the discussion of Levittown and suburban expansion exposed the structural inequalities embedded within the American Dream, revealing how policies of development simultaneously produced exclusion. Overall, the presentation effectively demonstrated that architecture and infrastructure are not neutral systems, but active forces in shaping social and racial landscapes. It encouraged a more critical and ethical understanding of design practice as both a historical witness and a tool for social reflection.

***Livia Catao & Davi de Lima Vaz Xavier*** - University of Nebraska-Lincoln

Presentation provided a thoughtful and well-structured exploration of housing as a flexible and participatory system shaped by social, cultural, and material conditions. Centered on the concept of “Structural Permanence and Material Flexibility,” the research challenged conventional housing models that rely on standardization and instead proposed a more open, adaptive approach rooted in circularity and user participation. A key strength of the presentation was its strong connection to the realities of Latin American informal settlements, where incremental construction and tacit knowledge already play a vital role in shaping the built environment.

By reframing informality as a form of intelligence rather than a limitation, the presentation offered a more respectful and productive understanding of how communities build and adapt over time. The explanation of the “hard and soft” flexibility spectrum was particularly effective in clarifying how architectural control can be balanced with user agency.

This framework helped demonstrate that housing should not be treated as a fixed product but as a continuous process shaped by collaboration between architects, users, and policy systems. The Flex House prototype further strengthened the argument by illustrating how structural systems can accommodate multiple materials, spatial arrangements, and cultural expressions. Overall, the presentation successfully argued for a more inclusive and adaptive approach to housing, where design becomes a framework for possibility rather than a predetermined solution.