

ATUT
17th Annual Symposium of
Architectural Research

27–28.10.2025
Tampere

Radical Care for Resilience in the Built Environment

Book of Abstracts

ATUT

17th Annual Symposium of Architectural Research

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The School of Architecture at
Tampere University

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ATUT

17th Annual Symposium of Architectural Research

The 17th **Annual Symposium of Architectural Research (ATUT 2025)** explores the fostering of resilience in the built environment through a radical care lens and approach. Here we explore contributions to this interdisciplinary dialogue on the role of education, the just energy transition, digitalisation, and the promotion of ecological values in shaping of resilient, caring futures for our built environments.

For us, radical care refers to an ethical commitment to prioritise well-being, equity, and sustainability in design and development processes for collective wellbeing – not just for some. Resilience, within this context, refers not only to infrastructural and environmental adaptability but also to social and emotional support systems that empower communities to thrive, and come back stronger after crisis events.

ATUT 2025 encouraged interdisciplinary contributions from fields such as architecture, architectural engineering, civil engineering, urban planning, digital technologies, social sciences, and policy studies. We welcomed a plethora of abstract submissions from educators, researchers, practitioners, and students who are contributing to this vital conversation and that address, but were not limited to, the themes of education, energy, digitalisation and ecology.

The following sections present these double-blind peer-reviewed abstracts in their order of presentation in the symposium. Abstracts from registered symposium participants that were accepted but not presented can be found at the end of each section.

We hope these abstracts bring you, the reader, moments of insight, reflection and inspiration, and most importantly, active hope for a more sustainable future, where we all can radically care for resilience in the built environment!

– The editors

Essi Nisonen
Raul Castano de La Rosa
Sofie Pelsmakers
Lena Jegard

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Monday 27.10.2025

- 8.30 Registration
- 9.30 Welcome words
- 9.15 Keynote Doina Petrescu (UK)
Co-resilience
- 10.30 [Parallel sessions 1](#)
- 12.00 Lunch
- 13.00 [Parallel sessions 2](#)
- 14.30 Coffee
- 15.00 Keynote Henrika Pihlajaniemi (FIN)
Art of Sustainable Darkness
as radical care
- 16.00 Wrapping up the day
- 18.00 Conference Dinner

Tuesday 28.10.2025

- 9.00 Welcome words
- 9.15 Keynote Felicity Atekpe (UK)
Architectural Auroras
- 10.30 [Parallel sessions 3](#)
- 12.00 Lunch
- 13.00 [Parallel sessions 4](#)
- 14.30 Coffee
- 15.00 Keynote Laura Uimonen (FIN)
Shared biodiversity – radical
planning for change
- 16.00 Closure
- 17.00 Book launch
”Architectural Thinking in a
climate emergency”

This theme explores the critical role of education in fostering radical care for resilience within the built environment, aiming to highlight the intersections of pedagogical approaches, innovations, and community-centered practices that contribute to resilient, inclusive, and sustainable spaces. In an era of increasing environmental challenges (e.g., biodiversity loss, scarcity of resources, etc.), social inequalities, and fast-moving urbanisation, ATUT 2025 seeks to investigate how educational frameworks can ingrain a deeper sense of care for people, places, and the planet.

Theme 01 Education

- **Educational Approaches:** How can innovative methods and curricula in architecture, architecture engineering and related design and built environment fields promote resilience through the lens of radical care?
- **Sustainable Design and Construction:** How can educational institutions prepare students to design resilient, sustainable, and equitable, caring environments for human and non-human actors?
- **Community Engagement and Social Equity:** The role of education in fostering community-centered approaches for built environment resilience and adaptive design.
- **Interdisciplinary Learning:** How can collaboration between different fields, such as architecture, engineering and social sciences, drive radical care for resilience in the built environment?
- **Policy and Practice:** Exploring the impact of education on policy development and the integration of resilience and care and maintenance in building codes, city planning, and infrastructure development.

Abstracts should clearly demonstrate how **education** can play a transformative role in advancing radical care for resilience within various contexts of the built environment.

This theme explores energy transition in the built environment, approached through the lens of radical care for resilience in the built environment, while also addressing potential unintended consequences. The global shift toward renewable energy, decarbonisation, and energy-efficient technologies offers immense potential to strengthen resilience in the built environment. However, as we transition to cleaner energy systems, it is essential to prioritise radical care, ensuring that the shift is not only environmentally sound but also socially equitable and attentive to the well-being of all communities (human and non-human). Radical care emphasises a deep ethical responsibility towards people and ecosystems, advocating for just and compassionate solutions in addressing climate change and sustainable energy use and production.

At the same time, the energy transition presents risks and unintended consequences, such as economic disparities, disruptions to vulnerable communities, or environmental impacts from new technologies. ATUT 2025 seeks to critically engage with these complexities and consider how we can balance the need for sustainable energy systems with the imperative of radical care, ensuring resilience for the built environment, the people and non-humans who inhabit it.

We invite abstracts from educators, researchers, practitioners, and students who are exploring the intersection of, but are not limited to, the following themes:

- **Energy Transition and Built Environment Resilience:** How can transitioning to renewable energy sources, energy communities, enhance the resilience of buildings and communities while incorporating the values of radical care?
- **The negative side of Energy Transition:** What are the potential negative impacts, e.g., social, economic, environmental, intercultural, ingrained gendered aspects, etc., associated with the energy transition, and how can they be mitigated in architecture?
- **Equity and Justice in Energy Transition:** How can we ensure that energy transitions are inclusive; not reinforcing gendered power structures and addressing the needs of marginalised communities and reducing energy poverty?
- **Sustainable Design and Energy Efficiency:** How can architects and engineers design resilient and energy-efficient buildings that prioritise well-being and long-term sustainability and considers care and maintenance of systems and infrastructures?
- **Energy and Social Infrastructure:** How can energy transitions contribute to the social resilience of communities, enhancing not only infrastructure but also the emotional and social well-being of residents and can foster a sense of care?
- **Technological Innovation and Ethical Implications:** Examining the role of new energy technologies, such as smart grids and energy storage systems, and their potential unintended consequences, including environmental impacts, privacy concerns, engendered caring roles
- **Policy, Governance, and Community Engagement:** What policies and governance structures are needed to ensure that energy transitions are resilient, equitable, and attentive to local community needs?

Theme 02 Energy

This theme explores how digitalisation can foster or hinder radical care and resilience in the built environment, minimising the potential unintended consequences of these technological advances. As digital technologies increasingly shape the design, construction, and operation of our built environments, there is immense potential for promoting resilience through data-driven planning, smart cities, AI-enhanced systems, and real-time environmental monitoring. However, it is equally important to critically examine the unintended social, environmental, and ethical consequences of digitalisation. How do we ensure that the use of technology contributes to inclusive, sustainable, and human spaces that embody radical care? This concept of radical care emphasizes a commitment to equitable, compassionate, and sustainable development practices that prioritise the well-being of both people and the environment. ATUT 2025 seeks to explore both the opportunities and challenges that come with digital transformation in the built environment and include the following topics:

Theme 03 Digitalisation

- **Digital Innovation and Resilience:** How can digital tools and smart technologies enhance the resilience of the built environment while integrating principles of radical care?
- **(Un)sustainable Digital Innovation:** What are the potential social, environmental, economic, ethical, etc. risks of digitalisation in architecture, engineering, and urban planning (e.g., social justice (digital break), environment impacts, privacy, engendered aspects)?
- **Equity and Inclusion:** How can digital technologies promote social equity, or conversely, exacerbate exclusion, gendered power structures, marginalisation in built environment design and development?
- **Sustainability and Smart Technologies:** Exploring the intersection of digitalisation and sustainability in building design, construction, and urban resilience and how it can support care.
- **Digital Education and Training:** The role of education in equipping architects, engineers, and planners with the skills to harness digital tools for resilience and care – linking to Theme 01
- **Community and Human-Centered Design:** How can digital technologies support participatory design processes and community-centered approaches towards built environment resilience? How can it support radical care principles without reinforcing caring roles?
- **Data-Driven Policy and Governance:** The role of digital technologies in shaping resilient policies and governance structures, and how to mitigate unintended consequences in their implementation.

This theme explores the integration of radical care to enhancing ecological values, such as biodiversity, wellbeing, green transition, within architecture and promoting care and resilience in the built environment. ATUT 2025 will examine how ecological values can be prioritised and integrated in architecture, while critically reflecting on the potential unintended consequences of their implementation.

As architecture and urban planning increasingly embrace sustainability and ecological responsibility, radical care for nature and human wellbeing emerges as an essential guiding framework. Radical care emphasises a deep, ethical commitment to nurturing ecosystems and human communities in a way that is equitable, compassionate, and mindful of long-term resilience. However, the pursuit of these values must be carefully balanced with an awareness of unintended social, ecological, and economic impacts, ensuring that efforts to “green” the built environment do not inadvertently cause harm.

ATUT 2025 aims to foster dialogue on how architecture can incorporate biodiversity, promote wellbeing, and contribute to the green transition, while remaining vigilant to the risks associated with ecological interventions, such as the displacement of communities, gentrification, or over-reliance on technological fixes and lack of care of non-humans and the natural world. We invite interdisciplinary contributions from architects, urban planners, engineers, environmental scientists, social and political scientists. We welcome submissions that address, but are not limited to, the following themes:

- **Biodiversity in Architectural Design:** How can architecture and urban planning integrate biodiversity and natural ecosystems into the built environment to promote resilience, and what are the potential unintended consequences of these efforts; how do we care for and who does the caring for the natural world and non-human?
- **Wellbeing and Ecological Design:** Exploring the relationship between ecological values in architecture and human wellbeing, including mental health, social cohesion, and quality of life in green spaces, co-benefits of humans when caring for nature and non-humans.
- **Green Transition and Resilience:** How can architects and planners contribute to the green transition in a way that ensures both environmental and social resilience, while addressing unintended outcomes such as gentrification, engendered aspects in who cares for the environment, community, etc., or unequal access to green spaces?
- **Unintended Consequences of Ecological Interventions:** What are the potential risks of ecological strategies in architecture, such as reliance on green technologies or scarcity of natural resources, that could lead to negative consequences for communities or ecosystems?
- **Nature-Based Solutions and Resilience:** The role of nature-based solutions (e.g., green roofs, urban forests) in building resilience, and the challenges or trade-offs involved in implementing these strategies.
- **Ethics of Ecological Design:** How can architects and urban designers ethically balance ecological values with social justice, ensuring that marginalised communities benefit from green transitions without facing displacement or loss of cultural heritage?
- **Biodiversity and Urban Spaces:** Exploring innovative ways to promote biodiversity in dense urban environments and the potential conflicts with urban development pressures and who looks after the spaces and biodiversity.
- **Policy and Regulation for Ecological Architecture:** How can policymakers support the radical care of ecological values in architecture through regulations, incentives, and urban planning frameworks?

Theme 04 Ecology

Theme 01

Education

Parallel sessions 1

Increasing Care-Oriented Pedagogy Through Timber Faculty Development Workshops

Edward Becker

In 2024, 139 institutions of higher education in the United States and 12 in Canada had at least one accredited architecture degree program. Based on data from the Softwood Lumber Board (SLB), a USDA federal check-off program, a majority of architecture degree programs teach students about wood, but research indicates that the amount and quality of wood-focused education is extremely limited, often comprising only a few days of introductory-level teaching the entire semester. This lack of focus on a material that is widely understood to promote human well-being through biophilia, environmental sustainability through renewable growth and lower embodied carbon, and other care-related building outcomes stands in stark contrast to the widespread, in-depth teaching of concrete and steel - materials that are often taught from a historicist perspective without mention of their related climatic or environmental impacts. This research explores how wood education is changing in North America, specifically in terms of the embedment of care-oriented approaches to architecture in wood-focused architectural curricula. Since 2022, the SLB has led nine Timber Faculty Development Workshops enhancing wood-related teaching practices for 175 faculty members from 110 different institutions across North America. Research methods include the collation and extrapolation of SLB post-workshop survey data, focusing specifically on how these workshops have promoted more sustainable, resilient, and care-oriented teaching practices. Over 80% of participants state that the faculty development workshops have directly improved their wood-oriented pedagogical practices, and relatedly, the results indicate that faculty teaching approaches now include more resilient, sustainable, and care-oriented subject matter.

Pedagogy
Faculty Development
Wood

Parallel sessions 1

**Disruptive Care as Pedagogical Praxis:
Cultivating Situated Ethics for Resilient
Futures in Architectural Education****Esra Can**

In the face of converging crises of climate breakdown, resource depletion, spatial injustice, and colonial continuities, architectural education must confront its entanglements with extractive and hierarchical systems. Disruptive Care Studio, a Master's-level design studio (University of Sheffield, UK), situated within the contested territories of Cyprus, proposes a pedagogical transformation that activates radical care as both a critical framework and an epistemic intervention. Drawing from feminist, decolonial, and care ethics (Tronto, 1994; Puig de la Bellacasa, 2017; Can, 2024), disruptive care is framed as the practice of making visible and disrupting the broken socio-ecological relationships through an active understanding of, and appreciation for, the interconnectedness of all things. (DC Studio, 2024)

architectural pedagogy
care ethics
territorial praxis
ecological repair
disruptive care
Cyprus

Cyprus' divided geography, shaped by colonial legacies, militarised boundaries, and extractive development, offers a critical lens through which to explore how urbanisation and infrastructural practices break ecological interdependencies and fragment cultural landscapes. In response, the studio foregrounds architectural thinking as territorial praxis, fostering reparative engagements with rivers, deltas, coastlines, and heritage sites. Students engaged with methods such as countermapping, site-writing, and ecological storytelling while co-learning with local actors and solidarity networks.

Studio outcomes revealed that fostering "response-able" inquiry (Haraway, 2016) in tandem with zero-carbon and context-specific material practices enabled students to imagine resilient futures attentive to relational interdependencies and grounded in plural, reparative futures. Disruptive Care Studio offers a model of pedagogical praxis in which architectural design is interwoven with social justice, climate responsibility, and contextual intelligence, training architects not only as spatial practitioners but as engaged, caring disruptors.

Parallel sessions 1

Beginnings Matter An Experimental Studio on Radical Care

Mehmet Ali Gasseloglu
Aygen Erol Çakır
Seben Aşkın Kütükçü,
Damla İnci
Merve Eflatun

In the face of intersecting global and local crises—ecological collapse, social fragmentation, and pedagogical inertia—architectural education is increasingly called upon to cultivate alternative ways of thinking and acting. While global in scope, these crises are spatially situated, unfolding through distinct material and political conditions. As a site of both reproduction and potential rupture, architectural education must confront its complicity in extractive and hierarchical systems.

radical care
experimental pedagogy
architectural education
situated learning
spatial justice

This paper presents an alternative first-year design studio developed in response to the urgent need to decenter anthropocentric worldviews, foster ecological and social responsibility, and reimagine architectural education as a site for cultivating care, responsiveness, and critical agency. Co-authored by a team of early-career instructors, the studio is structured around four interconnected modules—Materiality, Temporality, Agency, and Speculative Atmospheres. The studio foregrounds embodied observation, slow mapping, and relational thinking across diverse sites such as forests, islands, and urban neighborhoods. Students engage with more-than-human relations, spatiotemporal ecologies, and their own positionality through fieldwork, collaborative exercises, analog-digital media, and speculative storytelling. Through immersive and speculative practices, they explored architecture not as an isolated product but as a process embedded in complex socio-ecological systems.

The studio fosters a learning environment grounded in solidarity, inquiry, and care. It challenges competitive academic norms and encourages students to rethink architecture not as a product, but as a process—emergent, entangled, and situated. In this way, it contributes to a broader reimagining of architectural education: one that promotes resilience not only through what we design, but through how—and with whom—we learn, perceive, and act.

Parallel sessions 1

Navigating Urban Resilience: The Impact of Temporary Use Initiatives in Brussels

Gabrielle Kawa
Waldo Galle
Niels De Temmerman

The value of temporary use in reactivating vacant buildings is gaining increasing recognition, leading to its broader adoption by public authorities, property owners, and civil society actors. In Brussels, where more than 6.5 million square meters of unused space exist, temporary use has become a professionalised strategy—particularly as an interim solution in anticipation of redevelopment projects.

Circular Design
Temporary Use
Urban Vacancy

This study examines temporary use in its integration within the context of urban renewal and resilience. Drawing on insights from literature study and an in-depth case study analysis, supported by semi-structured interviews, the paper explores how temporary use facilitates capacity building through experimentation, social learning and collective action. In addition, the paper reflects on the future, sustainability and continuity of temporary use projects. The case of Wood In Molenbeek (WIM) within Brussels' Sustainable Neighbourhood Contract (SNC) framework exemplifies how temporary use could contribute to long-term urban renewal strategies and thereby enhance urban resilience. However, temporary use still faces various challenges in this context by its current short-term vision and integration in urban renewal. This paper aims to open and facilitate discussion on how to navigate trade-offs between urban and community resilience and individual resilience facilitated through temporary use effectively

Parallel sessions 2

Equipping Architectural Graduates for Radical Care: Pedagogical Responses to Complex Urban Integration of Migrants

Jason Oberholster
Carin Combrinck
Hettie Schonfeldt

This PhD research examines how architectural education prepares graduates to address the complexities involved in the urban integration of migrants and refugees. Adopting a qualitative interpretive methodology, the study compares two academic programmes: the Unit for Urban Citizenship at the University of Pretoria in South Africa and the Architecture and Planning Beyond Sustainability programme at Chalmers University in Sweden. Using thematic analysis of interviews, course documents, and graduates' reflections, this research investigates educational approaches and their impact on graduates' readiness for inclusive urban practice.

Architectural Pedagogy
Urban Integration
Global Migration
Sustainable Livelihoods
Meaningful Engagement

The study identifies experiential learning, interdisciplinary methods, and community-based approaches as pivotal elements of both programmes, significantly enhancing graduates' capacity to engage with complex socio-spatial dynamics. Participants consistently described transformative learning experiences, noting how the curriculum shaped their professional ethics, empathy, and practical competencies essential for working in diverse and challenging contexts.

Notably, the research also documents critical barriers students and practitioners encounter, including emotional and ethical dilemmas, cultural miscommunications, and institutional limitations. Despite these challenges, findings emphasise that curricula grounded in radical care significantly improve architects' preparedness to contribute meaningfully to urban integration processes.

Ultimately, this study provides evidence-based insights for architectural educators, highlighting the value of pedagogical practices centered on radical care, social responsibility, and meaningful collaborative engagement. By fostering these capabilities, architecture graduates are better positioned to actively promote equitable, inclusive, and resilient urban environments, effectively addressing the challenges of global urban migration.

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Parallel sessions 2

Hållbar urban design-undervisning**Jarre Parkatti**

Undervisningen i arkitektur och urban design präglas i och med verksamhetens natur och yrkestraditionen i vårt land av ett pragmatiskt förhållningssätt där en stor del av färdigheterna förmedlas i form av tyst kunnande. Detta medför att många faktiska randvillkor för design- eller planeringspraktiken förblir underförstådda. Argument och teoretisk kunskap som inte backas upp av olika slags effektiva sanktioner, till exempel om en ekologiskt hållbar och socialt fungerande miljö, har svårt att hävda sig som "hårda fakta". I stället för att beaktandet av argumenten och teorin skulle utgöra kriterier för huruvida arkitekten är yrkeskunnig eller inte, kan frågor om hållbarhet och social funktionalitet därmed komma att handla om etiska ställningstaganden, hänföras till kategorin "bra att veta" eller betraktas som inspiration. I och med undervisningens praktisknärlighet överväger ofta färdigheter som antas nyttiga med tanke på verkliga design- eller planeringsuppgifter, såsom att "gömma in" ett stort antal parkeringsplatser på ett sätt som bevarar miljökvaliteter. Därmed bortses exempelvis från kunskap om alternativkostnaderna för parkeringsplatserna och vilka alternativa planeringslösningar varierande randvillkor skulle möjliggöra. Parallellt med kunskapsförmedling av det senare slaget skulle det också gälla att förmedla insikter om kunskapsbyggets teoretiska bakgrundsantaganden och perspektivberoende, som är större inom samhällsvetenskapen än naturvetenskapen. I denna studie undersöks läromedel samt urban design- och stadsplaneringsundervisning mot bakgrund av relevant urban design- och stadsplaneringsteori samt samhällsteori utifrån ett struktureringsteoretiskt synsätt.

*hållbarhet
stadsplanering
undervisning (utbildning)
urban design*

Parallel sessions 2

Promoting Critical Analysis of Sustainability in the Design Studio Curriculum: Case studies from Sheffield and Liverpool

Yun Wu
Ranald Lawrence

Architectural education increasingly navigates a landscape saturated with sustainability rhetoric, often emphasising 'net zero' design as readily achievable through regulatory and legislative change alone. If the correct rules and design guides are in place, everyone will follow them, and development can proceed without hindrance. This assumption overlooks the radical action required to achieve genuine sustainability in architectural design. Prioritising community wellbeing, energy security, carbon emissions, or economic factors – alongside material choices and the role of technology versus passive design approaches – all involve contested value judgments. Consequently, students must develop their own critical perspectives, as no definitive canon for sustainable design exists. This paper explores the challenges experienced in developing alternative pedagogical approaches to sustainability through studio teaching at Sheffield and Liverpool Schools of Architecture. It examines how giving students ownership of design briefs can foster the articulation and justification of their own sustainability priorities. It analyses the use of assessment tools (e.g., energy efficiency, embodied carbon) as part of a holistic approach to develop a deeper understanding of what is achievable in any given situation, rather than as simple metrics of success or failure. It questions how students and educators gauge understanding of sustainable design, arguing that self-identification of limitations and the recognition of failure can be more instructive than superficial evaluation of success. Examples reveal how students develop a deeper critical awareness of the limitations of rhetoric in achieving sustainable outcomes, and the persistent challenges that remain in transforming real-world design practice.

Sustainable design
Pedagogy
Design studio
Critical thinking

Parallel sessions 2

An integrated didactic approach: a new curriculum proposal for increasing radical care in sustainable building design education**Marika Mangosio**

The scientific community has recognised that the complexity of design activity - aimed at defining a resilient built environment - requires a radical paradigm shift and the adoption of a system-based approach. The complexity of resilient design also poses new challenges to university education: how can we sensitise the designers of the future to develop a truly holistic view of the problems?

*Integrated design
Project-based learning
Sustainable architecture
Building engineering*

The study intends to illustrate the methods and main results of an innovative teaching approach introduced in the Master's Degree Course in Building Engineering at the Politecnico di Torino starting from the A.Y. 2020-2021, through a complete reform of the training curriculum. This approach is rooted in the integrated design method and allows students to operate in a comprehensive, interdisciplinary and multiscale framework thanks to the careful coordination of teaching content, timing and knowledge transmission methods.

The integrated approach has as its strong point the sharing of the same practical exercise theme, according to the pedagogical method of "project-based learning". All the courses of the first year have been organised in an integrated and coordinated way to contribute to the development of the project theme characterizing the 'Integrated design for sustainable building' course, the true trait d'union of the curriculum.

The adoption of a single case study allows students to systematise knowledge and methodologies; working in group helps them to simulate the professional activity of a real design team. The experimentation is currently in progress: a collective assessment by the Degree Course College is planned at the end of this year.

Parallel sessions 3

Promoting multidisciplinary cooperation in lighting design through continuing education**Outi Parhankangas
Henrika Pihlajaniemi**

Although light – both daylight and artificial light – is an elemental part of architecture influencing our well-being in multifaceted and profound ways, architectural lighting design is still a new and developing field of education. In Europe and globally, there is still a limited number of universities offering education on Bachelor or Master level to become a lighting designer. In Finland, there is no degree education, which would qualify students to be lighting designers mastering architectural and urban lighting. The professionals practising lighting design come from different educational backgrounds – For this shortage, an ESF funded project was conducted in 2019–2022, where a multidisciplinary continuing education program (60 ECTS) of architectural and urban lighting design was developed and piloted during two academic years. The educational pilot was evaluated with thematic analysis of feedback questionnaires (n=80), qualitative semi-structured interviews (n=18), training applications (n=85) and the analysis of the data concerning the students (n=185) and the courses they attended and passed.

*education
lighting design
architectural lighting
urban lighting
multidisciplinary*

In the paper, the results are reflected and discussed from the perspective of multidisciplinary, which is seen as an important feature both in the education and profession of lighting design. Aspects relating to the differences between continuing education and degree education, as well as different roles of the profession are discussed. In addition to the fact that lighting designers come from different educational backgrounds, lighting design is participated in and influenced by different roles of overall construction processes. When developing lighting design education, analysing in more detail these roles and processes is essential.

Parallel sessions 3

Architectural Care-taking : Theoretical Perspectives on Material Repair and their Implications for the discipline of Architecture – A Literature Review

Aislinn McCarthy

Repair work, typically understood as the act of fixing something that is deemed broken invites for a critical examination beyond its surface definition. Through a thematic literature review, the discourse surrounding material repair is explored from the perspective of architectural practice, focusing on repair-orientated thinking within early design deliberations. Informed and anticipated predictions of material aging, breakdown and deterioration over time are conceptually framed by an acceptance of buildings as living entities, composed of a complex network of material properties unifying an assembly, constantly in flux through ongoing reactions over a structure's lifetime. Disconnections unfold between this notion and the prevailing perceptions of realised architecture as something static, fixed momentarily in time, giving rise to a disciplinary gap between how buildings are created and how they realistically exist in the natural world. By tracing the mentalities, perceptions and practices inherent to building uphold, architectural repair is explored as an application of caretaking amid ethical considerations for the evolving role of the architect tending to the existing built fabric. Through *intending for* and *designing with* repair in mind, the nature of an often-overlooked discipline is drawn into focus, unveiling hidden visibilities, while responding to the shifting value assessments of materials in question of sustaining. Incorporating an architectural mending-mentality may aid in the transfer of information, from designer to maintainer and further to dweller, of the level of repair required for certain materials to maintain in ongoing states of cyclical repair.

Repair
Maintenance
Material longevity
Care
Architectural value perceptions
Disrepair
Brokenness

Parallel sessions 3

Facing the Dark Side of Architecture – Toward Radical Care in the Built Environment**Thomas R. Hilberth**

To engage in radical care for the city, we must first confront the structures—both physical and systemic—that produce harm. Architecture is not a neutral or inherently benevolent act. It has long been instrumentalized to assert control, enforce segregation, displace communities, and perpetuate environmental degradation. These are not merely unintended consequences but, at times, deliberate strategies embedded within architectural and urban planning practices. Understanding this dark side is essential if we are to imagine and enact forms of care that are not superficial, but structural.

This text critically examines how architecture has historically operated as a tool of domination and exclusion, revealing the ways in which certain forms of violence—social, spatial, psychological—are designed into the built environment. By tracing case studies across housing, public infrastructure, and urban renewal projects, it argues that confronting these realities is a prerequisite for a truly caring practice.

Radical care, in this context, demands more than sensitivity or consultation; it calls for a fundamental reorientation of architectural values and priorities. It requires accountability, historical awareness, and a willingness to dismantle the spatial expressions of injustice. Care becomes radical when it challenges the very systems that have normalized harm under the guise of progress or aesthetics.

By shifting the architectural gaze from objects to relationships, from form to ethics, this contribution proposes pathways toward an architecture that not only shelters but supports, heals, and empowers. Only through such reckoning can we begin to care—for the city, and for each other.

Parallel sessions 3

The potentiality of artistic research in architectural education

Tordis Berstrand
Aleksandra Raonic

“It matters what matters we use to think other matters with,” Donna J. Haraway famously paraphrases the anthropologist Marilyn Strathern.¹ While Strathern is concerned with the ways in which ideas inform other ideas (1992: 10)², Haraway’s focus is on how entangled relationships in troubled times produce stories, thoughts, knots, and worlds through response-able gestures. When calls to radically transform the ways in which humans live on the planet sound with increasing alarm, Haraway’s richly textured fabrics of relational thinking invite us to become co-weavers of more sustainable futures. Such calls concern the architectural profession, which as part of an over-consuming construction industry must find new ways of practicing. By extension, they involve the educational setting where feminist ethics of care guides us in the transition to pedagogical practices and curricula that render the students capable of responsible collective practice.

Architectural education
Artistic research
Soft tectonics
Ethics of care
Response-ability

The Master-level design studio ‘Experimental Practice’, anchored in a newly established textile workshop at the Norwegian University of Science and Technology, is a testing ground for this new approach. Centred on artistic research where teams of students develop textile-based architectural structures – soft tectonics – the course also involves performances in public space and an elaborate design journal. The paper argues that such processes of experimentation and reflection make artistic research practices particularly well suited for care-based transformative learning in the architecture studio.

¹ Donna J. Haraway, *Staying with the Trouble: Making Kin in the Chthulucene* (Durham: Duke University Press, 2016), 12.

² Marilyn Strathern, *Reproducing the Future: Essays on Anthropology, Kinship and the New Reproductive Technologies* (Manchester: Manchester University Press, 1992), 10.

Parallel sessions 3

Designing with Wood: Educational Strategies for Sustainable Architecture**Laura Cristina Zubillaga
Pekka Heikkinen**

This paper investigates how sustainability is integrated into wood architecture education with a focus on the Wood Program at Aalto University. Wood, as a renewable and low-carbon material, offers a compelling context through which to explore sustainability in both theory and practice.

As the construction industry faces increasing pressure to adopt sustainable practices, architectural education plays a critical role in shaping future professionals' values, knowledge, and competencies. The Wood Program focuses on understanding the use of wood as a material, from the forest to the completed building project, incorporating resilient practices.

Four different courses, each with varying teaching methods and content, were assessed to identify the specific approaches used to foster a holistic understanding of sustainability: a lecture course, a research course, a studio course, and a design-build course focused on wood architecture. In addition, the study highlights the challenges and limitations involved in integrating sustainability topics across student learning pathways.

The study builds on educational theory and sustainability frameworks to examine how teaching methods, material choices, and hands-on experiences influence students' understanding on resilience architecture. The research draws on a qualitative analysis of course materials, such as learning outcomes and assignments, teaching methodologies and student's theoretical, design and built project outcomes.

By analyzing the pedagogical strategies employed in the Wood Program courses, the paper aims to contribute to the discourse on sustainable architecture education. It offers insights into how material-based learning environments can shape ecological literacy. It identifies gaps and proposes recommendations for enhancing sustainability education within architecture curricula.

Parallel sessions 3

Facilitating the becoming of a caring practitioner**Ila Narjus
Essi Nisonen**

In a climate emergency, the work of architects should promote care and resilience. This can only be achieved through professional identities and praxis that strive towards holistic sustainability. Their foundation is formed through education. Broadly, values and cultures transmitted through education form the foundation of one's knowledge, worldview, and mechanisms of meaning-making. In the context of professional education, they form the foundation of one's professional praxis.

To promote a transition towards care and resilience, it is paramount to understand what kinds of professional identities and praxis architectural education currently transmits, explore their justifications, analyse their validity in the climate emergency and propose alternative courses of action. Unsustainable design praxis produces unsustainable architecture. In her master's Thesis "Becoming the Caring Practitioner" Ila Narjus proposes an alternative approach to being an architect. Instead of following a series of linear steps apart from the communities one works with (strategic briefing, concept design, spatial and technical design, construction, handover...) being an architect can be about iteratively adopting a series of positions in relation to the communities one works with – becoming an integral part of the community, being a tool(kit) for the community, and being available.

Through a narrative literature review, this contribution explores how architectural education can promote radical care for resilience by introducing these positions as a foundation for the educational process of becoming a caring architect. We explore how, through education, we could facilitate the formulation of architectural identities and praxis that promote social justice with what already exists.

Parallel sessions 4

From the 'More Knowledgeable Other' to Collective Care: Co-curating the Cambridge Room

Zhuozhang Li
Minna Sunikka-Blank
Ruchit Purohit
Flora Samuel

Taking the Cambridge Room as a case study, this paper critically reflects on the forms of community engagement and argues for 'co-curation' as a new model for unsettling hierarchies in the dynamic processes of sharing and exchanging knowledge. Drawing upon emerging theories on care and critical curatorial studies, we examine 'co-curation' as an embodiment of 'collective care' from two lenses: 1) understanding care as a feminist concept grounded in relationality and plurality; and 2) foregrounding the etymological link between 'care' and 'curating', derived from the Latin word *curare* (to take care).

Critical futures
Care
Sustainable architecture
Built environment
Education
Spatial practices

Situated in one of the most unequal cities in the UK, the Cambridge Room - registered as a charity - aims to advance education for the public benefit and widen civic participation in the planning and design of built environments. Through a series of interconnected programmes, this paper explores how curating can be seen not only as the act of putting things together but also as a practice of educating, criticising, and enabling.

Focusing on the design and development of the Cambridge Room, the paper critically analyses how the Room, pedagogically, serves as a learning instrument for not only children, residents, and young people, but also planners, architects, policymakers, and scholars who are often seen as the 'More Knowledgeable Other'. We argue that co-curation, as a new model for civic engagement and curriculum development, creates a space of difference that registers alternative voices and imaginaries from often-overlooked 'decentred' groups.

Parallel sessions 4

Reconfiguring Architectural Pedagogy in Sino-Foreign Education: A Transdisciplinary, Entanglement-Driven Approach

Eugenio Mangi
Andrea Palmioli
Yucong Zhang

This paper examines the impact of reconfiguring a final-year undergraduate Architectural Design Studio module at a Sino-foreign university, positioned at the intersection of British pedagogy, which emphasizes exploratory inquiry and iterative learning, and Chinese architectural education, which prioritizes technical execution, standardized workflows, and structured problem-solving.

Sino-foreign education
Architecture Design Studio
Entanglement
Design Pedagogy
Meshwork

The reconfiguration introduces a transformative shift in pedagogy, moving beyond conventional layered disciplinary analysis of sites to a design-led exploration of interdisciplinary entanglements. It hypothesizes that an entanglement-driven methodology, structured through sequential phases of descriptive, critical, projective, and strategic analysis followed by design scenarios, enables students to develop adaptive and resilient design strategies that transcend traditional disciplinary silos. Drawing from Tim Ingold's meshwork, this approach reframes design as a mediating tool to uncover and communicate the site's dynamic interdisciplinary intersections rather than as an outcome of compartmentalised disciplinary perspectives.

Using an iterative, practice-based methodology, the research examines the revised pedagogical model through classroom case studies, peer reviews, and student surveys conducted between the academic years 2022 and 2025. The analysis of the collected data underscores the central role of relational design methodologies in integrating ecological, social, and spatial justice considerations into resilience-building processes through the lens of radical care. While the proposed model is designed to cultivate radical thinking, students report difficulties in adapting to its demands due to limited prior exposure to multidisciplinary methodologies in their earlier education. However, they acknowledge the importance of engaging with complex, environmentally responsive design challenges to navigate the escalating unpredictability of environmental and socio-political landscapes.

Parallel sessions 4

Radical Domesticities: Rethinking Housing Design Education in Sweden through the Lens of Care**Daniel Movilla Vega**

How can architectural education equip future practitioners to design housing that is not only resilient and sustainable, but also grounded in care, equity, and ecological awareness? This paper presents a pedagogical case study, Radical Domesticities, a research-based design studio in a Master's programme in Architecture at Umeå University, which explores how education can foster resilience through the lens of radical care. Responding to the urgent need for inclusive and sustainable housing in Sweden, particularly for ageing populations and other underrepresented actors, the studio positions education as a transformative space to cultivate ethical, social, and ecological responsibility in future architects. The relevance of this work lies in its challenge to conventional notions of domesticity and housing architecture by foregrounding the agency of both human and more-than-human actors in the built environment. Through the theoretical lenses of feminist care ethics, posthumanism, and socio-spatial justice, the studio interrogates dominant housing narratives and expands the architectural brief to include hidden, marginal, and ecological perspectives. The pedagogical framework is structured around four methodological pillars: code (critical analysis of housing policies and building regulations), type (typological inquiry that questions conventional housing models), sample (full-scale care-oriented experimentation), and fiction (cultural and speculative narrative-making). Focusing on special housing typologies, students engage with innovative care precedents and develop design proposals that respond to real-world constraints and community needs. The paper shares theoretical foundations, methods, and selected studio outcomes to illustrate how radical care can be operationalized in design education to support caring and equitable futures for the built environment.

Parallel sessions 4

Beyond New Construction: Rethinking Futures of Spatial Practices in the Classroom

Hella Hernberg
İdil Gaziulusoy

New construction and demolition are among the world's most significant contributors to carbon emissions, the use of energy and material resources, and waste generation. Architecture and other spatial practices must find ways to address spatial needs in more sustainable ways, focusing on caring for buildings, resources, and environments that already exist. Yet, this calls for a radical paradigm shift in values and practices surrounding architecture. Towards enabling such a paradigm shift, critical futures can help us identify and challenge the assumptions we collectively hold and reimagine spatial practices beyond new construction. It can also help us understand how our assumptions about futures steer our thinking and actions in the present.

Critical futures
Care
Sustainable architecture
Built environment
Education
Spatial practices

This paper reflects on our experiences of using critical futures methods in the Aalto ARTS summer school on Spatial Practices beyond New Construction. In this course, international, multidisciplinary student groups employed Causal Layered Analysis and visioning methods to unpack the current paradigms of the urban development and construction sectors, to envision an alternative society where new construction is limited, and to imagine new spatial practitioner roles in such a society. As teachers of the summer school, we studied the teachers' and students' experiences of using these methods in workshop settings through teachers' observation and reflection notes, students' learning diaries, and a feedback survey. Through this research, we developed an understanding of how critical futures methods can contribute to the students' developing futures literacies and how the students evaluate this experience from the perspective of their future professional life.

Online session

Creative writing as a pedagogical tool for creating care**Elizabeth Donovan**

With the continuing paradigm shift towards understanding humans as part of ecological systems, how we engage with non-human perspectives is a pedagogical challenge. It raises questions of how we can create empathy towards species other than our own and include all in our built environment. This is often a challenge as other species cannot speak on their own behalf, and often need experts, such as biologists or ecologists. Thus, it requires a change in how we, as architects, collaborate with other professions and understand and value space and place.

This paper aims to illustrate a pedagogical approach that iterates between creative drawing and writing as a way to engage with themes of place and space from a regenerative thinking perspective. It will exemplify the learnings from the course, as well as provide pedagogical reflections on how care and empathy can be embedded within a theory and writing course.

Tools such as peer learning and feedback, collaborative learning, co-presence, and iteration were used in connection with analogue drawing and creative writing, which are especially relevant for changing the point of view on how and why we design, giving voice to perspectives that are often difficult to comprehend.

Theme 02

Energy

Parallel sessions 1

Unidad Vecinal 3: Understanding Care and Maintenance in Social Housing**Nuria Casais**

'Cultures of Maintenance' research project addresses the gap between cultural practices of upkeeping European postwar housing buildings and the balance between institutional and informal maintenance. 'Unidad Vecinal 3', a housing complex designed by Antonio Corrales in 1967 in A Coruña (Spain), contributes to the research discussion on the localised performance and formats of care from the maintenance practices viewpoint.

Promoted by Obra Sindical del Hogar, the project aimed to tackle the housing shortage with 400 family dwellings (approximately 2,000 residents) and 45,000 built sqm in the disconnected outskirts of the city. Today, 'Unidad Vecinal 3' condition is inconsistent, reflecting conflicts and contradictions due to varying ownership and maintenance decisions between institutions and residents. This contribution identifies existing examples of caring and maintenance practices carried out by owners and administrations at different scales and with different impacts, in spaces of both private and public ownership, identifying challenges, failures and successes. Interviews with residents and media become fundamental in revealing the distinctive maintenance solutions, formal and informal design details, and decision-making processes.

'Unidad Vecinal 3' particularities contribute to the discussion on the understanding of social housing as a cultural contextual positioning, and the role of ownership in maintaining, caring and prolonging the life of existing social housing estates and their communities.

Parallel sessions 1

The Role of Care in Domestic Heating Transitions: Insights from Finnish Case Studies

**Sarah Kilpeläinen
Sofie Pelsmakers
Raul Castano-Rosa**

The concept of care in domestic heating encompasses not only the physical provision of warmth but also everyday acts of care related to comfort, practices, and enjoyment. A better understanding of the diverse forms of care in domestic heating provides meaningful insights into designing heating systems that meet the diverse needs of individuals while promoting sustainable heating practices now and in the future.

*Domestic heating
Energy transitions
Oral histories
Sustainability
Heating futures*

This paper investigates the role of care in domestic heating transitions by analysing 110 oral histories and visual material collected alongside the oral histories in the heating seasons 2022/23 and 2023/24 in three Finnish case studies. The material provides unique insights into how different forms of care are framed both narratively and visually.

Our analysis identifies diverse types of care, such as care for family members, the environment, and cultural traditions, as key drivers in heating decisions within the home. These everyday acts of care have not been adequately considered in policy debates and design decisions, yet they impact how participants develop and use heating systems. Mapping forms of care allows to pinpoint subjects and objects of care and how they interrelate in the home.

The findings highlight the importance of creating a presence for care in design and policy decisions, impacting the heating transition. This contributes to shaping energy transitions that address concerns beyond sustainable and technological development and instead center meeting the needs of individuals while also promoting strong sustainability.

Parallel sessions 1

Holding Space with Care: Acts of Maintenance in Self-Organised Cultural Practices**Natalie Novik**

Across diverse contexts, self-organized cultural initiatives boldly assert their presence in socio-ecological transformations by reclaiming unwanted architectures. These decaying environments are frequently treated as the sole viable territories for cultural activities, reinforcing the notion that culture must inhabit spaces of decline. Through close engagement with self-organized cultural initiatives, this research investigates their role in shaping lived environments by occupying socially and spatially liminal positions, transforming unwanted architectures into public sites of maintenance through practices of care-driven activism, and, crucially, contributing to the collective production of the commons.

Positioned within the domain of critical spatial practice, my research project intends to contribute to composing new ethical perspectives on design professions in the emerging era of post-extractivist thinking using maintenance as a theoretical lens. At the intersection of artistic research and urban studies is where critical spatial practice takes shape. In the context of self-organized cultural spaces, maintenance is often perceived as a transactional practice—a means of ensuring access in exchange for labor. Recognizing maintenance as an assemblage of infrastructural and organizational systems – a network composed of objects, tools, relationships, practices, scores, and effects – challenges the rigid dichotomy between order and disorder, revealing the nuanced realities of how urban systems function and are sustained. Grounded in feminist epistemologies, the methodology combines embedded ethnography with participatory action research, using collaborative mapping of maintenance practices as a spatial and relational tool to explore how self-organized cultural initiatives transform space. This perspective also repositions architecture: rather than an industrial, product-driven discipline, it is understood as a practice embedded in everyday life. Through acts of maintenance—those mundane, often invisible forms of care—architecture becomes a means of sustaining, adapting, and inhabiting space. Such practices bring attention to overlooked aspects of spatial production and propose new ways of living and organizing that are rooted in ethics of care, collaboration, and resistance to extractive capitalism.

Parallel sessions 1

Fostering civic resilience in Urban Living Labs

Elina Alatalo
Markus Laine
Mikko Kyrönviita

Local governances have become supportive of urban experimentation to promote systemic change towards sustainability. Common forms of such governance are Urban Living Labs (ULLs). A distinct feature of ULLs is their explicit learning function, where actors across various fields and sectors are engaged.

However, when seeking change through Living Labs, city organizations face a dual challenge: they must drive change while also being adaptable and capable of learning themselves. Various context-connecting practices among stakeholders are crucial for balancing this challenge. Our research further develops these practices by focusing on interactions between citizens and key city authorities. This approach enhances the civic dimension within the resilience discourse.

Our case study focuses on the district size Hiedanranta Urban Living Lab (ULL) in Tampere, Finland, where citizen involvement and fostering bottom-up initiatives has been central. The analysis is based on versatile materials from action research conducted between 2016 and 2025. This long-term data allows to ask: How can city authorities increase civic resilience during different phases of urban development? To understand the temporalities of ULLs, a system lifecycle view is applied, including an often-overlooked early phase of setting the stage, which can efficiently integrate citizens into the stakeholder network. Key findings reveal that persistent collaborative efforts with citizens from the outset were crucial in setting the tone for the entire area development process. These efforts were instrumental in realizing new design concepts, such as Nordic Superblocks, and highlighting the importance of shared spaces.

Urban Living Labs
Civic resilience
Context-connecting practices
System lifecycle
Top-down
Bottom-up
Grassroots

Parallel sessions 2

Players and painted stage: Ephemeral architecture in holistic low-carbon retrofit projects**Dara Nerweyi**

To reach EU climate goals, the European residential building stock needs considerable retrofitting. To ensure performance goals are met in reality and not only in simulations, a more holistic building process is needed. However, the building is traditionally left unsupervised after commissioning, following a linear design-construction-handover process. This paper aims to provide a better understanding about how to address this challenge by using the Horizon Europe INPERSO project as case study and Dorita Hannah's "Nietzschean architecture" as a theoretical framework.

Ephemeral architecture
Performance
Retrofit
Stakeholder engagement

The INPERSO project's key goal is to carry out low-carbon building renovations through holistic stakeholder engagement from the planning and design phases to commissioning. Key actions consist of a smart monitoring plan, engagement and training sessions, and long-term sustainable plan. These align with Hannah's observations as the project is treated as ephemeral/temporal and democratic or collaborative as the building is a time of negotiation rather than a static object.

In this context, a view of sustainable architecture as performance is proposed. Unlike plastic arts like painting or sculpture which are "finished" and remain in stasis, architecture should move towards ephemeral arts like song and dance which are "performed". This is reflected in the collaborative process of holistic building retrofits where the building continues to "perform" after the commissioning phase, often not as intended. It therefore needs to be returned to, evaluated, and adjusted so that the repeated performance matches the simulated "routine". Buildings need to be "rehearsed" to ensure the performance matches the design.

Parallel sessions 2

**Telework and thermal discomfort at home
– a new energy vulnerability in urban context
since pandemic?****Hyerim Yoon
Rafael Vicente-Salar**

The COVID-19 pandemic of 2019-2020 caused significant re-organization of everyday life during and after the lock-down, starting from the intimate and private place of home. It accelerated the transition to teleworking, representing a significant socio-technological regime shift. This has resulted in changing the organization of home, a private space which has majorly focused on reproduction and care, to become part of the space of production with increased time spent at home. The structure shift and consequent change in household dynamics led us to conduct exploratory research addressing the following questions: Do teleworkers experience thermal discomfort at home? Did this change during and after the pandemic? How does the regime shift impact household energy vulnerability? A survey was conducted for households living in the Barcelona Province, and 600 households responded. Preliminary results demonstrate that a significant proportion of households that worked from home (full-time or partially) after the pandemic experienced thermal discomfort during winter and summer. These households, despite having a job, expressed challenges in effectively heating and cooling their homes as they faced an increase in living costs during and after the pandemic. Moreover, the high proportion of households with thermal discomfort before the pandemic revealed the structural problems resulting from the built environment with low energy efficiency. Our research contributes to broadening energy vulnerability studies by including teleworkers as an emerging group that has yet to be examined in depth. It also raises critical questions about how the energy cost and environmental cost once borne by traditional office spaces are increasingly being shifted on to individual households.

Parallel sessions 2

(Dis)Orienting the Green Transition: A Multimedia Mapping of Alternative Temporalities

Pia Palo

The green transition has emerged as a dominant narrative for climate action, driven in Europe mainly by private-sector megaprojects—from battery factories to green steel and hydrogen plants. Yet scholarship reveals that its rapid, growth-oriented logic often sidelines social justice and obscures entanglements with past extraction, displacement and dispossession.

Green transition
Just urban futures
Spatial justice
Multimedia mapping
Interstitial temporality

Through an architectural lens, I will critically engage the entanglements of green transition narratives in this presentation by examining how built environments both enable and unsettle them. I ask: How can multimedia mapping surface latent spatial and temporal layers in green transition sites? and What contradictions emerge when these layers are laid bare? Focusing on a pilot site in Skellefteå, northern Sweden, I explore multimedia mapping as a way to generate layered narratives of the spatial and temporal complexity of green transition narratives. The approach rests on a relational understanding of built environments and is guided by an actor-network sensitivity.

Initial key insights include:

- **RESIDUE & RUBBLE: Buried archives of extraction**
Chemical residues in remediated soils reveal a geological record of environmental injustice.
- **RIOT & PRECARIETY: Workers (his)stories**
Historical and contemporary precarity has repeatedly sparked collective mobilisation, only to be refracted through crisis-driven growth rhetorics
- **RETOUR: Interstitial temporality**
The site's boom-bust cycles generate ambiguous, in-between times that escape linear progress narratives.

By revealing these alternative stories and the contradictions to green transition narratives they imply, multimedia mapping provides a starting point for further exploring the role of built environments in imagining more just and inclusive approaches to urban transitions.

Parallel sessions 3

The role of energy communities to promote energy security in Finland**Jasmin Laitinen
Raul Castano De la Rosa
Jussi Valta**

In the ever-changing global world and the midst of tightening international relations, security is becoming a crucial theme in energy planning. Energy community as a concept has emerged as a result of technological development, but also decentralization and democratization of energy systems. Energy communities have potential in enhancing energy security both locally and nationally. However, the interplay between public and energy company-led energy security practices and community-led practices is complicated, and therefore energy security is not often highlighted in energy community projects.

*Energy security
Energy community
Finland
Energy planning*

This study aims to untangle the potential energy communities possess to promote energy security by analyzing what kind of energy security aspects are the most prevalent and neglected among the different actors. As a theoretical approach for this study, a broad definition of energy security is used, including aspects of securing supply, affordability, environmental and societal effects, energy infrastructure, governance and efficiency. Finland is used as the case context for its characteristics of being sparsely populated but also known for its preparedness for conflicts. Data collection is done through semi-structured interviews, targeting a variety of energy community actors involved in the selected energy community projects.

Results will highlight the untapped potential energy communities could provide for energy planning in terms of security. It is expected that certain energy security dimensions are more prominent than others. As energy community planning appears top-down in nature in Finland, there is need for bottom-up approaches to bring upfront the neglected dimensions and, consequently, promote energy security fully.

Parallel sessions 3

Assessing Spatial Justice in Urban Regeneration: A Methodological Approach for Milan's New Campus Project

Giulia D'Antonio

Spatial Justice involves organizing and managing space and distributing resources. Adopting a spatial justice approach can mitigate discrimination in urban areas, despite a lack of consolidated operational tools for planning and evaluating urban policies. Despite this, Social Impact Assessment is currently being developed as a tool for measuring the impact of public policies. The focal point is understanding if SIA can become a tool to guarantee **more just projects and processes**. This contribution addresses these questions through field research in the Città Studi neighbourhood of Milan, currently impacted by a major urban regeneration plan. The Università Statale intends to relocate its science departments to the former Expo area, leaving the future of Città Studi undefined. This case offers a critical lens on the university's evolving role: not only as a centre of education and research, but also as an urban actor—sometimes operating as a real estate developer—with significant influence on the city's spatial and social dynamics. The research follows a three-phase approach. The first phase involves mapping the realities and communities to be involved. The second phase employs the exp-EIA (experiential Environmental Impact Assessment) method for exploring the area and assessing people's reaction to the environment in its existing condition. The third phase, conducted through multiple meetings, is dedicated to identifying outcomes and indicators suitable for evaluating the urban regeneration project with a spatial justice perspective. The overarching goal is to develop social impact indicators collaboratively, ensuring a fair and participatory assessment of the transformations brought about by the project.

Spatial justice
Social impact assessment
Urban regeneration
Popular education
Co-learning

Parallel sessions 3

Facing a Warming Climate: Can Civil Defence Shelters Serve as Potential “Cool Rooms”?

Peng Qi
Anna-Kaisa Viitanen
Raul Castano De la Rosa
Sofie Pelsmakers
Jonathon Taylor

Since the 1930s, Finland and a number of other European countries have mandated the construction of civil defence shelters in response to security threats. These include both property-specific house shelters and public shelters, which are now widely used as storage rooms and various public facilities, respectively. These shelters are typically located underground, even though some have been built on the ground floor as well. Intended to provide protection against explosions, collapse of buildings, radiation and substances hazardous to health, these shelters are typically built from reinforced concrete or rock, resulting in significant thermal mass.

In the decades following their initial mandate, new threats have emerged in Europe, notably climate change, with rising average summertime temperatures and increasing frequency, severity, and duration of heatwaves. As a result, there has been increasing discussion about the potential for “cool rooms” in homes and communal cool spaces for the public. Civil defence shelters, where thermal mass can help maintain lower indoor temperatures during heatwaves, may offer such spaces. Can the cooling potential of underground civil defence shelters offer additional resilience against the changing climate? What characteristics may support this, or prevent this?

This study, supported by literature review, case study analysis and monitoring data, explores how existing civil defence shelters can be repurposed to a new overheating mitigation strategy. Barriers related to psychological well-being, economic viability, and spatial design challenges are discussed. The findings provide valuable insights for Finland’s urban planners and architectural designers on the role of civil defence shelter to mitigate climate change and enhance societal sustainability without compromising residents’ well-being.

Parallel sessions 4

How can solar panels become a fundamental building element of future architectural design? A perspective from Finnish built environment

Mansi Garg

Increasing share of renewable energy is one of the key focus areas in energy policies of Finland. Solar energy has the highest increase in governmental funding. Following the EU Solar Energy Strategy and energy policies in Finland, the City of Helsinki has been installing PV panels on every new service building as well as on housing owned by the city. However, limited roof spaces pose a challenge in multi-story buildings, which have low roof area compared with building volume. Utilizing building integrated PV (BIPV) can serve as a solution to increase PV proliferation in built environment. Architects have been identified as a key stakeholder in BIPV. This research explores the possibility of making solar energy an integral and fundamental part of building designs. The study builds on the knowledge to promote the adoption of solar panels through structured workshops. The methods used are a mix of digital design build workshops and a questionnaire. In the workshops, architects try to integrate solar panels in their own digital 3D design models and calculate the total energy generated. The goal is to simulate the experience of considering solar panels during the crucial design phase. Through this methodology, we intend to identify the required changes to solar panels which will make architects more willing to consider them in their design process. The research output can be used in developing novel solar panels which aim to be widely accepted and integrated in new and existing urban environments.

Building integrated photovoltaics
Energy transition
Architects
Qualitative research
Workshops
Urban environments

Parallel sessions 4

On the compatibility of sustainable housing development with environmental objectives in the UK

Philip Graham
Anna Pagani
Michał Drewniok

In light of its manifesto commitment to build 300,000 new homes annually, the incoming UK government's 'Committee for Environmental Sustainability and Housing Growth' issued a call for evidence. Our response emphasised that housebuilding is critical for climate goals because the construction and operation of new-build housing makes up 12% of the UK's total consumption-based GHG emissions. Drawing evidence from embodied carbon modelling, design-game simulations and stakeholder engagement, our whole system response found little justification for the proposed house-building programme, even beyond its environmental consequences. Considering there are already 1.5 million empty or underused homes, continuous house building will not lower prices or expand homeownership, but rather perpetuate underlying distributional issues, including car lock-in and the loss of social housing stock. Instead, we offer alternative pathways to housing delivery that are research-backed and compatible with the environmental objectives of the planning system. This is premised on establishing a sufficient level of housing space per person and applying this to: (a) the available floor area capacity in any given area; (b) the potential for expanding this capacity through a combination of retrofit, subdivision, extensions and limited new build; and, (c) headroom relative to climate commitments. We recommend four ways that a radical rethinking of the housing model might refocus provision on the social good: (1) modernise the planning rules; (2) decarbonise the tax system; (3) support innovative finance that incentivise the reuse and retrofit of existing homes; (4) encourage systems that match living space to changing and changeable housing needs.

Housing sufficiency
Systems thinking
Panetary boundaries
Adjustable space
Embodied carbon

Parallel sessions 4

Proposal for the Development of an Architectural Sustainability Index Integrating Biomimicry Principles, Vernacular Architecture, and User Perception

Hakim Herbane

Using nature as a model, measure, and mentor, biomimicry seeks to develop innovative and resilient architecture in response to our growing climatic, social, and economic challenges. In this context, Canada's Indigenous communities seek to establish sustainable production systems for their built environments that are attuned to their surroundings' unique human, technological, economic, and ecological characteristics. In alignment with their philosophy, biomimicry holds great potential, although its approach to implementing sustainability requires further refinement.

Sustainability
Biomimicry
Vernacular Architecture
Community involvement
Implementation design tools

To better understand and address the issues inherent in this process, a literature review focused on defining architectural sustainability and biomimicry has revealed several promising pathways. Key findings emphasize the significant role of user involvement in shaping sustainability and its implementation methodologies. Additionally, vernacular architecture, which reflects practical biomimicry, possesses an intrinsic sustainability quality that warrants careful examination to guide the execution of architectural sustainability. Moreover, indexes emerge as straightforward yet impactful tools that enhance social engagement and the organization and evaluation of sustainable actions. Thus, this research aims to develop an architectural sustainability index inspired by biomimetic principles and influenced by the vernacular architectures of Inuit and Iroquoian cultures.

Following the presentation of the literature review findings, the conference will explore the methodology, its rationale, the resulting architectural sustainability index, and preliminary insights gained from its application in the context of architectural studio projects.

Justice by Design: Land, Relationality, and Indigenous Epistemologies in Africa's Energy Transitions

Galila Khougali

As global energy transitions accelerate, renewable infrastructures are increasingly framed as solutions to the climate crisis and as pathways to resilience in the built environment. Yet in much of Africa, these transitions remain entangled in colonial legacies of extraction, technocratic governance, and epistemic erasure (Banerjee, 2003; Tornel, 2022), continuing to impose development models that marginalize Indigenous worldviews (Dei et al., 2014; Fre, 2018). This paper argues that achieving justice in Africa's energy transitions requires grounding them in Indigenous knowledge systems that view land, energy, and infrastructure as fundamentally relational—shaped by ethics of care, spiritual responsibility, and ecological reciprocity.

Drawing on African Indigenist thought (Dei et al., 2014) and transformation literacy (Kuenkel and Ragnarsdottir, 2022), the paper critiques dominant green transition frameworks that universalize sustainability while reinforcing spatial and ontological violence. It draws from regional traditions, including Oromo Gadaa governance, Sahelian pastoralist mobility (Fre, 2018), and Shona ancestral stewardship (Mawere, 2013; Fontein, 2015), to develop a restorative design framework rooted in pluriversal Indigenous knowledges.

The built environment is reimagined not as a neutral site for intervention, but as a socio-cultural and ecological interface where memory, repair, and justice must be embedded. The paper outlines five principles of restorative infrastructure: relationality over efficiency, history and ritual in design, participatory stewardship, multispecies architecture, and alignment with ecological cycles. Ultimately, the paper contributes to just transition debates by offering a care-centered, regenerative approach to energy design—rooted in African worldviews, ontological plurality, and the imperative of land-based justice.

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Theme 03

Digitalisation

Parallel sessions 1

Usability of GIS Surveys in Protecting Sustainable Urban Darkness

Riikka Vuorenmaa
Henrika Pihlajaniemi
Outi Parhankangas

Participation in the formation of one's living environment is an ethic principle and has been studied and written about a lot. Participatory practises are used in urban lighting design. However, the framework and practises of protection of darkness in urban environments are just evolving. The different dimensions of sustainability and safety have to be considered from the perspective of various user groups.

Darkness
GIS
Participatory design
Urban lighting
Lighting vision

The aim of the paper is to present results of a pilot study about Geographic Information Systems (GIS) based surveys, targeted for informing darkness-sensitive lighting design and protection of darkness. The aim and methods position the study within the field of research-by-design, containing practical experimentation in a real-world setting. The research questions were: 1) What kind of data a GIS-survey produces regarding darkness? 2) How should the data be analysed and interpreted? 3) How can the understanding acquired inform the planning and design of urban darkness? 4) What are the challenges, limitations, and risks?

A GIS survey on experiencing darkness was conducted during winter 2024-2025 in a northern Finnish city using Maptionnaire platform. The respondents were asked to mark on the map dark-time places they consider meaningful, comfortable or uncomfortable, and to describe the places and the feelings they aroused. 241 respondents participated in the survey. The usability of the GIS-based method is assessed in the context of creating a lighting vision for the city through interviews with city officials and external consultants. The results contribute to inclusion of place user experiences in designing sustainable nocturnal urban environments.

Parallel sessions 1

Uusia tutkimustuloksia Turun tuomiokirkon keskiaikaisesta rakennushistoriasta [New research results on the medieval architectural history of Turku Cathedral]**Panu Savolainen**

Esitelmäni käsittelee johtamani akatemiahankkeen Uponnut katedraali. Turun tuomiokirkon keskiaikainen arkkitehtuuri, rakennushistoria ja taideteokset uusien tutkimusmenetelmien ristiinvalotuksessa (2024–2028) tuoreimpia tutkimustuloksia. Tämän hankkeen tavoitteena on ratkaista Turun tuomiokirkon rakennushistoriaan liittyviä kysymyksiä, jotka ovat askarruttaneet tiedeyhteisöä 1700-luvulta asti. Turun tuomiokirkko on yksi Suomen vanhimmista rakennuksista, monumentti, joka kuvastaa Suomen alueen kansainvälisiä yhteyksiä ja historiaa keskiajalta nykypäiviin. Tuomiokirkon keskiaikaista rakennushistoriaa ja esineistöä ei ole kuitenkaan tutkittu kokonaisvaltaisesti sitten 1920-luvun. Hankkeessa luodaan luonnontieteellisin ja humanistisin menetelmin uusi kokonaiskuva tuomiokirkon rakennushistoriasta, yleiseurooppalaisista yhteyksistä sekä kirkon esineistöä osana Pohjois-Euroopan keskiajan arkkitehtuurihistoriaa. Luonnontieteellisistä menetelmistä vertailevaan rakennustilikirjojen ja anekirjeiden analyysiin ulottuva monitieteinen yhteistyö tuo vastauksia tuomiokirkon keskiaikaiseen historiaan liittyviin kysymyksiin. Hanke luo myös uusia menetelmällisiä avauksia yhdistelemällä historiallisten tietomallien, analyysien ja asiakirjojen käyttöä arkkitehtuurihistoriallisessa ja rakennusarkeologisessa tutkimuksessa.

Parallel sessions 2

Learning for Digital Change: Impact of Software on the Architect's Profession**Leif Östman**

The digitization of the architectural profession is undergoing a radical transformation, fundamentally altering how architects work. Software tools are increasingly integrating functionalities that were previously separate tasks requiring expert competence. Despite these changes, the core competencies of architects—creative design, management of design processes, and critical evaluation of proposals—remain irreplaceable. However, detailing work, which constitutes a significant portion of an architect's design contract, is becoming easier and partially automated, leading to a reduction in the volume of hours required for architects.

This paper explores a potential scenario where architects incorporate more tasks into their responsibilities, in contrast to a scenario where the scope of the architect's field is reduced. They incorporate functions related to early design stages, such as sustainability, cost optimization, and design management. As a result large segments of the architectural profession will require reskilling.

Through a comprehensive literature review, this paper compiles and analyzes estimates on the impact of software development on the architect's profession. Technological changes are expected to introduce AI-powered generative design tools that enable architects to quickly generate and explore numerous design alternatives through prompts. Future software will optimize the use of materials and energy by analyzing design parameters and environmental data, leading to sustainable and cost-effective designs. Additionally, project management will benefit from improved tools for coordination and collaboration.

In conclusion, the divide between design knowledge and software competencies is expected to widen. Therefore, it is essential to prepare architecture students for a skillful combination of both domains.

Parallel sessions 2

Developing a Digital Simulation Tool for Enhanced Participatory Design

Jenni Poutanen
Elisa Enlund
Heini Järventausta

This study explores using user data in work environment design and the development of a digital simulation tool to enhance participatory design process with objective information. With rising costs and changes in work life, workplace design often faces conflicts and strong reactions. The tool simulates time-based user profiles, collecting, processing and visualizing user-needs to improve communication between employees and designers during participatory workplace change processes.

This study focuses on a case study and action research in a participatory design process. The tool was developed and piloted as a part of a small-scale of a workplace renewal, using survey results from 2022, interviews with supervisors in 2023, and a literature review. The tool underwent several iteration rounds and was tested in two workshops, with data from the tool, plan layout versions, and workshop materials used for piloting.

The tool supports participatory design process by providing user-based information and facilitating interaction among stakeholders. It simulates user-profiles and workplace layout options, serving as a platform for dialogue, decision-making, and consensus-building in a work environment change. Thus, it benefits human-centred design and responsive workspaces.

The work environment design often relies on the architect's interpretation and experience. The piloted simulation model shows universal potential. The tool will be further developed to include a user-needs survey.

Parallel sessions 2

“SPACE Girls”. Feminist Self-Organised Models of Learning**Eleonora Antoniadou**

This paper explores Feminist Self-Organised Models of Learning through the work of SPACE Girls, a collective of female architects and artists who exchange knowledge through hands-on, collaborative practices. Emerging from the limitations of institutional and patriarchal models of architectural education — where collective learning is often framed but rarely meaningfully practiced — SPACE Girls reimagine learning as a process rooted in experience, dialogue, self-direction, and resilience.

Feminist Pedagogy
Self-Organised Learning
Experiential Learning
Collective Knowledge Resilience
Hands-on Learning
Interdisciplinary Collaboration

Formed in 2019, the group developed two live projects for a summer festival, bringing educators and students from different institutions and backgrounds together. Their collaborative process combined peer reviews, co-design workshops, social gatherings, and collective construction, offering an alternative model where knowledge is continuously produced through shared labor and creative experimentation.

This paper situates SPACE Girls within a broader feminist history of self-organised learning. It connects their practice to earlier women-led art, design, and architecture initiatives — from 19th-century reading groups to 1970s feminist design collectives like Matrix and Womanhouse. Moving beyond top-down educational hierarchies, the group positions learning as a social and political process shaped by experience rather than institutional validation.

Through this case study, the paper examines how knowledge circulates within self-organised groups, challenging the conventional roles of “educator” and “student.” It highlights how interdisciplinary collaboration can foster inclusive, resilient forms of architectural learning.

Parallel sessions 3

Resilience as Infrastructure: Exploring Commons-Based Approaches to Preparedness in Northern Sweden**Sara Thor
Cornelia Redeker**

In response to the vulnerabilities of centralized infrastructures, exacerbated by climate change, geopolitical instability and supply chain disruptions, the case study Resilienta Landsbygder in Northern Sweden investigates how architecture can support local resilience through radical care. The project explores commons-based, nature-driven strategies that foster preparedness beyond emergency response.

Focus on preparedness has increased nationally and civic society is recognized as playing a key role. A critical concern is access to food, water and energy, and reports on insufficient food production nationally coupled with centralized water and energy systems highlight the need for local strategies that strengthen self-sufficiency.

The project draws on a Swedish emergency response model; the SOT (Service och Trygghetpunkt), a community-operated infrastructure representing a contemporary common. While the SOT-model has the potential for broader civic support, its long-term role remains underdeveloped. This research reframes it as a site for everyday resilience and care, exploring how spatial design can integrate socio-ecological values.

Through participatory processes - interdisciplinary workshops, interviews, and community surveys - design scenarios were developed for local food production and water self-sufficiency. These ranged from minimal interventions to fully decentralized systems using Nature-based solutions such as rain and snow harvesting and natural filtration, based on climate-specific data.

This paper explores how adaptations on the building scale can shift preparedness from a reactive stance to a more regenerative, care-focused practice. Drawing from the collaborative process, it highlights challenges and potentials of civic capacity, foregrounding the commons as a framework for embedding care and preparedness within the built environment.

Parallel sessions 4

Digital Berlin: Navigating Real Estate Speculation Through City Marketing and Hybrid Architecture**Claudia Seldin**

The narratives guiding city marketing in Berlin have shifted significantly since the 2020 campaign “wir.berlin” to include buzzwords such as ‘start-ups’ and ‘digitalization,’ pointing toward the municipality’s desire to build a competitive urban brand reflecting efficiency in high-tech economy. This campaign has been accompanied by a series of public policies facilitating the attraction of big tech branches and skilled international workers to the city, as well as the construction of tech districts. As a result, Berlin is witnessing a proliferation of PPP-induced and private real estate developments catering to tech businesses, which tend to glorify architectural projects centered on mixed-use or hybrid spaces, often presented as innovative. While this digital turn may appear to foster the local economy and disrupt the outdated modernist tradition of separating functions within design, it has in fact contributed to the worsening of existing urban problems, such as selective migration, land speculation, and gentrification.

City marketing
Hybrid Architecture
Innovation District
Real Estate Speculation
Tech City

This research questions the interplay between state-led city marketing and real estate interests, showing how a narrative crafted around technology and hybrid architecture is instrumentalized to create solutions for tech business in the name of profit. To understand this interplay, I apply a mixed-method approach centered on the gathering of secondary data on land value and the critical discourse and visual analysis of marketing campaigns for the state-initiative Berlin Zukunftsorte and selected private developments. The analysis proves how digitalization is often used as a catch-all term precisely to undermine care and resilience through its uncritical celebration in architectural and urban thinking.

Parallel sessions 4

Estimating the National Scale Economy of Reusable Building Components Through Simulation

Olli Koskela
Genrikh Ekkerman

Climate change requires to develop more sustainable and regenerative practices in industries, including construction. Strong incentives are being proposed for construction and planning of buildings to increase the re-use of materials and building components. However, even though showcase examples of materials and components being re-used successfully in individual projects, large scale markets to supply and deliver good quality re-usable components have not yet developed.

In this work, we aim to increase understanding of market behavior of re-usable components in different scenarios, and, to this aim, we developed a simulation tool to assist researchers in market analysis and modeling. In the simulation, we model the supply of recycled materials and the purchasing logic of second-hand material customers. The simulation environment enables the study of the effects of supply and demand trends and assess the influence of intermediate storage and upcycling facilities on the purchasing logic of customers. A large number of controls are provided to the user to generate market scenarios.

Our preliminary results are based on two different types of materials, one being a larger component with a higher requirement of upcycling before reinstallation and the other a bulk component with high throughput. Varying the costs of disassembly, upcycling and reinstallation and the availability of storage spaces, market behavior is analyzed in volume, commercial value, logistical requirements and carbon emissions. The AnyLogic based tool is shared for wider use contributing to market and policy research.

Parallel sessions 4

Client's Possibilities to Promote Circularity and Low Emission Goals in Extensive Renovation Projects – A Multi-Case Study

**Juha Franssila
Anna-Sofia Aaltonen
Antti Kurvinen**

The construction and real estate sectors are among the most significant contributors to waste generation and greenhouse gas emissions. The transition toward more circular practices offers a promising pathway to reduce the consumption of raw materials and the overall environmental impact of these industries. Therefore, the study aims to provide much-needed empirical insights into how clients can support circular and low-emission goals in large-scale renovation projects. The study analyses two renovation case projects: one involving the extensive refurbishment of a 1980s apartment building, and another turning a former public facility into residential units. Through a multi-case study approach, the study investigates how project clients can influence design and procurement decisions to support reuse and reduce CO₂ emissions. Data collection includes qualitative interviews with key stakeholders, pre-demolition audit documents, and life cycle-based CO₂ calculations. The analysis identifies which construction components and materials can be feasibly reused either onsite or in other projects. Additionally, the study examines which early design phase decisions provide the most environmental benefits for the renovation projects. The findings suggest that clients, alongside other stakeholders, can play a crucial role in advancing circularity in renovation projects compared to conventional practices. To conclude, the study offers practical examples of how clients can promote the adoption of circular economy principles in renovation projects and contribute to the green transition.

*Circular economy
Renovation projects
Client*

Online Session

Place Mending [Digitising with Care]**Daria Belkouri
Douglas Pritchard
Maria Sanchez**

This study presents a novel approach to participatory urban design, emphasising care for the places we inhabit by fostering community empowerment and collaboration between local communities and professionals. Through the exploration of connections between digitisation and urban walking, both as a design and co-creation tool, this study aims to interrogate the role of digital tools, specifically mobile laser scanning (MLS), in documenting and analysing urban spaces to provide not only a precise record of surroundings but offer a valuable foundation for future design interventions.

The dual function of MLS, serving both as a tool of architectural accuracy and as a medium for artistic abstraction is also explored through this research. The transformation of physical spaces into digital data alters the way people interact with environment. By reinterpreting urban spaces through scanning, the process generates abstracted images that challenge perceptions and highlight the complex relationship between technology and lived experience. As the data is acquired through walking this study also focuses on urban walking as a participatory design tool in creating a more powerful attachment with places and potentially rebuilding socio-spatial connectedness. Therefore, this study proposes Place-mending Toolkit—an evolving portfolio of patched urban areas in need of mending —empowering communities and designers with a method to co-create and merge the multilayered physical and digital context of cities. The research ultimately questions whether walking and digital interpretations of [un]familiar urban landscapes alter perceptions of cities, provide deeper insights and potential design solutions to shape inclusive public urban spaces.

Computation-Driven Innovation in Mass Timber Buildings for Enhanced Well-Being

Edward Becker

This paper explores how digitalisation can increase well being and radical care in the built environment by mitigating growth-limiting factors for biophilic mass timber building systems via emerging digital tools and services. In the United States, the world's largest forest products market, mass timber building systems which are commonly understood to be both sustainable and enhance inhabitant well-being are experiencing a near exponential growth rate with over 3,000 mass timber buildings in planning, construction, or completed since 2016. Yet despite rapid market expansion, research indicates that proliferating mass timber use beyond its limited market share will require further mitigation of two limiting factors: high project costs and inefficient cross-disciplinary coordination. Emerging digital tools and services such as Generate, Branch3D, and CadMakers have been specifically designed to mitigate such limitations, thus advancing the pursuit of better architectural solutions to foster biophilic, care-oriented spaces. Through a mixed methods research approach, a review of emerging digital tools and services will be conducted including their affordances and limitations for the advancement of care-oriented mass timber buildings, followed by interview and case study data that illustrates how computation-driven innovation is advancing the design of care-full spaces. The research indicates that the selected software platforms and services such as Generate have proven to significantly reduce the perceived risks of mass timber and streamline collaboration, thus reducing project costs. Case studies such as the Portland International Airport expansion by ZGF also demonstrate how computation-driven innovation can liberate project resources to realize projects with a radical care focus.

Theme 04

Ecology

Parallel sessions 1

Profiling Human Values of Urban Nature in Finland**Arpa Aishwarya
Elisa Lahde
Nora Fagerholm
Salla Eilola**

In recent years, Finnish cities have increasingly implemented nature-based solution (NBS) to address climate change while at the same time improving living environments for its residents. However, the policies and branding around urban greening can also contribute to rising housing costs and land values resulting in unequal accessibility to green spaces. This study investigates how urban nature is valued by residents across Finnish cities and how these valuations are associated with social, ecological and technological characteristics of the nature place. Based on the IPBES Life Framework of Values – living from, in, with and as nature – we explore the existing plurality of human-nature relationships in urban contexts. Data was collected through a participatory, map-based survey where 2116 respondents across the cities of Turku, Tampere and Lappeenranta marked their everyday nature places. Followingly, they evaluated their values through Likert-scale statements and choice-based questions based on which quantitative and spatial analysis was carried out. The study revealed three distinct urban nature profiles; (1) Nature value hotspots, nature significantly associated with multiple and diverse human values at the same time; (2) Latent nature, nature supporting diverse values to a limited extent; (3) High-valued experiential nature, nature reinforcing cultural and personal experiences. Participatory mapping proved to be a valuable tool to capture people's everyday nature places and their attached values. Understanding these value profiles can offer planners nuanced insight into how different nature places contribute differently to resident's wellbeing, allowing for more tailored and equitable NBS strategies that reflect diverse lived experiences. Our findings underscore the necessity of integrating value perspectives in urban planning processes, reinforcing a paradigm of radical care and social – environmental justice in the governance of resilient urban landscapes.

*Nature-based solutions
Participatory mapping
Values of nature
Urban green spaces
Environmental justice.*

Parallel sessions 1

**Community-based Ecological Justice Indicators
and Radical Care****Nicolette Slagle**

This research explores the question “can engagement with remediation and restoration processes foster closer relationships with nature?” To answer this question, two case study sites are being studied: the St. Louis River Estuary in the United States and the Kymijoki here in Finland. Through environmental history research and community-based research, I am developing a community-informed ecological justice framework. Ecological justice is an emerging concept to re-define our relationship with the natural world. At its heart is a rejection of the false dichotomy between humanity and nature, and an acknowledgement of our deep connection to nature and our responsibility to protect nature. The heart of this research is the communities’ relationships with the rivers, and their perspectives on the history of the rivers.

Ecological justice indicators and hot spots important to the community are being identified through a series of three workshops. While the concept of ecological justice is new for most stakeholders, they have embraced the concept and are eager to learn more. This shift in perspective—centering the river as a stakeholder—has opened new possibilities for applying justice-oriented thinking in local environmental work. The next phase of this research will explore how the framework can be translated into regulatory tools, such as environmental assessments or planning guidelines, to embed ecological justice more concretely into built environment governance.

Parallel sessions 1

**Ancestral future in the cities of the Global South:
Counter-coloniality, justice, and buen vivir****Giselly Barros Rodrigues**

Thinking about just and equitable cities in the Global South requires a counter-colonial approach that confronts the historical violences of colonialism, racism, and patriarchy in the configuration of urban spaces. Gender, race, and class continue to shape who belongs, who has access, and who holds the right to the city. In this context, radical care is understood as the recognition of historically silenced knowledge and practices — especially those rooted in African traditions, the African diaspora, and traditional communities — that propose other ways of relating to territory and to those who inhabit it. Inspired by African and Indigenous cosmologies, cities can be imagined as living bodies intertwined with rivers, time, memory, and life cycles. The ecological debate thus expands beyond technical sustainability to embrace principles such as interdependence, deep listening, and respect for the diversity of existences. By moving beyond the notion of “cities for people,” it becomes possible to imagine cities for the Earth, for the spirits, and for buen vivir (collective well-being between nature and community). Grounded in an ethics of care as a collective, affective, and political practice, an ancestral future emerges where multiple worlds are visible, alive, and capable of nurturing justice and radical care.

Parallel sessions 1

Hidden Treasures of Tatsuno: Town Revitalization through Collaborative Design and Adaptive Reuse – A Case Study

Tomoya Wakayama
Mari-Sohvi Miettinen
Kimmo Hokkanen

Tatsuno in Nagano prefecture is a typical Japanese municipality facing issues such as population decline, aging demographics, and rural stagnation. Abandoned houses and closed shutters characterize its townscape. This oblivion is not only a waste of material in forms of buildings and the land they stand on but loss of local culture and identity.

*Architecture education
Non-formal education
Town revitalization
Collaborative design
Adaptive reuse*

This study proposes a non-formal architecture education project as an agile way to explore ways of caring for the town and to foster its resilience for the future. Our case study is a workshop conducted in Tatsuno in early 2025. In collaboration with local community-focused organizations, the project summoned 10 young people to a workshop that merged formal academic instruction with non-formal education, aiming for sustainable rural development. The participants explored Tatsuno's hidden gems – interesting places and cultural phenomena – and then moved on to making an addition to this treasury. Supported by facilitators, the participants managed the design decisions, material selection, and construction process of a Nordic style sauna with Japanese twists, that was realized into an old bath in a local inn. Materials salvaged from vacant houses were collected from a local storage facility “Treasure Island” and utilized in the construction.

According to preliminary findings, the cross-disciplinary collaboration significantly enhanced participants' professional skills and awareness of sustainable development principles. Future applications of this approach could effectively support community revitalization initiatives and educational programs, contributing to broader adoption of sustainable renovation methodologies and care for places outside of growth-centers.

Parallel sessions 2

Thresholds of Care: Reclaiming the schoolyard for situated ecologies

Nadia Bertolino

This paper presents The School of Collective Care, a spatial transformation project led by the author and implemented in Marcignago, a peri-urban municipality in Northern Italy. The intervention reconfigures the underutilized courtyard of a secondary school into a civic infrastructure for care, learning and ecological stewardship. Responding to the ATUT 2025 call, the project frames care as both a political and spatial practice (Krasny, 2020), addressing territorial inequalities through participatory governance, low-impact architecture and co-constructed public space.

Civic infrastructure of care
Intergenerational engagement
Community-managed biodiversity hub
Building as a social ritual

Emerging from a partnership between the Municipality of Marcignago, the University of Pavia and local civic actors, the project applies a multi-scalar strategy of territorial cooperation. The design incorporates a community-managed biodiversity hub, modular classrooms and inclusive recreational spaces, built through hands-on construction workshops and long-term stewardship agreements. Care is operationalised not as a moral imperative but as a spatial device—integrated through material choices, maintenance rituals, and ecological cycles (Rawes, 2007; Schneider & Till, 2009).

The intervention is informed by theories of the urban commons, understood here as spaces of negotiated co-authorship (Petrescu, 2007), and the threshold condition, defined as a spatial and social interface that enables indeterminacy, encounter and transformation (Stavrides, 2016). Rather than aiming for completion or closure, the project cultivates open-endedness, seasonal adaptability and situated knowledge production.

By advancing care as an infrastructural principle embedded in both process and form, this paper argues for design's capacity to enact spatial justice, repositioning peripheral territories as laboratories for socio-ecological transition.

Parallel sessions 2

Future-proof housing?

**Paula Femenias
Elton Chain
Kaj Granath
Anna Braide**

Housing lies at the centre of building sustainable societies. Resilient solutions for housing are needed to ensure people's long-term comfort, safety, and well-being in an era marked by a persistent housing crisis, global resource scarcity, climate change and political instability. Homes must adapt to changing lifestyles, such as increased remote work, online shopping, meet societal expectations of ageing-in-place and home-based healthcare, and at the same time accommodate disruptions, changes and crises, like new pandemics, rising temperatures and increased living costs.

This paper explores architectural strategies for creating more resilient homes that can withstand evolving needs and conditions, focusing on how spatial design influences behaviour. Post-occupancy studies were conducted on five Swedish cases featuring innovative solutions for flexibility, space efficiency, affluent secondary space such as balconies, and on-site cultivation facilities. The cases include rental and owner-occupied apartments in multi-residential buildings. Data was collected through interviews with architects and developers, resident surveys and interviews, and floorplan analysis.

Preliminary results show that architects and developers face frequent technical and economic challenges in implementing new solutions for flexible use and cultivation facilities. In addition, social and behavioural challenges in reaching the intended use of the architectural strategies are also prevailing, notably when residents' participation is needed to reach intentions. The social challenges seem to have been underestimated by developers and architects and neglected by property managers. We call for user-centred design built on feedback from usage to inform new design and incentivising strategies for management that recognise the importance of social engagement to reach resilient housing.

Parallel sessions 2

From Sustainability to Reciprocity: Biocultural Heritage and Multispecies Coexistence in Landscape Architecture

**Eveliina Kunnaton
Elisa Lähde
Ella Prokkola**

As architecture and landscape architecture increasingly adopt ecological values, radical care for multispecies coexistence calls for deeper conceptual frameworks. In our project *Beyond Sustainability*, conducted at the Kone Foundation's Saari Residence in Southwest Finland, we argue that the concept of biocultural heritage offers critical additional depth to the discussion of multispecies relationships especially in the context of landscape architecture. By emphasizing the entanglement of cultural and ecological histories, biocultural heritage allows for a more nuanced understanding of the evolving reciprocal relationships between humans, non-humans, and ecological processes over time.

Our case study at Saari Manor — a site shaped by centuries of interaction between human activities and ecological processes — investigates how landscape architecture can move beyond anthropocentric design practices to foster mutual interdependence. Through the development of landscape graphics and narrative tools, we document, and present past and ongoing multispecies interactions and the ecological affordances generated by these mutual engagements. Visitors are invited to explore the site not only visually but sensorially, pausing to experience the dynamic, living relationships between species and environments.

By rooting our approach in the site's layered biocultural heritage, we promote a form of care that respects both human and more-than-human histories, while critically engaging with the risks of superficial or technocratic ecological interventions. Our work shows how landscape architecture can embrace ecological and historical depth, fostering biodiversity, resilience, and wellbeing without displacing or marginalizing existing multispecies communities. Ultimately, we call for a broader adoption of biocultural heritage thinking in architecture and planning to more ethically and effectively prioritize ecological values and multispecies coexistence.

Parallel sessions 2

Aesthetics of an Architecture of Radical Inclusivity

Maiju Suomi
Sofie Pelsmakers
Sanna Lehtinen

Extractive and exploitative modern construction culture is based on the prevailing Western human-exceptionalist worldview that justifies treating non-human animals, plants, and living environments as mere resources for human wellbeing and accumulation of wealth. Architecture has the agency to advance cultural change by communicating alternative values and worldviews through its aesthetic experience.

Environmental architecture
Multisensory aesthetics
More-than-human-world
Ethics of care
Cultural change
Practice-led research

However, the potentially different aesthetics of an architecture that aims to safeguard living conditions for both humans and non-humans, for current and future generations, can hinder adopting holistically sustainable architectural practices as the aesthetics of the outdated modern architecture still prevail.

Beginning with a broader framing of why aesthetics (i.e. the multisensory experience of space) are crucial in advancing sustainable architecture through enabling long-term resiliency (i.e. built environment being cared for) and supporting a shifting discourse in society and among architects. This is illustrated through the case of Alusta Pavilion, a temporary space for multispecies encounters and environmental discourse in the centre of Helsinki (2022-2024), shaped through a radically inclusive approach influenced by post-humanist theory and ethics of care. The research unfolds how its unique aesthetics were created and experienced by users. Visitors' experiences are explored through thematic analysis of speaking-aloud audiorecordings made in the pavilion. These are contrasted with the designers' aims, reflected on through the self-documentation data gathered by the designer-researcher during the process. It was found that different stakeholders, including non-humans, but also cyclical change, more than human temporalities, and forces such as the weather shaping the aesthetics along with human creativity were crucial.

Parallel sessions 3

Planning as a collaborative inquiry: The case of a societal learning platform for urban transformations in Laajasalo, Helsinki

Elif Öztekin
Elisa Lähde

This research investigates how transformation-oriented design methods can facilitate societal learning and sustainability transformations in cities by supporting cross-sectoral collaboration and dialogue, expanding urban system complexity framings, and fostering shared understanding. We present insights from an urban experimentation conducted in Laajasalo, an urbanizing neighborhood in Helsinki, Finland, where residents and urban planners participated in a series of multi-stakeholder workshops between April and October 2024.

Sustainable design
Pedagogy
Design studio
Critical thinking

The workshops applied transformation-oriented design approaches aimed at enhancing systemic, collaborative, embodied, and empathetic thinking. These educational encounters catalyzed reflective dialogue and co-learning among stakeholders, addressing socio-ecological system change and rethinking human–nature relationships. Our findings suggest that such methods, grounded in transition design and transformative learning theories, offer significant pedagogical value in equipping both professionals and citizens with the cognitive, social, and emotional skills needed for steering sustainability transitions (Wals, 2023; Beukers and Bertolini, 2021).

Framed through Abson et al.'s (2017) realms of deep transformation—re-structuring, re-connecting, and re-thinking—we demonstrate how design-led educational practices can foster hybrid governance, enable recognition of diverse value perspectives, and cultivate care and interest for multispecies urban futures. Laajasalo case highlights the importance of embedding relational and reflective learning processes within urban planning education to build capacities in cities understood as complex adaptive systems. By introducing planning as collaborative creative inquiry into urban transformations, this research offers a model for how design education can advance joint efforts for sustainable urban futures. We argue that transformation-oriented design is not only a tool for planning but also a powerful method for learning, collaboration, and systemic change.

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Parallel sessions 3

Caring for the unseen and seeing with care: Lessons from investigating the home as a space of work

Dalia Milián Bernal
Essi Nisonen
Sofie Pelsmakers
Jaana Vanhatalo

For centuries, and almost universally, individuals and communities have been working in and around their homes. However, the home as a space of work has received little attention in architectural scholarly work. Moreover, despite being one of the countries in Europe with one of the largest populations of homeworkers (specially teleworkers), to our knowledge, no in-depth qualitative research has been conducted to understand the spatial and architectural conditions under which homeworkers in Finland perform their work and the way they create workspaces within their otherwise living environments. In addition, existing research in Finland – though not from an architectural perspective – has focused mostly on ‘remote work’ (telework) barely capturing the diversity of existing homeworking practices, thus, rendering invisible a whole group of homeworkers who cannot be considered teleworkers.

Architecture
Care
Methods
Home
Work
Space

In this paper, we look into the homeworking environments of 16 homeworkers in Finland and discuss: 1) the ‘ways’ in which we set out to investigate the spatial and architectural dimension of the home as a space of work and 2) how our approach allowed us to see, not only the diversity of homeworking practices in Finland and the spatial conditions under which homeworkers perform their work, but also learn from these individuals’ multiple space-making practices and witness the performativity – the bodily – dimension of such practices. We argue that researchers, educators, and students in the field, and their institutions have a responsibility to care to see and make visible the diversity of individuals that make up our societies and inhabit the spaces we often carelessly design and build, but that these approaches must be developed caring for these individuals’ experiences within the research process while at the same time remain open to capture serendipitous moments of their private lives, living environments, and their ways of inhabiting. Such approaches – that focus on capturing diversity, the grassroots, and their space-making practices – could radically transform the way we understand and learn to investigate (to see) the production of space and help develop methods to investigate, teach, learn, and practice architecture that foster empathy, just investigative practices, and that are conducive to a living environment that is caring, resilient, and constructed with care.

Parallel sessions 3

Facilitating Radical Care through CoDesign: Projects in Melusi Informal Settlement, South Africa**Jason Oberholster
Carin Combrinck**

The CoDesign studio, based at the University of Pretoria, demonstrates radical care within architectural education through targeted, small-scale interventions at the Malusi Youth Development Centre 2 and Community-Oriented Primary Care Clinic. The initiative aligns with South Africa's timber frame construction standards (SANS 10082) and extends long-term community engagement practices, particularly insights derived from the Co-Creating Wellness Project (2023–2025). In challenging traditional roles within architectural pedagogy, the studio deliberately repositions students from experts to collaborative facilitators, employing participatory methods such as analogue and digital CoDesign tools, AI-assisted techniques, and live-build prototyping.

*Architectural Pedagogy
Co-design
Community Engagement
Live-build pedagogy
Meaningful Engagement*

Through iterative community engagements, both digital and physical, students work closely alongside residents, assessing existing conditions and developing tailored interventions. This hands-on, collaborative process ensures that each intervention addresses localised health, educational, and social needs, fostering genuine community ownership and responsiveness.

The studio's outcomes reveal significant educational benefits from embedding radical care and authentic participation within architectural curricula. Students develop deeper competencies in technical skills, ethical collaboration, socio-spatial empathy, and cross-cultural communication. The studio emphasises that architectural practice can and should prioritise human-centered processes and shared knowledge production. Thus, this educational project highlights architecture's capacity to drive social change through community engagement, contributing directly to more resilient, equitable, and inclusive urban communities.

Parallel sessions 3

The ghost outside the machine**Ranald Lawrence
Yun Wu**

'A house is a machine for living in.' But is the machine a watch or a tree? A century ago Le Corbusier could not envisage the consequences of Building Management Systems, HVAC, or 'Passivhaus'. The sun path was fundamental to his approach, cast into concrete at Unité. The Savoyes complained that it rained inside their villa. Aalto described his 'biodynamic concept' as 'the family's and the single individual's life within the dwelling walls', defining biodynamic functions as eating, sleeping, working and playing. The Kingo houses in Helsingør – Utzon's prototypical urban environment – were established on the heliothermic axis, with courtyard 'rooms' at the centre of every home.

Environment
Technology
Climate
Modern movement

It would take later 20th century developments for the potential of the hermetically sealed interior to be realised – Reyner Banham's 'exclusive' turn. This paper will trace fundamental shifts in the underpinning philosophical position of architects towards the environment through case studies across the modern movement. It will question the extent to which fundamental changes affecting our architectural response to nature (time spent indoors, perceptions of comfort, the changing climate) reflect broader societal trends – the evolution of technology, the changing nature of work, rest and play – and the consequences in terms of our part exclusionary, part exploitative relationship with the natural world.

Moving beyond the performative adoption of green or technological 'solutions', it will question whether we can recover a more sustainable approach to living within nature that acknowledges our existence as part of nature (ecology), repairing some of the damage that has been caused.

Parallel sessions 4

Mapping Housing Ecosystems. A Systemic Approach to Circular Design and Equitable Housing

Margaux Lespagnard
Waldo Galle
Sofie Pelsmakers
Raül Castaño-Rosa
Niels De Temmerman

Beyond environmental benefits, circular design choices can reduce housing costs through reuse, repair, maintenance savings, and adaptable buildings that extend their lifespans. Despite the existing amount of research, the adoption of circular design strategies in housing projects is hindered by a lack of understanding of the relationship between design choices and socio-institutional parameters, including management and financing. Every project is unique and has its own regulations, stakeholders, and context. Particularly in the context of housing, it is crucial to ensure that decisions related to circular design do not negatively affect the project's equitability. Effective implementation requires strategies tailored to specific housing projects and their respective contexts. This requires more comprehensive and systemic insights into the financing and management of housing projects and their impacts on architectural and technical design decisions.

Circular design
Equitable housing
Housing ecosystems

This study developed a method for approaching housing projects as ecosystems. We aim to introduce a wider perspective on residential architecture, encompassing technical, design, and socio-institutional aspects. The ecosystemic approach allows us to structure the complexity of housing projects and understand the interactions – monetary, services, legal, design – , (power) dynamics, and decision flows.

First, Information on 11 cases was gathered using semi-structured interviews, literature reviews, workshops, and site visits. These cases were located in Belgium and Finland. A comprehensive understanding of a project's dynamics is essential for mapping housing ecosystems. Therefore, an iterative mixed-method development was conducted using three existing methods. Value Network mapping helped trace the stakeholders and interactions in ecosystems. We used the equitable housing framework to map the stakeholders' needs, goals, and abilities and how these lead to certain design decisions. Architectural and technical analyses of plans, photographs, site visits, and interviews allowed the identification of tangible design decisions. Finally, we created a new housing ecosystem matrix to compile all the gathered data, offering a visual summary of the process behind the most significant design choices in the project.

The housing ecosystem matrix developed in this study allows for the systemic mapping of stakeholders, their interactions and intentions, and design decisions. By examining different housing models in Finland and Belgium, the approach illustrates its effectiveness in comparing housing systems, identifying alignments and discrepancies among ecosystem components, and uncovering obstacles that hinder the implementation of circular design strategies. Although this method was initially developed for circular building design, it is not confined to this area; it can be applied to map any design decision within a housing ecosystem.

The key findings highlight how funding mechanisms, community engagement, and policy frameworks shape the design outcomes and opportunities for circularity. The ecosystem approach provides valuable insights into the socio-technical dynamics underlying housing design decisions, enabling a more holistic understanding of how to foster equitable and circular housing models and designs.

Parallel sessions 4

Making Sense of Sufficiency in Housing Design**Sanna Meriläinen
Anne Tervo**

As growing awareness of the effects of construction on the climate crisis also means questioning our current housing production, downsizing living spaces has become a key part of housing sufficiency. Different studies propose limiting living space per person to an environmentally tenable level of around 20 m² in Finland and other countries with similar housing stock. The discussion around housing sufficiency has largely focused on changing the cultural acceptance of small homes, rather than on small homes themselves. To overcome the deficiencies of this approach, this study examines the effects of a sufficient space limit of 20 m² per person for different types of dwellings, considering different household sizes and residential building types. By studying purposively selected examples illustrating a wide range of Finnish dwellings of the 2000s and their design quality attributes in the context of sufficiency, this paper argues that policies based on space per person overlook qualitative aspects of domestic space, which are essential for encouraging people to live in smaller homes. Furthermore, the study highlights the scaling benefits for larger households, raising concerns about equity between different household sizes. To provide future solutions within the limits of sustainable consumption, examples of small dwellings from the existing housing stock that combine sufficiency with desirability are presented. The conclusions discuss the conditions for housing construction to transition into a low-carbon society, in alignment with care for human well-being.

*Sufficiency
Housing Design
Small Homes
Rightsizing*

Parallel sessions 4

Integrating Biodiversity and Built Environments: Animal-Aided Design for Sustainable Human Settlements in the Galapagos

Zeynep Naz Alkan
Mauricio Morales-Beltran

The Galápagos Islands, a UNESCO World Heritage Site, face growing ecological threats from urbanization, unsustainable tourism, and infrastructure incompatible with their fragile ecosystems [1]. While endemic species like land iguanas, giant tortoises, and Darwin's finches rely on protected habitats, human activities—such as fishing and boating—disrupt wildlife cycles, highlighting the urgent need to reconcile development with conservation. This study addresses the question: How can human settlements coexist with protected species and ecosystems without causing ecological harm?

Sufficiency
Housing Design
Small Homes
Rightsizing

An architectural case study proposes a research center modeled after the Charles Darwin Foundation, serving as both a sustainable design guideline and a validation of its methodology. The project integrates animal-aided design principles, prioritizing site selection that balances proximity to human settlements (reducing logistical impact) with isolation to foster wildlife habitation. Four keystone species—land iguanas, giant tortoises, sea lions (umbrella species), and Darwin's finches—were prioritized to guide ecosystem-sensitive strategies [2-3]. Design innovations include elevated platforms to preserve animal movement, open-flow layouts merging organic circulation with equatorial climate responsiveness, multi-layered structures to minimize land footprint, and natural, recyclable materials ensuring animal safety. Building forms adapt to site topography, avoiding visual dominance while promoting ecological integration.

The research center demonstrates that embedding wildlife needs into architectural design fosters coexistence. For housing projects, the methodology's hierarchy (site selection, species prioritization, and guidelines) may adapt, but core principles remain applicable. Elevated housing units, for instance, could reduce environmental disruption in tropical climates while maintaining accessibility. Customized guidelines balancing human needs with ecological sensitivity prove effective, ensuring projects harmonize with landscapes and serve both inhabitants and wildlife. By prioritizing minimal intervention and species-specific strategies, this approach offers a scalable model for sustainable development in biodiverse regions, underscoring the viability of design that aligns human activity with the preservation of fragile ecosystems.

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Online session

From Waste to Care: Circular Building as Community Practice in Boschgaard

Tamara Egger
Jan Jongert
Machiel van Dorst
Alexandra den Heijer

The built environment consumes vast resources, destroys habitats, and generates waste—yet remains essential to human survival. Materials only become waste when we stop valuing and caring for them. What if waste regained value, and architecture shifted from extraction to a practice of radical care—for people, nonhumans, materials, and ecosystems?

This paper explores circular commons from a care perspective: a practice where communities co-create, maintain, and repair their environments using local, reused materials—fostering care across humans and more-than-humans. Building on theories of the commons, care ethics, and circularity, we frame community-led construction as “careful circularities.”

Through action research, we study the process of Boschgaard, a housing cooperative in 's-Hertogenbosch (NL), where 19 social housing units were self-built through a community-led process using 80% salvaged materials. Originating from a squat, the project became a collaborative experiment in circular architecture and grassroots construction. We trace socio-material narratives as a process over time through visual analysis, interviews, and archival review—for example, following the main wooden frame salvaged from a demolished gas station, transported, restored, and still maintained by residents.

Findings show the built environment became an active agent—enabling and receiving care through reuse and maintenance. Community cohesion emerged through collective struggle, skill-sharing, and inclusive practices involving neighbors, nonhumans, and materials. Learning was reciprocal: architects taught harvesting; residents became builders, maintainers, and stewards. Despite challenges—regulatory barriers, storage, and replicability—Boschgaard demonstrates how careful circularities can foster resilient, biodiverse, and socially cohesive built environments. Its experience offers valuable lessons for cultivating circular commons rooted in reuse, community care, and multispecies cohabitation elsewhere.

Careful circularities
Circular commons
Circular architecture
Self-building
Reuse
Multispecies commons
Community care

Does an individualistic lifestyle design affect students' social loneliness?

Emma Colin

The number of young adults, including higher-education students, facing loneliness and other mental health issues is increasing both internationally and nationally in Finland. Students are considered a vulnerable group, subjected to tight financial situations and housing insecurity which leads them to seek after cost-effective living options, especially during the current housing shortage. Their appeal for privacy alongside the ongoing development of more studios as cheaper individual forms of housing allow them to access more affordable accommodations. However, those individual lifestyles can jeopardise their social wellbeing, i.e., lack of social interaction and social cohesion coupled with poor feeling of community belonging. This is further accentuated as students spend increasingly more time in their housing. Despite the importance of student housing for students' wellbeing, it is often seen as temporary, second-class housing, reinforcing the idea of investing in better housing, spaces and community shared areas as non-necessary. This study, through a mixed-methods survey, with an emphasis on its qualitative component, aims to provide a deeper understanding of the role that student housing play in students' daily socialisation and social loneliness. Preliminary findings showed that prioritizing privacy and individualistic lifestyles, at the expense of social spaces, (i.e. the disappearance of the living room without providing adequate options at the building scale) jeopardises community belonging, socialisation and social cohesion of students. This research emphasizes the need to consider the social cost of individualistic developments and advocates for new models that include and consider social wellbeing of students.

Student housing
Wellbeing
Social wellbeing
Loneliness
Socialisation
Community

Residents' response to state-of-the-art resilient lifestyle apartments

Anna Braide

One major actor in Sweden, the cooperative housing company Riksbyggen EF, has developed a state-of-the-art resilient housing project, the Brf Viva, confronting the challenges of sustainable housing solutions. The project, including condominiums, has been initiated as a research-informed project development process to deliver demonstrations and experiments in the field, involving interdisciplinary exchanges between different expertise and academic actors. The project was finished in 2018.

*Sustainable housing
Design solutions
Social qualities.*

The Brf Viva project addresses design solutions meeting environmental and social challenges, such as small apartment sizes compensated with communal spaces, flexible apartment space, solar panels and battery energy storage, carpooling and bike-sharing, communal cultivation, sharing services, and six cooperative apartments for young adults. The design solutions have been forwarded as future-oriented and resilient designs carrying the indirect message of a resilient lifestyle. In 2019 and 2024, two empirical surveys were conducted, investigating the residents' response to the resilient housing design, including questionnaires to all households and interviews with some selected households.

Key results show that some design solutions have not met expectations, and far from all residents think it is critical to have a resilient lifestyle. Still, most residents express contentment and pride in living in the Brf Viva, and the aim to stay and not move has increased by seventeen percent in four years. The discussion evolves around the design's capacity for social qualities. The conclusion is that the design promotes social cohesion, well-being, and identity, making it a critical precondition for residential life.

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Radical Care for Resilience
in the Built Environment

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