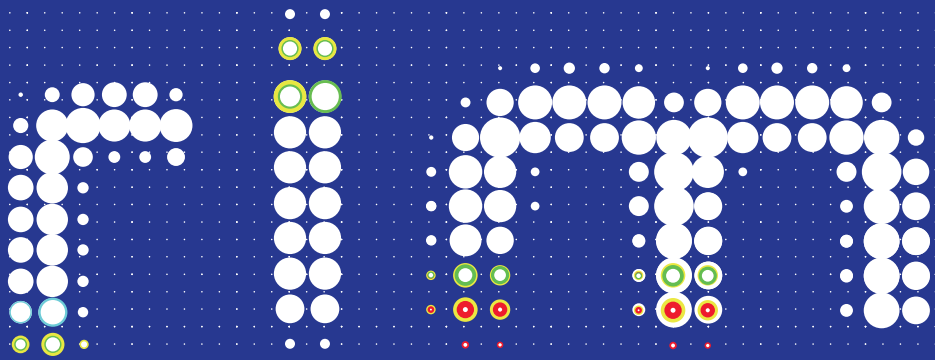

REGIONAL
INNOVATION
MODEL
HANDBOOK

How to use this handbook

This handbook is designed to be used as a companion to city and regional administrators. It includes practical examples of engagement and activities for local actors and changemakers, in collaboration across sectors and disciplines.

It suggests ways to think about grand challenges that address specific needs and characteristics of regional ecosystems, while it offers support instruments and frame-works to leverage local intelligence and create a systemic shift at the global scale.

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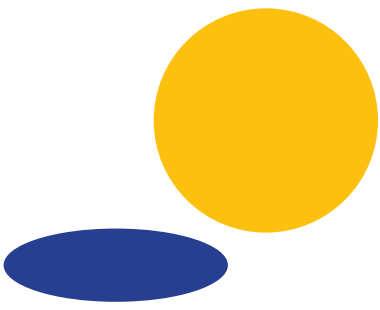
SHEELA PATEL
SHIGERU BAN
TOM MINDERHOUD
TORBEN KLITGAARD
TUULI UTRIAINEN
UWE KIES
AND MANY MORE

REGIONAL INNOVATION MODEL HANDBOOK

"I believe that the New European Bauhaus must become a real movement which involves local and regional authorities and is not just another top-down project. It must be a project for everyone, not just the few. To be successful, this exercise must be socially, culturally and territorially inclusive"*

– Cork City Councillor **Kieran McCarthy**



* i) CoR-members-adopt-McCarthy's-opinion-on-the-New-European-Bauhaus.aspx
ii) Kieran McCarthy at the European Week of Regions 2023 and Cities

THE RIM HANDBOOK IS A COLLABORATIVE WORK. THE COMPONENTS OF THIS HANDBOOK — THE FRAMEWORKS, CONCEPTS, GUIDELINES, METHODS, TOOLS AND PRACTICES — ARE THE RESULT OF WORK BY BRILLIANT RESEARCHERS, PRACTITIONERS AND THOUGHT LEADERS FROM THE NEB COMMUNITY. IT HAS NOT BEEN POSSIBLE TO DO JUSTICE TO THE DEPTH OF THAT WORK IN THE SCOPE OF THIS VOLUME, BUT IT IS RECOGNISED, ACKNOWLEDGED AND APPRECIATED.

Written and edited by Andrew Dubber and Michela Magas

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TABLE OF CONTENTS

There is a 20 year-old Japanese Playstation 2 video game called Katamari Damacy in which the player pushes a ball within a 3D environment. As the ball rolls around and encounters objects, those objects stick to it, and the ball grows in size. Over the course of the game, the ball becomes planetary in scale.

There are parallels between that game and the evolution of this handbook.

1

In the beginning of 2022, the world was still emerging from lockdown and a war had started on European soil. The Omicron variant caused a spike in the number of cases, and in just the first week of 2022, 43,000 people died of Covid-19.[1] The following month Russia's invasion of Ukraine displaced two million people in just a matter of days, leading to what would become the single largest mass movement of human beings in Europe since World War Two.[2]

These simultaneous crises came with paradigm shifts in society's attitudes to problem-solving. The Covid vaccine was developed faster than any other vaccine against a new disease in history, thanks to unprecedented global collaboration and knowledge sharing between hundreds

1 Stefanelli et al, 2022. Tracking the progressive spread of the SARS-CoV-2 Omicron variant in Italy, December 2021 to January 2022. [Link]

2 European Central bank: The impact of the influx of Ukrainian refugees on the euro area labour force. [Link]

of governments and organisations[3]. Shortage of supplies during the pandemic highlighted the need for information alignment across supply networks and collaboration across domains.

The displacement of the Ukrainian population called for dispensing with old narratives that created barriers to integration. In an unprecedented move, the European Commission announced that Ukrainians could apply for jobs where regions had skills shortages. Rather than treat this as a 'refugee crisis', it was recognised as an influx of talent and intelligence.

In regions of Poland that received a high influx of incoming Ukrainian people, urgent action was needed on the ground. To empower incoming skilled workers and their families, their new living conditions had to be more than just a blanket on a factory floor.

Two 'think and do' architects were on the ground immediately during the first days of the war, galvanising volunteers to provide privacy shelters and create dignified living conditions for the incoming populations. Formidable Japanese architect Shigeru Ban aided by Polish architect Hubert Trammer, in collaboration with local governments, engaged armies of volunteer students to construct agile and economical privacy shelters using lightweight and readily available materials, based on the design for a Paper Partition System (PPS)[4]. The architects met as members of "the New European Bauhaus High Level Round Table" (NEB HLRT).

Construction of privacy shelters spread very fast through VAN — the Voluntary Architects' Network — an international initiative created by Shigeru Ban Architects to engage student volunteers with disaster relief projects — and rolled into Slovakia facilitated by Slovakian design expert Mária Beňačková Rišková, another member of the NEB HLRT.

3 Gavi The Vaccine Alliance, 2020. How did scientists manage to develop safe COVID-19 vaccines in just ten months? [Link]

4 Shigeru Ban Architects: Ukraine Refugee Assistance Project, 2022. [Link]

The initiative required all hands on deck with every bit of available intelligence, breaking down of traditional silos, mobilising communities, collaborating, experimenting and sharing knowledge. Schools of architecture at local universities provided student volunteers for the Voluntary Architects' Network. Corex, a Belgian company with a production plant in Poland, stopped their own production to produce the paper tubes free of charge. Ikea donated the materials in Slovakia. A variety of private companies donated the carton.

Photo by Jerzy Latka, Shigeru Ban Architects

The resulting design of the structures treated basic privacy and dignity as human rights, enabling people to continue to contribute to society in their new context rather than reducing them to the disempowering status of 'refugees'. The meaningful and purposeful application of design motivated communities of volunteeers to roll privacy shelters fast across the regions.

The key (as will become a recurring theme throughout this handbook) was *learning by doing*. Empowered by a systemic approach to design solutions, the knowledge, skills and competences of the volunteer students expanded and spread as they learned collaboratively, by building together. Within two months, privacy shelters were implemented along the Polish and Slovak borders providing families shelter and human dignity.

The New European Bauhaus, launched just 18 months earlier by the President of the European Commission Ursula von der Leyen, anticipated and laid out the necessary structure and approach for these kinds of interventions. Referred to fondly as 'NEB' by its members, it provided the intellectual, cultural and strategic advantage necessary to address grand challenges at this scale.

> "People tend to meet, come together and discuss solutions quickly — this is what also happened with the New European Bauhaus: without this organisation, this would not happen as fast as it should." — **Shigeru Ban**[5]

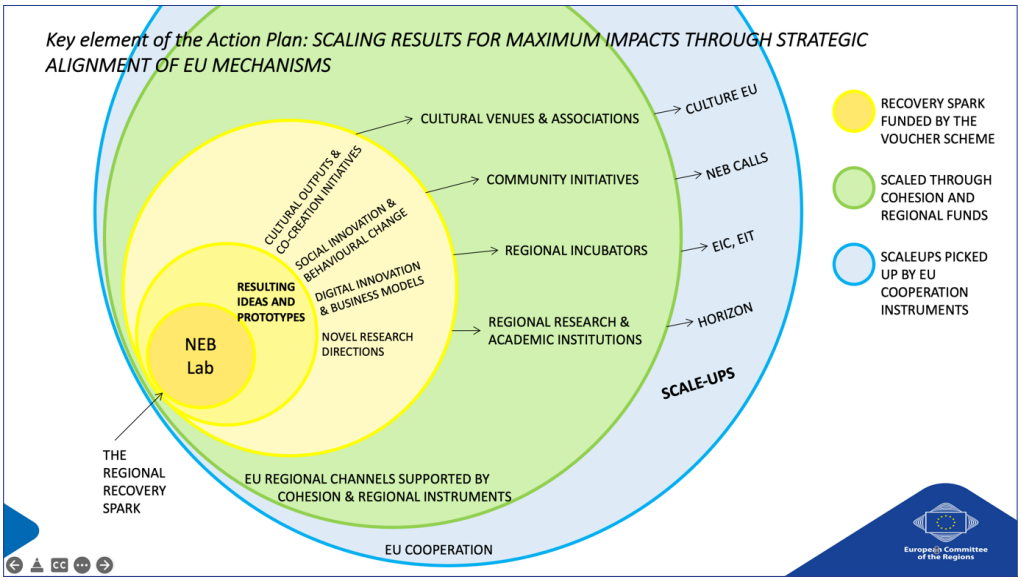
5 Shigeru Ban – Building temporary shelters for Ukrainian refugees with Paper tubes, fabric and safety pins, 2022. Lampoon Magazine. [Link]

2

Collaboration across domains and regional implementations of meaningful solutions on the ground were proving vital for survival. While emergency high-level meetings were taking place about the Ukraine crisis, NEB HLRT member Michela Magas coordinated a meeting uniting for the first time 13 representatives from the European Committee of the Regions (CoR), Cohesion Funds, INTERREG Europe, the Directorate General for Internal Market, Industry, Entrepreneurship and SMEs (DG GROW), and the NEB HLRT.

The proposal was to engage 100 regions in prototyping meaningful solutions, then scaling the best results by concatenating multiple European funding instruments.

A circular expanding schema showed the NEB regional recovery ignition spark leveraging regional intelligence for the creation of innovative ideas and prototypes, which could be scaled by connecting them with regional and cohesion instruments, and the results channelled further to EU cooperation programmes to create a multiplier effect.



A proposal to scale regional ideas by concatenating European funding instruments by Michela Magas and Thomas Wobben, Director for Legislative Works (Regional Policy, Economic Affairs, Employment and Innovation) at the European Committee of the Regions

A collaboration of this kind was unprecedented. The benefit of joining forces across funding mechanisms was recognised by all present. Complementary actions were being launched by Cohesion Funds in terms of technical assistance to municipalities to incubate NEB projects. Interest from Interreg came at the "resulting ideas and prototypes" stage, since Interreg works very much by reacting to something that is happening on the ground. The CoR noted an enormous amount of energy for NEB uptake that they wished to capture.

It was highlighted that this approach could bring a lot of good ideas into the system. It could provide evidence-based policy that draws on multidisciplinary communities of experts that join forces to generate ideas and inform regional governments with tangible results to base their policies on. It could also build a culture of collaboration, aesthetics, businesses, higher education, research and innovation. The agile initial spark could make everything else perform so much better as a result. In this sense NEB was seen to be not just a programme, but a movement.

Innovative regional solutions, sparked by local responses to grand challenges, could access funding mechanisms to scale their impact. Solutions could emerge from regional ecosystems, combining local knowledge with global expertise and shared best practices. These agile designs and methods could then be rapidly adapted and deployed across regions facing similar challenges. As regional innovations gained momentum through cross-domain collaboration and multiple funding mechanisms, they could grow from local solutions into initiatives with national, cross-European and global impact.

In this vision, regional politicians and communities were positioned to see their ideas gather momentum, grow rapidly in scale and roll out across Europe. The peripheries became the centres of innovation and positive change that scale up to become the methodologies and solutions that address grand challenges at the European and global scale.

As with the necessary shift from specialist and siloed responses to an all-hands, cross-domain approach, regional support moved to support ground-up initiatives that can demonstrate tangible results. Cohesion funds have been designed as instruments to build competence within smaller cities, preparing them for this new approach to regional development. The NEB Lighthouse programme was conceived to demonstrate and implement the power of cross-disciplinary engagement at the neighbourhood level, providing practical examples of how communities can be galvanised into relevant action at a local scale, in a way that can be adopted and amplified across Europe.

Link: Contribution to the European Week of the Regions 2023: Stimulating Local and Regional New European Bauhaus Grassroots Projects

3

The NEB movement provided a new lens for understanding the place of regions as central engines of urgent and necessary societal, technological, industrial, ecological and cultural innovation.

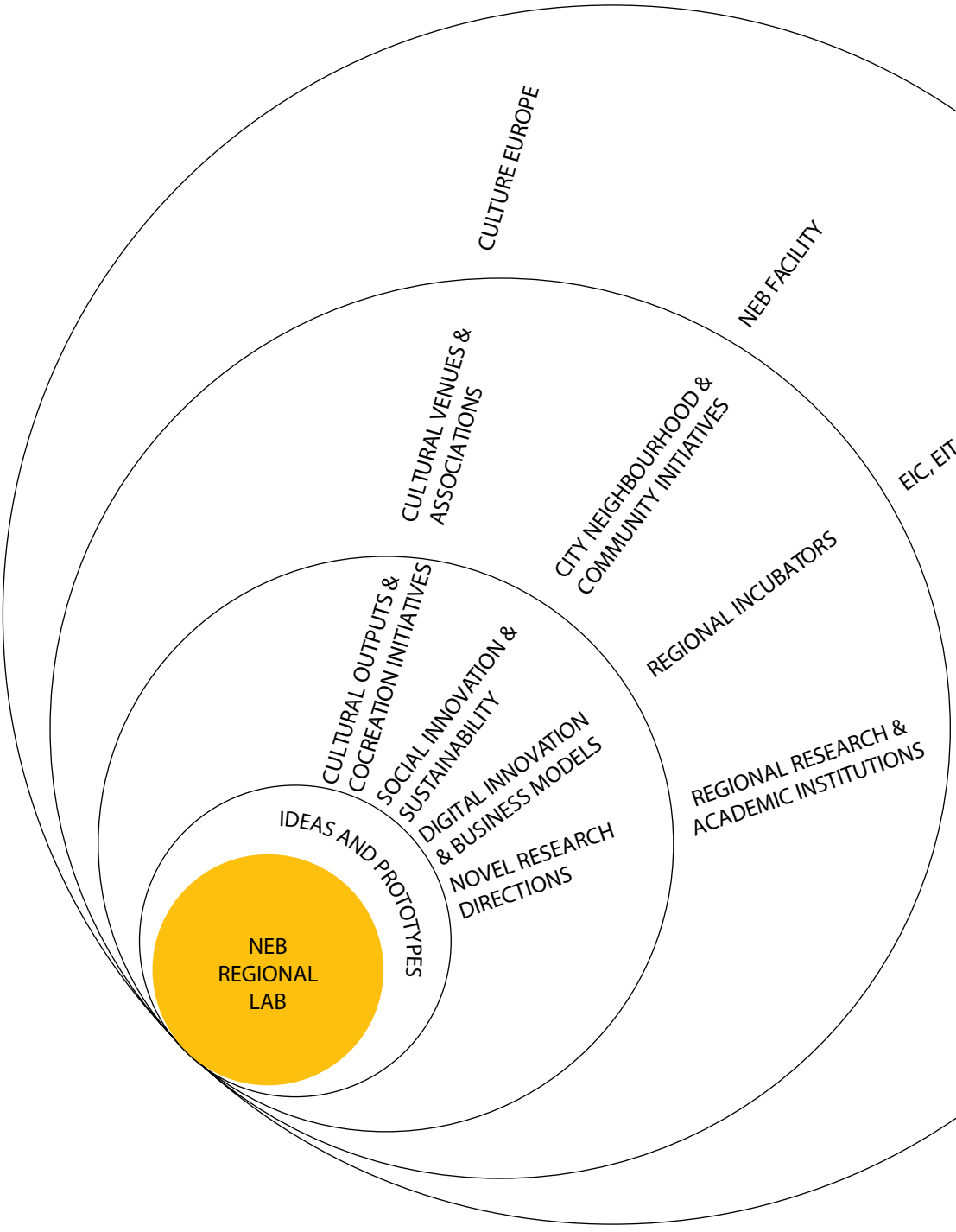
The regional innovation model of concatenating and aligning funding instruments provides the environment for NEB to scale by adding more elements, people, tools and competencies to its kit of parts, as it continues to grow and become more intertwined, creating greater robustness and resilience.

What follows are experiments, tools, frameworks and guidelines, that have grown as part of this momentum. They offer ways to think about regional ecosystems, methods to integrate fresh perspectives, and the means to develop ideas and approaches that build both local and global value.

Take these examples. Try them. Adapt them. Learn from them. Engage communities and bring together people with diverse experiences, expertise and ideas to learn by doing and *keep the ball rolling*.

Andrew Dubber and Michela Magas

"I don't know why people are frightened of new ideas. I'm frightened of the old ones." — **John Cage**

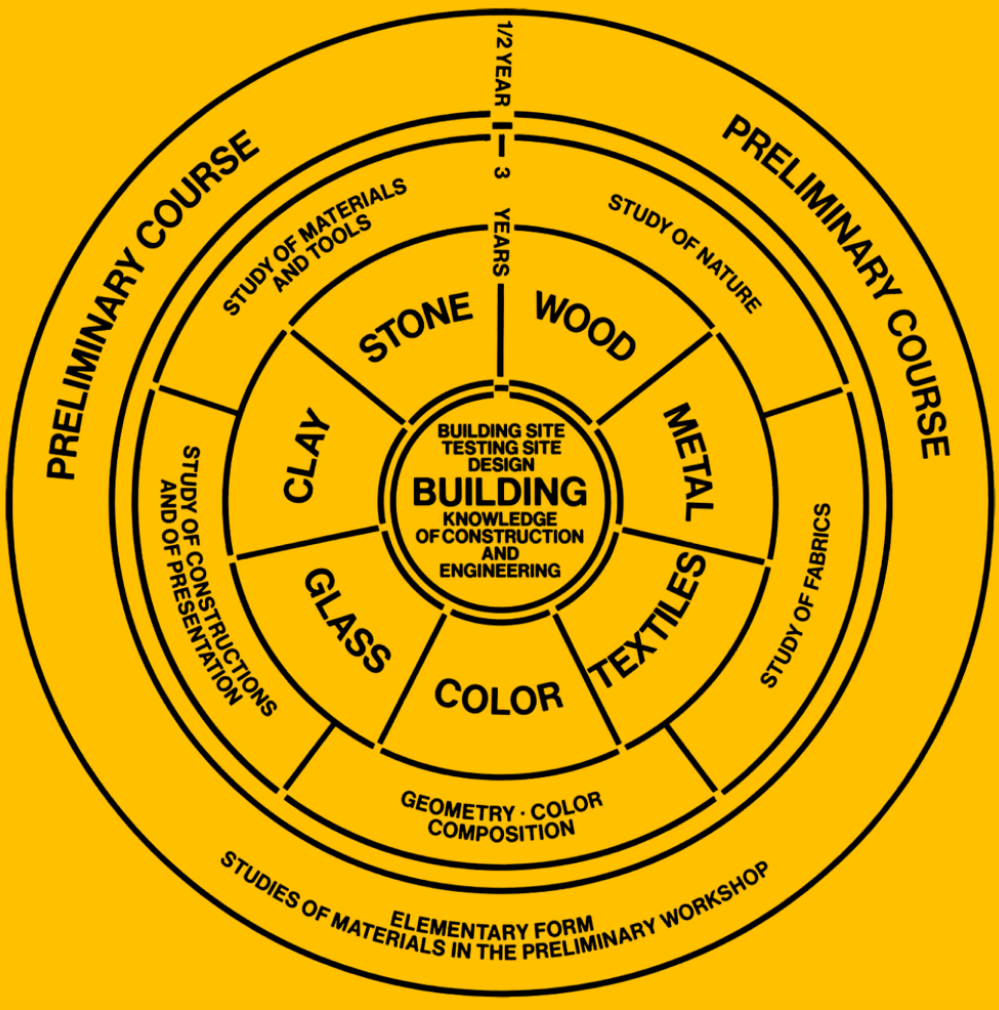

CULTURE EUROPE
NEB FACILITY
CULTURAL VENUES & ASSOCIATIONS
CITY NEIGHBOURHOOD & COMMUNITY INITIATIVES
EIC, EIT
REGIONAL INCUBATORS
CULTURAL OUTPUTS & COCREATION INITIATIVES
SOCIAL INNOVATION & SUSTAINABILITY
DIGITAL INNOVATION & BUSINESS MODELS
REGIONAL RESEARCH & ACADEMIC INSTITUTIONS
NOVEL RESEARCH DIRECTIONS
IDEAS AND PROTOTYPES
NEB REGIONAL LAB

SCALEUPS PICKED UP BY EU
COOPERATION INSTRUMENTS

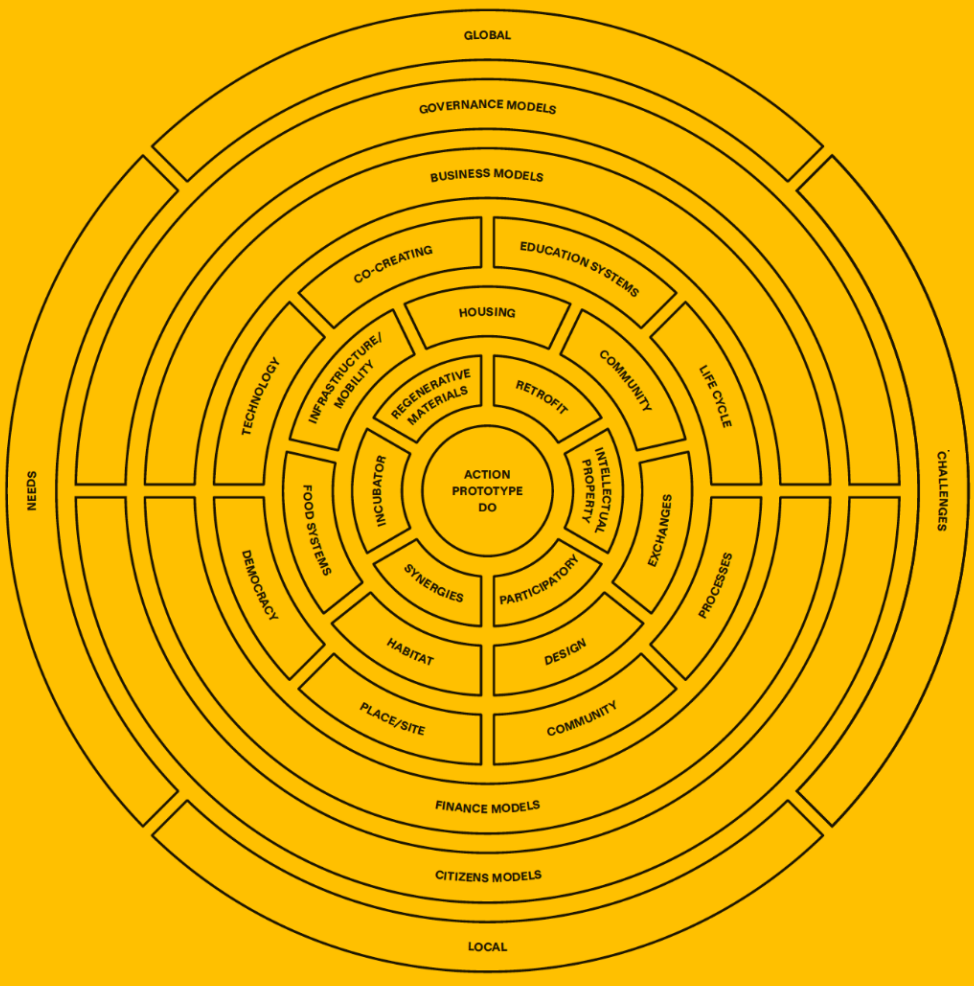
SCALED THROUGH COHESION,
PRIVATE AND REGIONAL FUNDS

SUPPORT TO LOCAL AND
REGIONAL NEB PROJECTS

THE LOCAL IS THE FUTURE



Walter Gropius Bauhaus Circle
diagram from 1922
Translation from the original
in the Bauhaus Archiv [Link]



Remake/upcycle version of Walter Gropius
Bauhaus Circle diagram from 1922
for New European Bauhaus 2023
by Jan Åman and Adam Davies (13.03.2023)

THE LOCAL IS THE FUTURE

This handbook began life within the Horizon Europe–funded digiNEB project with an update of the Walter Gropius Bauhaus Circle diagram from 1922. The update, by Jan Åman and Adam Davies, introduced the Ecosystemic Principle — addressing food systems, infrastructure and mobility, affordable housing, integration of digital and knowledge systems, innovation and new business, habitat and public space, culture, governance and democracy.

That prototype had an organising principle at its heart: **The Local Is The Future.**

Of course, knowledge and the development of strategies do not emerge or grow in a vacuum, even given the very fertile ground of the initial NEB movement. The prototype had its roots in other initiatives, including the Swedish **Duved project**, which experimented with deeply rooted organisational systems such as legal frameworks and norms that hinder societal development.

Duved is a small town of around 1000 inhabitants on the Western side of central Sweden, close to the ski resort of Åre. It's just 45 minutes from the border with Norway and just over an hour to the nearest airport. It has a hotel, a church, a school, some shops, a small ski slope of its own – and a couple of very good restaurants, a legacy from the town's close proximity to the site of the legendary Fäviken, a unique restaurant concept that was built by leveraging the local ecosystem in an unusually remote setting. It was listed among the top 10 restaurants globally in 2013 and received two Michelin stars in 2016[6].

In 2018, a diverse group including Jan Åman, top chefs, regional government representatives, architects and citizens began an experiment to develop Duved based on self-sufficiency and circularity[7]. The aim was to establish an innovation engine that reflects communities as role models for sustainability at the local scale.

In 2022, as part of the NEB Sweden "Visions in the North" initiative, the Duved model was supported to scale into the **Norrlands Model**[8] for city neighbourhoods, thanks to the first-ever collaboration between five governmental agencies. These included Formas, the Swedish government research council for sustainable development; the Swedish Innovation Agency Vinnova; Energimyndigheten, the Swedish Energy Agency responsible for supporting sustainable energy use and transition to a fossil-free economy; Boverket, the national board of housing, building and planning; and ArkDes, the Swedish Centre for Architecture and Design.

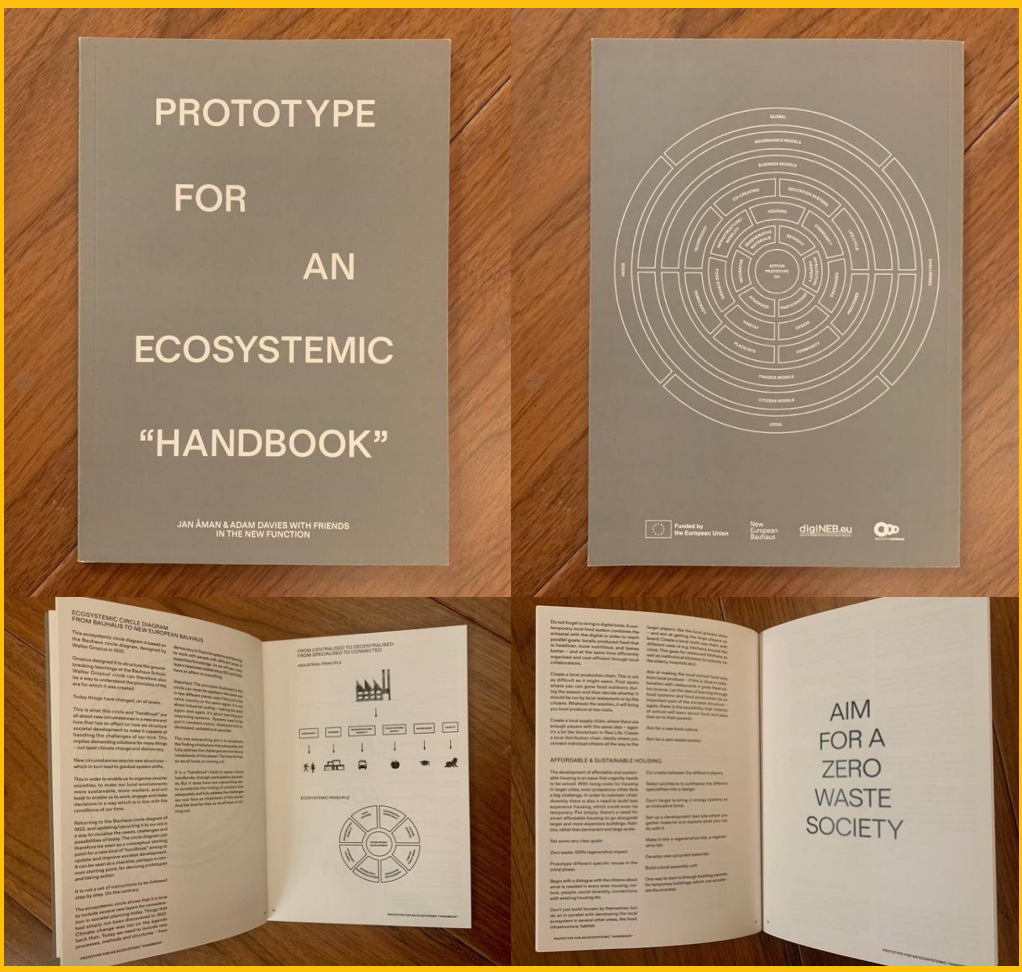
The model developed for the Duved project, and the scaled model for city neighbourhoods developed as part of a national NEB initiative, suggested that collaboratively-developed and locally-situated innovation models could be scaled and adapted for a variety of different regional ecosystems. With that in mind, Åman and Davies set to embed the updated Gropius diagram into a broader framework.

6 Magic out of mould: inside the world's wildest restaurant, 2016. The Guardian. [Link]
7 The Duved Model [Link]
8 The Norrlands Model [Link]

Michela Magas and Jan Åman in Duved, February 2023

The **Prototype for an Ecosystemic Handbook**[9] (PFAEH) provides a framework for thinking about ways to engage in creating locally-situated innovation that can be scaled and adapted across other regional ecosystems. It is intended for anyone interested in societal development and sustainability, including policymakers, urban planners, architects, thinkers, designers, and community members who want to make a tangible and meaningful difference to the place where they live and for their communities. It represents more than just a documentation of success stories — it extrapolates key lessons, and offers a fresh interpretation of original Bauhaus principles, recontextualised for contemporary challenges through the lens of recent experiences.

9 Åman and Davies, 2023. Prototype of an Ecosystemic Handbook



"It is not a set of instructions to be followed step by step. On the contrary."

With contributions and feedback by regional government officials involved in the related projects, PFAEH formulates and presents strategies for regional ecosystems that allow for each location's unique characteristics to be considered. While it acknowledges a high-level commonality of ambition and purpose (zero waste, affordable housing, accessible transport and so on), it assumes and accommodates differences at the ground level. It provides a shared starting point for place-based learning and community engagement and empowers local public servants, policy officers and community organisers to facilitate bottom-up action towards smarter societies and more sustainable local environments.

"A shift from silos to connectivity"

Focusing on the wider application of the core lessons learned, PFAEH is both a conceptual and practical guide to innovating in the context of regional societal development. It emphasises the need for interconnected local systems to tackle climate change, democratic processes, and local resilience through shared knowledge, regenerative practices, and cross-disciplinary dialogue. Within regional and city government structures it highlights the importance of connecting different departments that are more accustomed to functioning separately.

The updated approach to the Gropius circle provides a flexible framework for navigating the interconnected layers as a starting point for creating prototypes, supporting action and inspiring a systemic shift towards more sustainable, resilient, and participatory local and global practices. By leveraging circular economy and zero-waste principles, the model seeks to generate synergies supporting sustainable growth, resilience, and innovation across food systems, housing, and public spaces.

"A campus without a university"

"The whole knowledge system is in a sort of convergence where everything is changing rapidly. And working with Duved, we've created something that we call "Campus Without University." It's interdisciplinary, transgenerational, and it takes the rural possibilities of lower costs, the possibility of prototyping, the possibility of actually testing things in a new way, and of having different teams to work with. And actually, that attracted the universities to come"[10].

PFAEH can be deployed as a blueprint for community-driven societal transformation tailored to the specific challenges and opportunities of each unique context.

Link: https://bit.ly/prototype-handbook

10 Jan Åman, Ecosystem Living panel, NEB Day, Aveiro Tech Week, 13 October 2022

The Prototype for an Ecosystemic Handbook was launched at a public event entitled "The Local is the Future" hosted by the Faculty of Architecture at Umeå University on 9th February 2024. The event was introduced by Cornelia Redeker, Head Of Architecture, University of Umeå, and included Helene Hellmark-Knutsson, Governor of Västerbotten County and former Swedish Minister of Education; Jan Åman, author of the Norrlands Model and PFAEH; Adam Davies, Co-Founder of sustainable design agency Tŷ Syml and co-author of PFAEH; Sara Thor, Lecturer at Umeå School of Architecture; Michela Magas, Member of the NEB HLRT; and Magnus Myrenberg, Partner at Aalto Capital.

"Some may think the handbook is simplifying things. Some may think it is too abstract. So then, go ahead and make another version. That is the whole point. This is only a starting point. Not the end."
— **Åman and Davies**

ECOSYSTEM LIVING

The process of developing frameworks for regional innovation ecosystems requires a change to our mental models: a shift towards ecosystemic perspectives.

Ecosystem Living moves beyond the concept of urban planning and its focus on the management of infrastructures and complexities of urban environments, to consider broader alignment with the conditions that affect cohabitation.

The concept of Ecosystem Living inspired a week of experimentation with 50 participants from 23 countries in the Ria de Aveiro, one of the most biodiverse areas of wetland in Europe[11]. During the week, a day dedicated to NEB gathered thinkers to discuss ecosystemic approaches. Using the device of a manifesto, several shifts towards ecosystemic perspectives were identified. These shifts reveal the need to redefine roles, re-evaluate how we converge around topics, re-consider how we build knowledge, and rethink the design of our environments.

MANIFESTO FOR ECOSYSTEM LIVING

LINEAR TO MULTIDIMENSIONAL

A shift from linear thinking to a multidimensional, pluralistic approach, that aggregates many domains and perspectives, and rapidly builds new knowledge.

11 MTF Labs Aveiro 2022: Ecosystem Living. [Link]

Experimentation in situ at the Ria de Aveiro. ©MTF Labs 2022.

TOP-DOWN TO INTERPLAY

By shifting from top-down directives to an interplay between bottom-up and top-down actions, the evidence from the ground can be gathered at high level, where the design of new instruments can help stimulate further positive action on the ground.

SMALL-SCALE TO MISSION-DRIVEN

Shifting from small-scale experiments to a view high above ground captures the impact of the small interventions on the whole ecosystem and stimulates mission-driven approaches.

CENTRE TO PERIPHERY

Most regions may be geographically peripheral, but they are at the forefront of climate change facing challenges such as sea level rise and biodiversity losses. These threats are experienced in an immediate, lived and local way by communities who are central to addressing our most pressing environmental concerns. The periphery becomes the centre – where real solutions emerge and transformation begins.

ECOSYSTEMIC DEMOCRACY

The active role of the civil servant

Dan Hill encourages local policymakers to "think like gardeners"[12]. Gardeners create fertile conditions for growth but allow the plants to evolve organically. He recommends that policymakers focus on setting the stage for innovation by establishing clear goals and providing resources, but not try to predetermine the specific outcomes. Instead, they should nurture, support and tend them — enabling them to grow and take root. Gardeners understand the importance of biodiversity for a healthy and resilient ecosystem. Hill advocates for a similar approach to innovation, encouraging policymakers to engage with a diverse range of stakeholders, ideas, and solutions.

At the time the Duved model was being scaled for implementation in a neighbourhood in the city of Umeå to become the Norrlands Model, the Governor of Västerbotten County, Helene Hellmark-Knutsson wrote:

> I believe that this will become the new, sustainable way of planning both villages and cities. Everyone wants to invent their own model and many are uncomfortable learning and being inspired by others. That is the biggest obstacle. And also that we in Sweden think we are so good at collaborating and having a dialogue with the citizens. But we never let this really affect us. In other words, when decisions are made and money is managed, it is always from an expert and top-down perspective. Especially in the cities. We find it difficult to define and identify which residents should have influence in a city or district, for example. And cities are much more complex with stronger economic and political interests that do not

12 Dan Hill, Designing Missions, Vinnova – Swedish Inovation Agency 2022.

> want to give up power. Therefore, today, the village is a better innovation platform than the city. But I think we must dare to do this in the cities as well. And Umeå could be first! But it makes demands on civil servants and politicians.

This demands a rethink of the role of the civil servant:

> I think this means that many municipal and state officials have to relearn and learn new things. And get a new role. See themselves as enabling instead of controlling. And see your expertise as a piece of the puzzle that should contribute to the whole, not act as a culvert or stopping block[13].

ECOSYSTEMIC CONVERGENCE

Working across domains / radical inclusion

The new approach to knowledge creation is an "ecosystemic convergence" based on the principle of radical inclusion. Instead of defining contributors by categories or areas of expertise, the starting question is "Where do we converge?"

> The main issue we encounter when we work with municipalities is that there's a limited amount of money in the budget and an atmosphere of competition in those organisations, where suddenly the Transportation Department has to prove that they are more important than the Housing Department, more important than the Energy Department... because they feel they're competing for finite resources. The reality is that all these things are inherently interconnected

13 Helene Hellmark-Knutsson, in *The future is born in a village*, Arkitektur, nr.7, 2022.

> — someone's waste is someone else's energy, which then has to do with mobility and housing. Logically, all these things have to be considered as one organism — one ecosystem. The key to success is for us to align incentives and create a setting where we all start to work towards the same goal[14].

Bringing domains together into a space of convergence reveals overlaps and synergies. The diversity of perspectives can be channeled into hands-on low-level prototyping of potential solutions:

> Get to the prototypes as quickly as possible. This is where the real learning happens, even via the 'half-step' forward. Prototypes flip the focus from abstract analysis towards real world synthesis, putting 'the room in the system'[15].

Translating thought into practice creates a new kind of evidence for policy makers:

> To me, what that does is creates the sort of evidence for policy makers that's not based on statistics anymore. It's about tangible results on the ground[16].

ECOSYSTEMIC KNOWLEDGE

Collaborative methods for knowledge creation

Duved's "campus without university" relied on the convergence of different domains but also on intergenerational learning: collaboration and dialogue between generations to retrieve endangered ecosystemic understanding.

14 Jan Bunge, Ecosystem Living panel, NEB Day, Aveiro Tech Week, 13 October 2022
15 Dan Hill, Designing Missions, Vinnova – Swedish Inovation Agency 2022.
16 Michela Magas, Ecosystem Living panel, NEB Day, Aveiro Tech Week, 13 October 2022

In Venice, knowledge about the lagoon – vital for the city's sustainability and cultural preservation – was at risk of being lost between one generation and another. TBA21 implemented educational programmes that engaged young people in rediscovering local species, collaborating with chefs on traditional recipes, reinforcing intergenerational exchange and cultural resilience.

> One thing we realised when we arrived in Venice, is that that knowledge of the lagoon was slowly going to be wasted because people in Venice, they're not passing this on. This knowledge through intergenerational exchanges, and this is why we started the massive educational programme with kids. The food programme, rediscovering the food, the indigenous species from the lagoon, and working with chefs to cook this food and working with kids to study the lagoon, and we were also doing a programme of walks in the lagoon with Venetians. Because to tackle these problems that we've been mentioning, you need to have that knowledge[17].

Aside from passing knolwedge on, bringing together different disciplines opens up new ways of generating new knowledge:

> Ocean literacy is so important that when we got to Venice and we opened Ocean Space, we realised that there weren't sign languages about the oceans. So together with artists and deaf communities, we created new sign languages, because we realised that a big chunk of population was excluded by a massive problem or opportunity, which is knowledge about the seas. And we got there because of convergence, because of inclusion, and because of the willingness to bring together different disciplines and different communities around the specific focus or a specific mission[18].

17 Marco Zappalorto, Ecosystem Living panel, NEB Day, Aveiro Tech Week, 13 October 2022
18 ibid

ECOSYSTEMIC ENVIRONMENTS

Beyond-human quality of living

Our understanding of the ecosystem is expanding beyond the traditional confines of human-centric planning and habitation. The focus shifts to the interconnectedness of living systems, encompassing both human and non-human actors. This offers us a broader, more integrated view of cohabitation that values the complex interplay between species, habitats and ecological cycles. It challenges our assumptions about resource use, sustainability, and what we mean when we say "we":

> We consider human beings and their activities to be part of nature and not separate from it, and so true ecosystem living is about harmony, alignment and balance, and finding an entire value network within a holistic cohabitation. This balance must synthesise and integrate artistic practice, scientific research, traditional craft professions and local cultural practices[19].

MANIFESTO FOR ECOSYSTEM LIVING was developed by Jan Åman, Jan Bunge, Marco Zappalorto and Michela Magas during MTF Labs Aveiro 2022.

Link: NEB Day @Aveiro Tech Week: Manifesto for Ecosystem Living

19 Michela Magas, Concept of Ecosystem Living, MTF Labs Aveiro 2022. [Link]

DESIRE

AN IRRESISTIBLE CIRCULAR SOCIETY

Garden Caretaker, Herlev (DK). Photo: Hanne Kokkegaard, DTU Compute

From October 2022 to November 2024, **Desire** worked with communities across Europe, making European citizens central to their work. The insights they gathered are not just research outcomes but are a rallying call for a renewed urban policy agenda.

Cities are more than just collections of buildings; they are ecosystems where humans and non-humans cohabit, creating spaces crucial for thriving communities. The built environment is a powerful leverage point to reimagine our collective future. To envision a sustainable transition amidst today's overlapping crises, it is necessary to go beyond established norms. We need creative, interdisciplinary approaches that invite everyone to participate. This means integrating the social, economic, and ecological dimensions that form the backbone of a circular and regenerative urban future. It means making the circular and regenerative choices the irresistible choices.

Real, lasting transformation comes from place-based change, where collaboration among designers, artists, architects, municipalities, and local communities can play an important role.

Desire is about three things:

Creating Sustainable Futures Through Deep Engagement

Designing Urban Spaces for Trust and Ownership

Innovation Through Art, Design, and Participation

The Desire project created and collected a wide range of invaluable tools for ecosystemic regional innovation, local development and community engagement. These range from simple prompts for workshops, templates and canvases, workshop formats, future visioning exercises and engaging pen-and-paper interventions to digital mobile tools and interactive datascapes to map local community sentiment and concerns.

Garden Careta Wildemanbuurt, Amsterdam (NL). Photo: The Beach and Samenwonen–Samenleven (SW–SL)

The Transformation Guide

Desire has developed a series of six transformation themes with guidance on implementing them. These are core principles and guidance for people and organisations that want to lead in pushing for circularity in transforming spaces and places in their region in an irresistible manner. It focuses on creating ambitious approaches to transformation in order to influence and inspire radical change.

The transformation themes are:

Build and Maintain Trust

Establish and Nurture Ownership

Prioritise Empathy and Deep Care with the Place

Raise and Sustain Ambitions

Embrace and Enable Inclusion

Monitor and Learn Continuously

Each theme is explored and explained with practical steps, considerations, and examples that allow you to provide a context for ecosystemic innovation with a diverse community of stakeholders. These themes and their respective guides offer a practical starting point for regional policymakers wishing to engage with and work with local communities, laying the foundations for the long-term relationship-building necessary to create valuable long-term associations.

Link: https://www.irresistiblecircularsociety.eu/learn

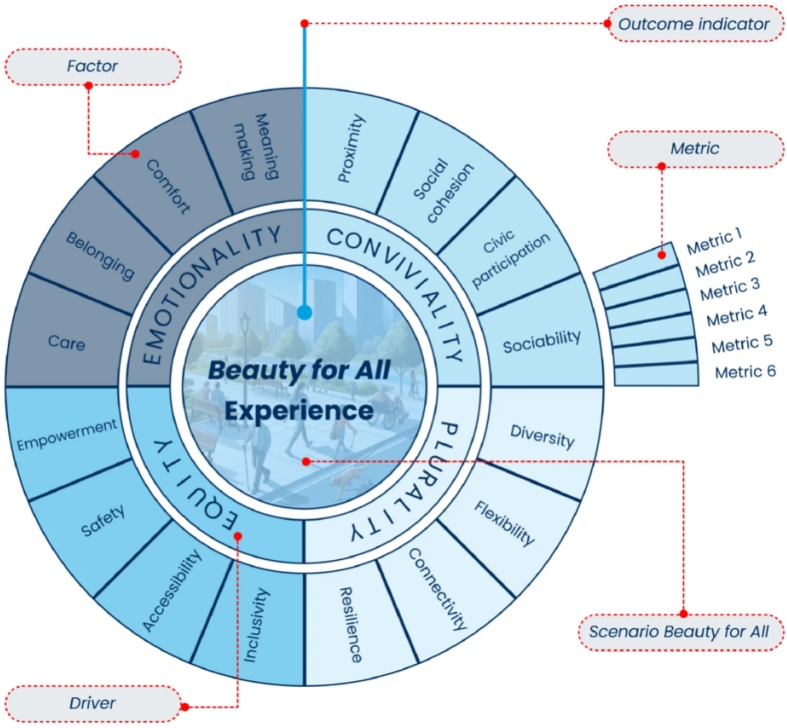
Monitoring Assessment and Learning Tools

Photo: Hanne Kokkegaard, DTU Compute

The Monitoring Assessment and Learning Tools include logbooks for activity planning and reflection, outcome mapping workshops for capturing, tracking and supporting project progress, and peer-to-peer learning templates to foster knowledge exchange. These tools are designed to establish a structured, collaborative learning environment. The practical tools include PowerPoint templates for the peer-to-peer sessions and an Excel spreadsheet for the activity record. These tools are particularly helpful in supporting new regional innovation projects to get underway, collecting empirical data and reflecting upon the learning with a series of simple tools already prepared to help manage the process.

Link: https://www.irresistiblecircularsociety.eu/the-monitoring-assessment-and-learning-tools

Beauty for All



Beauty for All model, MIND, Milan (IT). Credit: PlusValue and Politicnico di Milano, Design Department.

Beauty for All is a tool designed to help you guide and evaluate the transformation of public spaces, with a focus on quality of lived experience, inclusiveness, and sustainability. Through co-creation, defining context-specific indicators, and tracking progress using both qualitative and quantitative metrics, it supports decision-makers, funders, and urban planners in shaping and monitoring meaningful changes in urban spaces, either in permanent builds or temporary contexts. It can be used broadly or to direct attention towards more specific goals and outputs — e.g. supporting stakeholders and decision-makers in where to put their focus.

Link: https://www.irresistiblecircularsociety.eu/the-beauty-for-all-model

Think it, Sketch it, Show it!

Gadehavegaard, Høje-Taastrup (DK). Credit: GXN

This is a 6-step design toolkit for co-designing with young people in your region. Involving young people in a design workshop is a strategic approach to building valuable insights and design principles that can contribute to the creation of future-proof solutions. Co-designing with young people offers them a space to express their needs, explore their ideas, and have them translated into engaging design projects and visuals. The process has been tested and validated with students aged 12–17, but the toolkit is designed for a much broader age group. The toolkit is a comprehensive PDF guide that provides conceptual frameworks, activities, templates and case study examples.

Link: https://www.irresistiblecircularsociety.eu/think-it-sketch-it-show-it

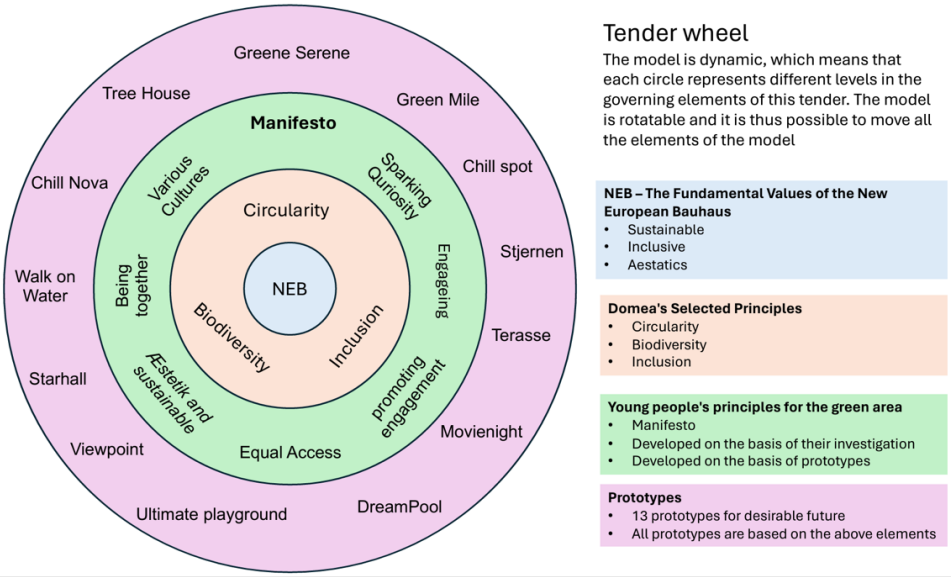
Listening to Places

Street event, Kalundborg (DK). Photo: Benjamin Hesselholdt.

Listening to Places is an experiential activity that engages participants as part of site visits and discussions to help them understand and express their sensory experiences and aspirations. The ideas and observations generated from the exercise go beyond the visual to capture essential sensory aspects that can help guide a new idea or vision for a place, and it is essential to integrate these insights into the strategic planning of a regional innovation project.

Link: https://www.irresistiblecircularsociety.eu/listening-to-places

The Tender Wheel



Credit: AGORA and Domea.dk

The Tender Wheel helps guide the development of a tender programme. It is used to include those who are not usually involved, such as children or other users of the site. There are four layers of the Tender wheel:

The NEB base: Sustainability, Inclusion and Aesthetics.

Selected principles: choose three Principles that you want to focus on for your own site-specific prototypes.

Customised principles: the principles that you develop for your site-specific context, customised to your setting and for your needs.

Prototypes: prototypes of the places, events, and objects that the other layers have inspired and guided toward.

Outdoor Space Mapping

Ziepju street, Riga (LV). Photo: Benjamin Hesselholdt

This tool is designed to include citizens in creating their desired transformation of a place. It is a simple yet effective approach that helps them to visualise their needs and creates a tangible way to integrate their perspectives into the ongoing stages of regional development. The toolkit includes simple cut-out images to place on a large scale print from a satellite mapping service such as Google Maps, allowing for discussions and negotiations with regard to placement of amenities and imagined site use.

Link: https://www.irresistiblecircularsociety.eu/outdoor-space-mapping

Co-creation Workshops and Hackathons

Gadehavegaard, Høje-Taastrup (DK). Photo: Benjamin Hesselholdt

Desire recommends a range of hands-on, collaborative co-creation workshops as a methodology to work with long-term transformations that rely on participatory, multi-level, and multi-disciplinary processes. Co-creation workshop is an umbrella term for a range of different interventions, ranging from 20 minutes to several days of activity. The workshops follow the logic that including various perspectives will invariably lead to better and more innovative solutions.
A strong element of Learning by Doing underpins the Co-Creation Workshops, and they aim to generate concrete solutions, prototypes or products that can be implemented in practice. The methodology ensures results and designs that could not have been possible without collaboration. It helps build relationships and makes every workshop participant feel heard and seen in the design.

Link: https://www.irresistiblecircularsociety.eu/co-creation-workshops

Multispecies Postcards

Photo: NXT

This tool is designed as a simple writing and imagination exercise to help participants see the world from the perspective of another species. A postcard is written to a fellow workshop participant from the viewpoint of a non-human species sharing the local, regional ecosystem. The template is intended to be used in a larger workshop or within a smaller team. Each participant is given a blank postcard with a specific species assigned to them. In silence, everyone writes their postcard. The additional step of actually sending the postcard is recommended. The organiser ensures that everyone receives a postcard written by someone else. Both writing and receiving the postcard gives participants pause to consider the ways in which they share their environment with other living beings, and how those non-human species might be affected by their actions and interventions.

Link: https://www.irresistiblecircularsociety.eu/species-postcards

1:1 Mobile Interventions

Kalundborg (DK). Photo: Benjamin Hesselholdt

This tool is a simple instruction to make long-term processes both tangible and visible before they are implemented. It refers to creating physical 'sketches' as temporary installations in the space you are planning to transform. In other words, if you plan to build something in a location, place something there of that same size to get a sense of its impact and scale. The key is to make something tactile and visible through very simple means. The Desire project recommends that you "work with what you got".

Link: https://www.irresistiblecircularsociety.eu/11-mobile-interventions

The Value Proposition Canvas

Cascina Falchera, Turin (IT). Photo: Marzia Allietta

The Value Proposition Canvas is a template for co-creating a value proposition for citizens, residents, or other site users of the place you are transforming. Originally created as a service design tool to help commerical providers meet their customers needs and pain points, the application of the canvas in a regional development and innovation context helps stakeholders and user communities think through their current and potential relationship with the site under development. At the urban farm Cascina Falchera in the Turin area, Desire lighthouse partners worked with artist Rooy Charlie Lana to reimagine the site as a living lab. They used the Value Proposition Canvas to engage the community and neighbourhood by listening and collecting ideas and proposals from various users. Through this methodology, they identified the need to improve internal procedures, particularly regarding lifelong learning for internal staff.

Link: https://www.irresistiblecircularsociety.eu/value-proposition-canvas

Stakeholder Mapping

Photo: BLOXHUB

Stakeholder mapping is always an essential first step in any regional or city development. It helps give an overview of the relevant actors and ecosystems, ensuring the inclusion and representation needed for your project to succeed. However, the Desire Lighthouse focused on two innovative approaches that go beyond traditional stakeholder listing and mapping, both of which are provided as templates and guides available from the Danish Design Centre, linked from the Desire website. Ecosystem Mapping focuses on the motivations, resources and capabilities that will become valuable for the overall ecosystem, while Value System Mapping concerns the exchange of value within the new development, and the kinds of value they are exchanging.

Link: https://www.irresistiblecircularsociety.eu/stakeholder-mapping

How to be an Irresistible City Maker

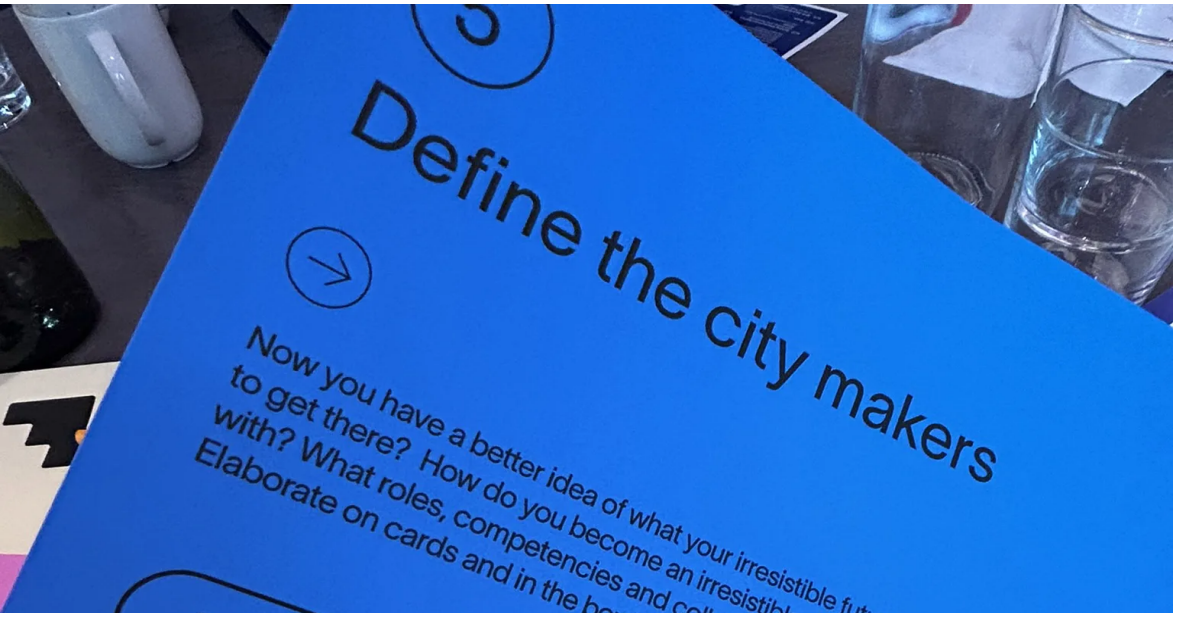


Photo: Hanne Kokkegaard, DTU Compute

The 'How to be an Irresistible City Maker' tool is a template for an interactive and engaging design sprint that leads participants through the creation of concrete images of irresistible circular cities of the future. Participants imagine and develop scenarios to reflect on and discuss what needs to be considered when developing thriving and inclusive future cities. The tool helps participants reflect on critical questions such as the role they can play in the creation of that vision, and who else is needed to get on board to help design the irresistible circular city. The tool sparks imagination by creating alternative future scenarios, and gains insights into the roles, actors, and partnerships necessary to achieve that Desired future. It helps highlight what you should continue to do and what you should start doing differently tomorrow.

Link: https://www.irresistiblecircularsociety.eu/how-to-be-an-irresistible-city-maker

The Closing Circle Ritual

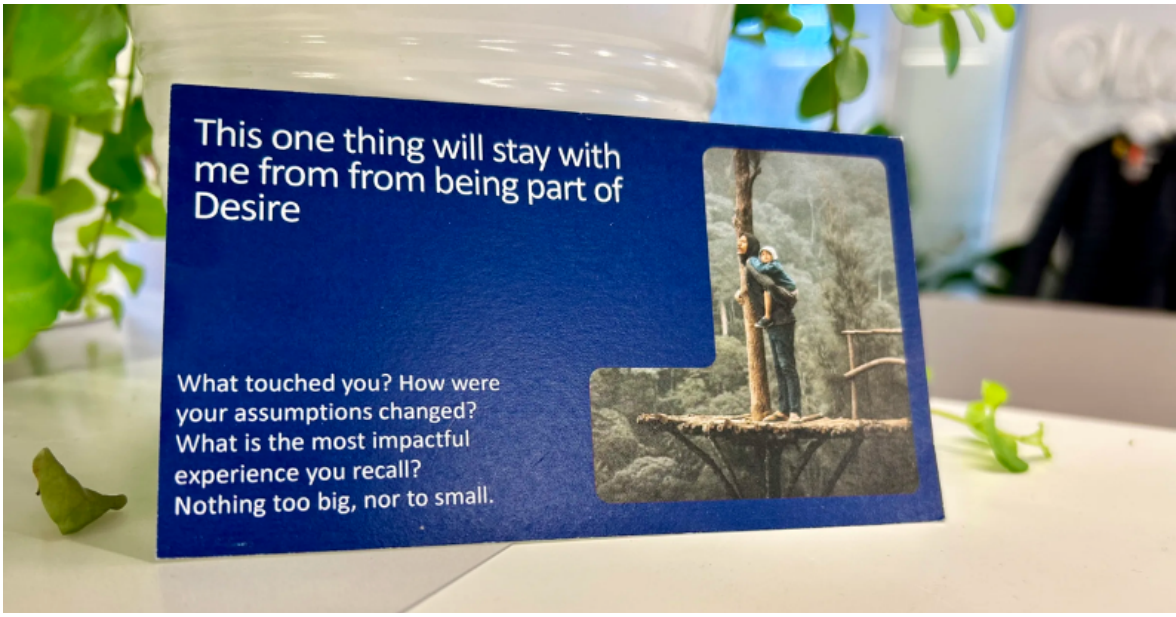


Photo: Hanne Kokkegaard, DTU Compute

Endings are as important as beginnings. As a project or development process comes to a conclusion, the Closing Circle Ritual allows groups to celebrate what they have achieved together throughout a project or transformation process. It marks a significant milestone, taking the time to look back with appreciation for the group and the work accomplished. The tool is a series of prompts and questions that guide participants through a reflective process. It is a simple act that embeds the learning and takeaways as well as the positive experience of the joint accomplishment.

Link: https://www.irresistiblecircularsociety.eu/the-closing-circle-ritual

Our Walk App

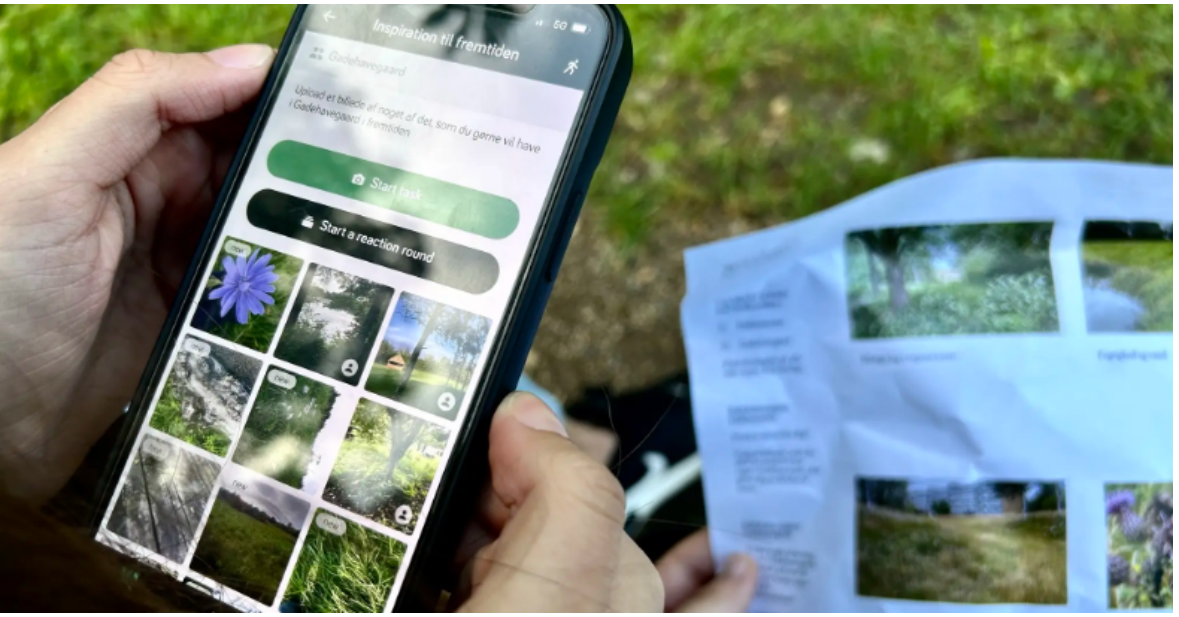


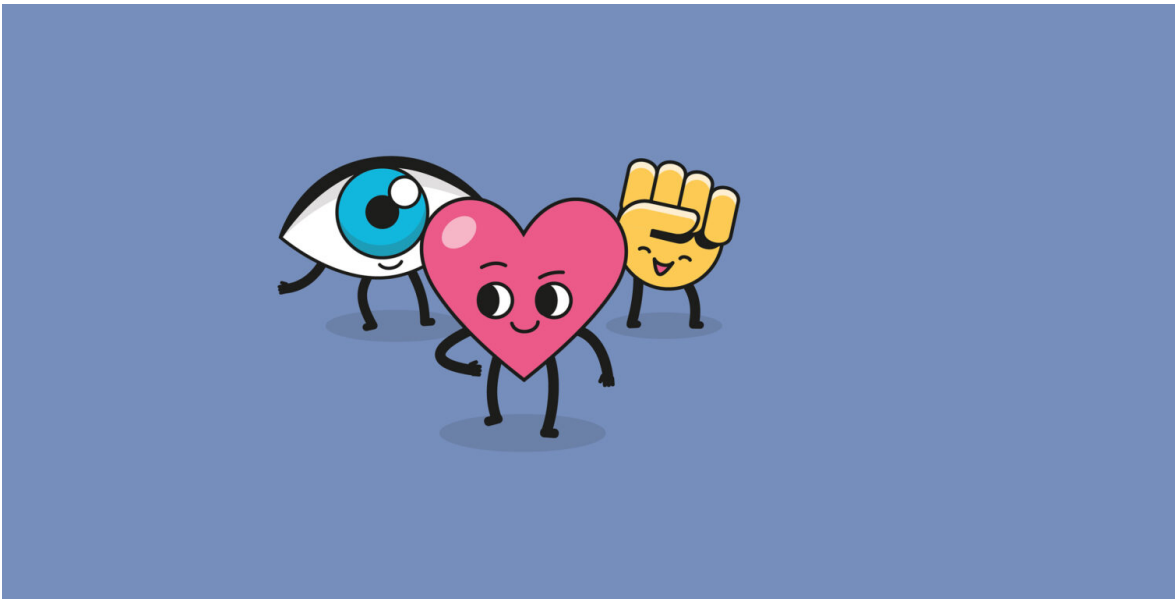
Photo: Hanne Kokkegaard, DTU Compute

Our Walk App is a tool for participatory research about a place or a city under transformation. Participants from the local community are encouraged to explore the local neighbourhood and engage in data collection, idea generation and the co-design of their locality. They join the app in a designated user group and are asked to complete one or more photo tasks. They take pictures of places and situations worth capturing or that are meaningful to them, in response to a specific task. To complete the task, they are asked to "annotate" the photo. A 'datascape' – an interactive map representing the data collected — displays all walks and photos taken with their exact geolocation. This aids decision-makers, architects, urban designers and planners to interactively explore the thoughts and responses of residents and so supports the creation of urban spaces where citizens feel seen, heard and listened to.

Link: https://www.irresistiblecircularsociety.eu/our-walk-app

EYES HEARTS HANDS

URBAN REVOLUTION



Eyes Hearts Hands — Urban Revolution focused on the transformation of cities while considering both the local heritage and the social context. To do this, it worked across seven diverse European cities with different backgrounds, cultures and local conditions. The project bridged the worlds of art, culture, and education with science and technology and contributed to the EU Missions aligned with NEB to tackle major challenges in health, climate, and the environment through closer engagement with citizens and harnessing the power of research and innovation.

The project considered that three things were necessary to make change happen:

Eyes: Aesthetically viable and socially accepted urban transformation

Hearts: Inclusive and socially fair involvement of local communities

Hands: Concrete engagement actions for full sustainability

Eyes Hearts Hands has supported cities with innovative co-design and co-investment practices that bring together local business and education communities as well as entrepreneurs, social enterprises and city residents. The aim was to design and apply solutions to grand challenges such as environmental and climate adaptation, social segregation, and reconversion of existing or heritage infrastructure — and to make cities sustainable and resilient for the long haul.

As part of that initiative, Eyes Hearts Hands examined 300 case studies and selected 30 best practices for dissemination. The case studies were evaluated through the lenses of 5 levels of sustainability (from conventional to regenerative), 3 ambition levels of NEB values, and the level of match or applicability for the seven Lighthouse cities in the project. Case studies were further categorised by the scale at which they are applied: City, Neighbourhood, Street, Building, or System.

A series of methodologies for co-creation were assembled, focusing specifically on the engagement of citizens and residents. Many of these tools are already very familiar to policymakers and make up much of the existing facilitation playbook for local governments. However, each of these can be implemented in a way that supports a NEB approach to ecosystemic regional innovation, and are included in the following pages to ensure that no ideas or strategies that may be useful are overlooked or discarded.

Link: https://eyesheartshands.eu/

City

01: Sønderborg – SmartEnCity, Sønderborg, Denmark – A pioneering zero-carbon community project focused on integrating energy-efficient solutions, renewable energy systems, and sustainable urban practices to reduce emissions and create a replicable urban model. https://smartencity.eu/

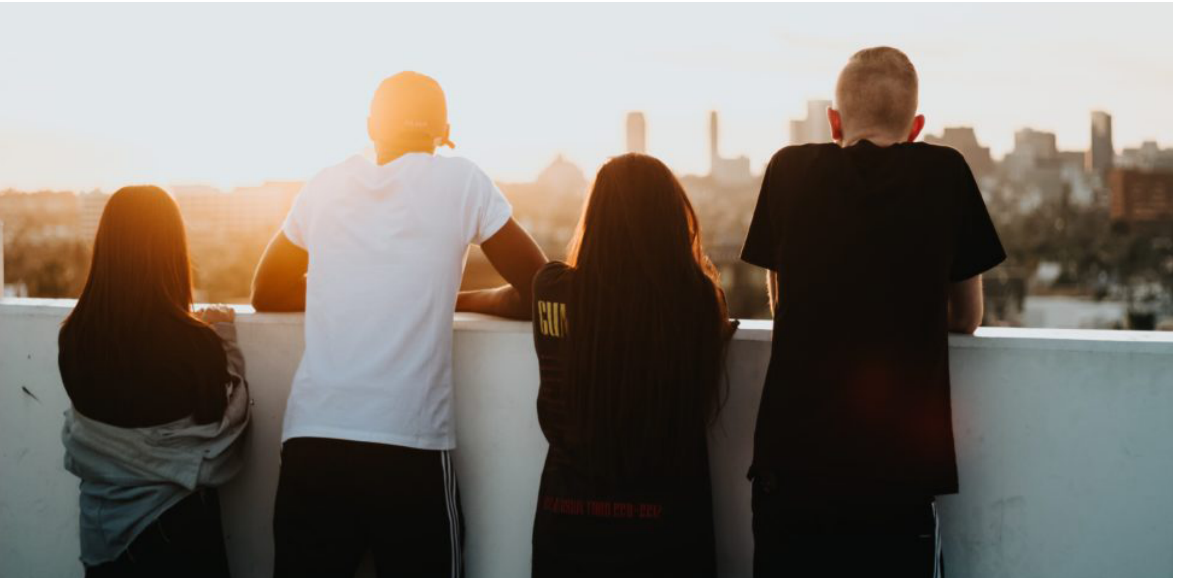
02: Les Contrats des Quartiers Durables, Brussels, Belgium – An urban regeneration initiative fostering public-private partnerships to revitalise neighbourhoods, improve infrastructure, and empower local communities with sustainable living solutions. https://www.brussels.be/sustainable-neighbourhood-contracts

03: E-on Waste Heat Recovery, Berlin, Germany – A project transforming industrial waste heat into a resource for urban energy systems, contributing to sustainable city development and reduced carbon emissions. https://www.eon.com/en/business-customers/success-stories/buerogebaeude-berlin.html

04: The Rivers of Sofia, Sofia, Bulgaria – An initiative reconnecting urban landscapes with natural waterways, enhancing biodiversity and creating vibrant public spaces

for recreation and ecological awareness. https://bigsee.eu/rivers-of-sofia/

05: Amsterdam Rainproof, Amsterdam, Netherlands – A city-wide programme promoting climate adaptation through innovative designs to manage rainfall and prevent flooding in urban areas. https://www.rainproof.nl/



Neighbourhood

06: Replicate, San Sebastián, Spain – A smart city pilot implementing energy-efficient technologies, sustainable mobility systems, and smart infrastructures to enhance urban resilience and quality of life. https://replicate-project.eu/

07: Enghave Park, Copenhagen, Denmark – A multi-functional urban park designed to handle extreme rainfall while providing a recreational space that contributes to the city's climate resilience strategy. https://www.tredjenatur.dk/en/portfolio/enghaveparken-climate-park/

08: Jardin Joyeux, Lyon, France – A grassroots urban transformation turning asphalted car parks into green spaces, improving ecological balance and fostering community connections. https://landezine.com/jardin-des-joyeux-by-wagon-landscaping/

09: Gardens of the Future, Nicosia, Cyprus – A forward-thinking urban project developing shared green spaces to support sustainable food ecosystems and enhance community-driven urban living. https://gardensofthefuture.com/

Street

10: Health Street, London, United Kingdom – A street redesign initiative prioritising healthy urban living by creating accessible, active, and community-centred environments. https://heatherwick.com/studio/news/healthstreet/

11: Green Shades, Seville, Spain – A project employing innovative shading systems to manage urban microclimates and improve thermal comfort on streets and in public spaces. https://www.singulargreen.com/en/green-shades/

12: The 200-Foot Garden, Detroit, United States – A community-led transformation of neglected urban land into productive green spaces, encouraging local engagement and sustainable practices. (in Hes, D. and du Plessis, C. (2015) Designing for Hope: Pathways to Regenerative Sustainability. 1st ed. London: Routledge.)

Building

13: Marion Fire Station, Marion, United States – A regenerative architectural project demonstrating sustainable design principles and fostering environmental awareness within the community. https://www.archdaily.com/1005665/marion-fire-station-no-1-opn-architects

14: Hitchcock Center for the Environment, Amherst, United States – A cutting-edge environmental education facility showcasing regenerative design and sustainable resource use. https://hitchcockcenter.org/

15: COOKfox Studio, New York, United States – An office environment designed with biophilic principles, integrating nature into the workspace to enhance well-being and productivity. https://cookfox.com/

16: De Verwondering, Almere, Netherlands – A school designed to promote a deep connection to nature, utilising biophilic design to create inspiring learning environments. https://verwondering-almere.nl/over-de-verwondering/

17. Maggie's, Leeds, United Kingdom — A free cancer care drop-in centre housed in a building designed by leading

architects to create an uplifting, sustainable environment. https://www.maggies.org/our-centres/maggies-yorkshire/

18: Gleis 21, Vienna, Austria – A co-housing development blending sustainable architecture with a focus on communal living and shared resources. https://gleis21.wien/

Systems

19: SolarLeaf – Algae Bio-Reactive Façade – An innovative façade system utilising algae cultivation to generate bioenergy and improve building sustainability. https://www.arup.com/projects/solarleaf/

20: Made of Air – Carbon Super Block – A carbon-negative building material designed to sequester atmospheric CO2 while offering high-performance construction solutions. https://www.madeofair.com/

21: CO-mida Vertical Garden – A vertical garden system promoting urban greening and local food production in densely built environments. https://iaac.net/project/co-mida-en/

22: Xifré's Rooftop: "Floating" Wild Garden – A rooftop garden project transforming urban spaces into ecological

havens for biodiversity and community use. https://new-european-bauhaus.europa.eu/get-inspired/inspiring-projects-and-ideas/xifres-rooftop-floating-wild-garden_en

23: ERDEN PURE Walls – A sustainable wall system made from natural materials, promoting energy efficiency and ecological design. https://new-european-bauhaus.europa.eu/get-inspired/inspiring-projects-and-ideas/erden-pure-walls_en

24: NORDIC LAM GLULAM – Engineered timber systems offering sustainable, high-performance structural solutions for modern construction. https://www.nordic.ca/en/products/nordic-lam-glued-laminated-timber-glulam

25: Bullitt Center, Seattle, United States – A model for net-zero energy buildings featuring advanced systems for electricity generation, water recycling, and energy efficiency. https://bullittcenter.org/

26: Vivihouse – A modular construction system focused on affordability, sustainability, and adaptability for urban housing needs. https://www.vivihouse.cc/

27: Clayworks – Sustainable interior finishes made from natural materials, enhancing thermal and acoustic performance while being environmentally friendly. https://clay-works.com/

28: Bertschi Living Building Science Wing, Seattle, United States – A learning facility designed to meet Living Building Challenge standards, incorporating innovative water and energy systems. https://www.bertschi.org/about-us/our-campus/living-building-science-wing

29: The Phenix Sustainable Design Lab – A laboratory showcasing cutting-edge sustainable systems for heating, cooling, and ventilation in buildings. https://lemay.com/projects/the-phenix/

30: Fabbrica dell'aria / Air Factory – An air purification system integrated into architectural spaces, improving indoor air quality through innovative design. https://www.pnat.net/fabbrica-dellaria/

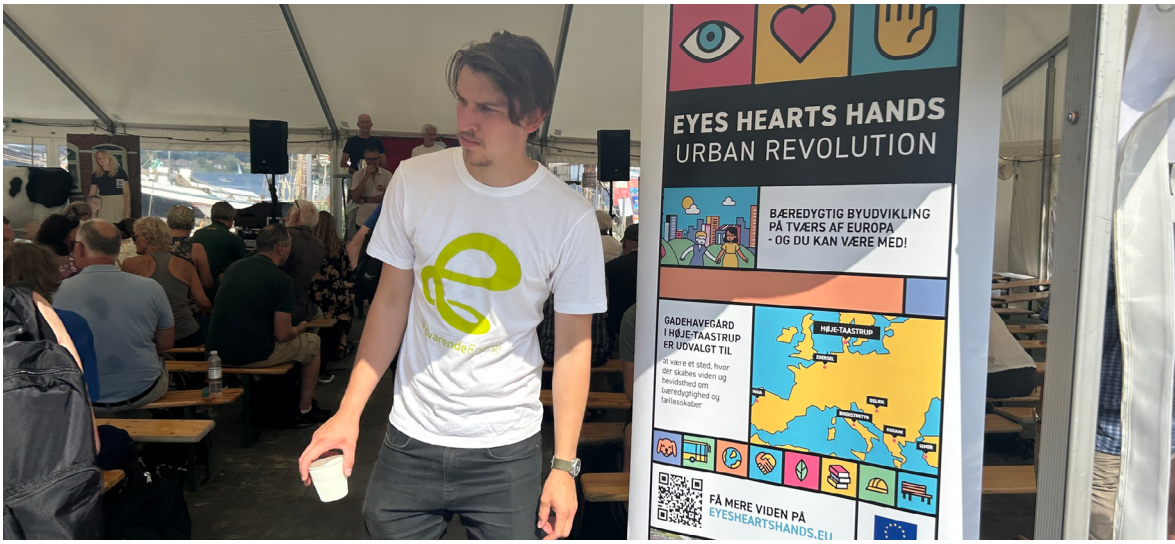


Photo: EHHUR

Co-creation methodologies

Information Hotline: A communication tool for large projects that provides phone-based access to project information, allowing stakeholders to receive updates, leave comments, and ask questions. While offering an inexpensive and consistent method of information dissemination, it requires broad advertising and a commitment to timely responses.

Community Day: A celebratory gathering designed to foster community engagement through workshops, cultural activities, and informational booths. By creating a welcoming and inclusive environment, Community Days encourage broad participation, promote transparency, and generate valuable feedback from diverse attendees.

Open House: An informal platform where stakeholders can engage with project materials, ask questions, and provide feedback in an accessible public venue. Using visual aids like posters and maps, Open Houses create a non-intimidating environment that encourages community participation and builds trust through direct engagement.

Town Hall: A structured meeting facilitating direct dialogue between project leaders and community members, typically involving presentations and open forums for expressing opinions and concerns. Town Halls promote transparency, address community issues, and build consensus by ensuring all voices are heard.

Community Walkshop: An immersive, hands-on method combining guided tours with interactive workshops, enabling stakeholders to explore neighborhoods, identify challenges, and collaboratively propose solutions. Walkshops are particularly effective for addressing hyperlocal issues by providing participants a tangible sense of place and context.

Public Consultation: A formal process for soliciting community input on proposed plans, policies, or projects through public meetings, written submissions, and surveys. This method ensures projects align with community needs by incorporating diverse perspectives and identifying potential concerns early in the decision-making process.

Buzz Groups: Small, focused discussion groups formed during larger meetings to tackle specific topics or generate solutions. By dividing participants into smaller clusters and then reconvening to share insights, Buzz Groups foster inclusivity, collaboration, and ensure diverse perspectives are heard.

Public Hearing: A formal event similar to Town Halls where stakeholders present views on specific projects, policies, or plans. These hearings typically include a structured agenda with project presentations followed by an open forum, underscoring transparency and allowing community members to directly influence project outcomes.

Public Workshop: Interactive sessions where stakeholders actively engage in hands-on activities to co-create or refine project solutions. Designed to foster creativity and leverage collective knowledge, these workshops are particularly valuable during design or planning phases to encourage innovative thinking and community ownership.

Citizen Advisory Group: A team of community representatives providing ongoing input throughout a project's lifecycle. By selecting members that reflect community diversity, these groups act as a bridge between the project team and wider community, offering feedback and advocating for stakeholder interests.

Online Jam: Digital brainstorming sessions allowing stakeholders to collaborate asynchronously or in real-time using virtual platforms. Particularly effective for large-scale projects or engaging geographically dispersed participants, Online Jams enable idea generation and problem-solving without physical meeting constraints.

Innovation Challenge: Competitive events designed to crowdsource creative solutions to project-related problems. By inviting participants to propose ideas and prototypes with potential incentives, these challenges generate fresh perspectives and engage diverse stakeholders in innovative problem-solving.

Forum Theatre: An interactive method using theatrical performances to explore social issues and encourage collaborative problem-solving. By combining emotional and intellectual engagement, Forum Theatre creates a safe space for stakeholders to express ideas and collectively envision solutions.

Consensus Workshop: Structured sessions guiding diverse stakeholders toward shared agreement on specific issues. Through facilitated brainstorming, discussion, and prioritisation, these workshops synthesise individual ideas into collective decisions, fostering stakeholder ownership and alignment.

World Café: A conversational methodology encouraging small-group discussions where participants rotate between tables with different prompts. By exchanging ideas and building on collective insights, World Café explores complex issues in a participatory and inclusive manner.

Vision Factory: A collaborative method where stakeholders co-create future scenarios and develop strategies to achieve desired outcomes. Participants engage in creative thinking activities, often using visual aids like drawings or models to illustrate potential futures, helping to align stakeholder aspirations and create a shared understanding of project objectives.

Envisioning the Future: A participatory process inviting stakeholders to visualise potential long-term project outcomes through facilitated sessions using storytelling, sketches, or scenario planning tools. This method helps shape project strategies by ensuring they reflect shared values and collective aspirations.

Charrette: An intensive, multi-day workshop bringing together community members, planners, designers, and experts to collaborate on detailed project designs. Through iterative cycles of brainstorming, prototyping, and feedback, Charrettes create highly contextual solutions that reflect collective stakeholder input.

Citizen Jury: A representative group of community members evaluates project proposals or policies by receiving information and participating in facilitated discussions. This method builds legitimacy and trust in decision-making processes by ensuring informed recommendations that reflect diverse community perspectives.

Gamification: A method applying game mechanics like challenges, rewards, and competition to engage stakeholders and motivate participation. By designing activities that incorporate game elements, this approach simplifies complex issues, encourages behavioral change, and increases stakeholder engagement through interactive experiences.

Stakeholder Working Group: A collaborative team representing different stakeholder categories (community members, experts, officials) formed to provide specialised input and ensure diverse perspectives are integrated into project planning and execution. These groups directly influence project decisions through regular meetings and collaborative input.

Living Lab: An experimental environment where stakeholders co-create, test, and refine innovative solutions in real-world settings. By integrating input from citizens, researchers, and industry partners, Living Labs develop and validate ideas through iterative experimentation focused on complex societal challenges.

Community Mapping: A participatory tool where stakeholders create visual representations of local resources, challenges, and opportunities. By generating maps that include physical features, social networks, or service gaps, this method builds local knowledge and provides valuable insights for project planning and advocacy.

VIPP Cards Collection Clustering: A visualisation method where participants write ideas on cards that are then grouped into clusters based on emerging themes or relationships. This approach organises complex perspectives, ensures all voices are represented, and provides a clear, visual method of synthesising collective input.

Appreciative Inquiry Process: A strengths-based approach that identifies and amplifies positive community attributes instead of focusing on deficits. Structured in phases of discovery, dreaming, and design, this method builds optimism, trust, and aligns stakeholders by focusing on existing successes and future possibilities.

Fishbowl: A dialogue technique where a small group discusses an issue in the center of a larger group, with observers able to join by stepping into the "fishbowl". This method allows for focused discussion while maintaining broader audience engagement, exploring complex topics through dynamic and inclusive conversations.

Nominal Group Technique: A structured brainstorming method that prioritises ideas through group consensus. Participants individually generate ideas, which are then shared, discussed, and collectively ranked to identify the most important or feasible options, ensuring all voices are heard and managing group dynamics.

Reflexive Interactive Design: An iterative project development approach that continuously integrates stakeholder feedback to refine solutions. By creating a cycle of design, feedback, and revision, this method ensures solutions remain flexible, relevant, and responsive to evolving stakeholder needs.

Six Thinking Hats: A problem-solving methodology encouraging participants to approach issues from six distinct perspectives (facts, emotions, positives, negatives, creativity, process). By preventing groupthink and ensuring comprehensive exploration, this technique promotes balanced and diverse discussions.

Topsy Turvy (Reverse Brainstorming): A creative problem-solving technique that flips conventional thinking by first brainstorming ways to exacerbate a problem, then systematically transforming these ideas into potential solutions. This approach helps overcome mental blocks and uncover innovative insights.

After Action Review: A reflective process for evaluating completed activities by systematically analysing what worked well, what didn't, and potential improvements. By fostering open discussion and documenting lessons learned, this method promotes continuous learning and accountability.

Design Thinking: A user-centered methodology emphasising empathy, ideation, prototyping, and testing to address complex challenges. By understanding user needs, generating collaborative solutions, and iteratively refining prototypes, Design Thinking promotes innovative, human-centered problem-solving.

NEBOURHOODS

"Making the city sustainable, affordable and attractive for all has long been at the core of what we do. The New European Bauhaus places particular emphasis on the role of culture and creativity and on directly tangible benefits for people." – **Elisabeth Merk**, Chief Planner of the City of Munich

NEBourhoods focuses on the Munich district of Neuperlach (65,000 inhabitants), with a range of activities and interventions for public spaces, attractive living, energy communities and local mobility, youth culture, nutrition, biodiversity and circular economy for that locality. The ambition is to prototype, test, validate and establish models for other European cities and to become an exemplar of the NEB principles.

Neuperlach faces significant social, urban development and construction-related challenges. With residential and office buildings from the 1960s – 1980s in serious need of renovation, neglected open spaces and a high unemployment rate compared with the city as a whole. Its strengths include the social connection of its multi-cultural residents to their district, extensive green spaces and a separate road network for pedestrians and cyclists, as well as vacant office

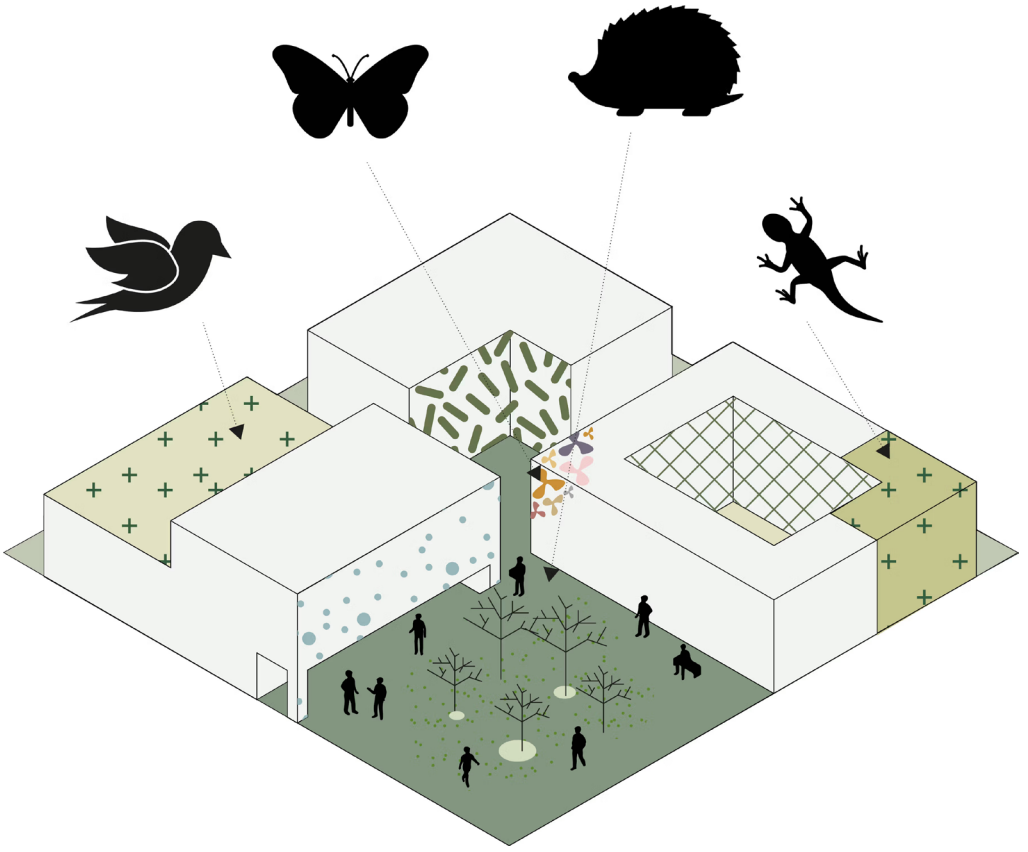
structures from which something new can be created. The territory therefore presented an ideal starting point for a revitalisation in the spirit of the New European Bauhaus.

The project established a NEBourhoods Pavilion to provide a meeting place for everyone who would like to be actively involved in the development of their district. They also established a 'Library of Things' with a digital tool, allowing residents to borrow useful household items to support a circular sharing economy. Clubs, organisations and groups from the region were invited to use the NEBourhoods Pavilion free of charge for meetings, exhibitions, events and more.

NEBourhoods created a series of NEB Actions to engage in the design and use of public spaces for all generations, the upgrading of residential buildings and circularity in the existing building inventory. These tested innovations targeting greater biodiversity, renewable energy, local transit and nutrition.

Link: https://www.nebourhoods.de/

Animal–Aided Design

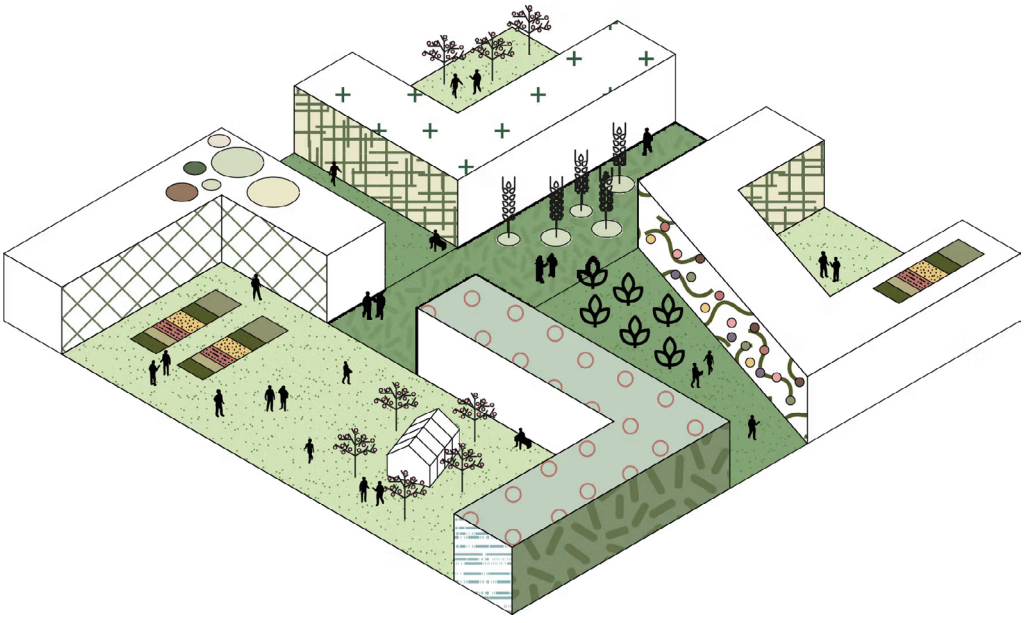


Animal–Aided Design (AAD) is an innovative urban planning methodology that integrates wildlife considerations into the architectural and urban development process from the very beginning, rather than as an afterthought. The approach begins with a comprehensive species assessment, where planners identify regional wildlife that could potentially thrive in urban environments. In Neuperlach's case, this involved evaluating approximately 400 animal species and determining which ones could successfully adapt to the local urban conditions.

The design approach focuses on developing multifunctional structures that address both human needs and wildlife requirements.

The "NEBourhoods Nesting Stool" is an urban furniture piece that demonstrates how everyday structures can be designed to serve multiple purposes – providing seating and shade for humans while creating nesting spaces and habitats for various wildlife species.

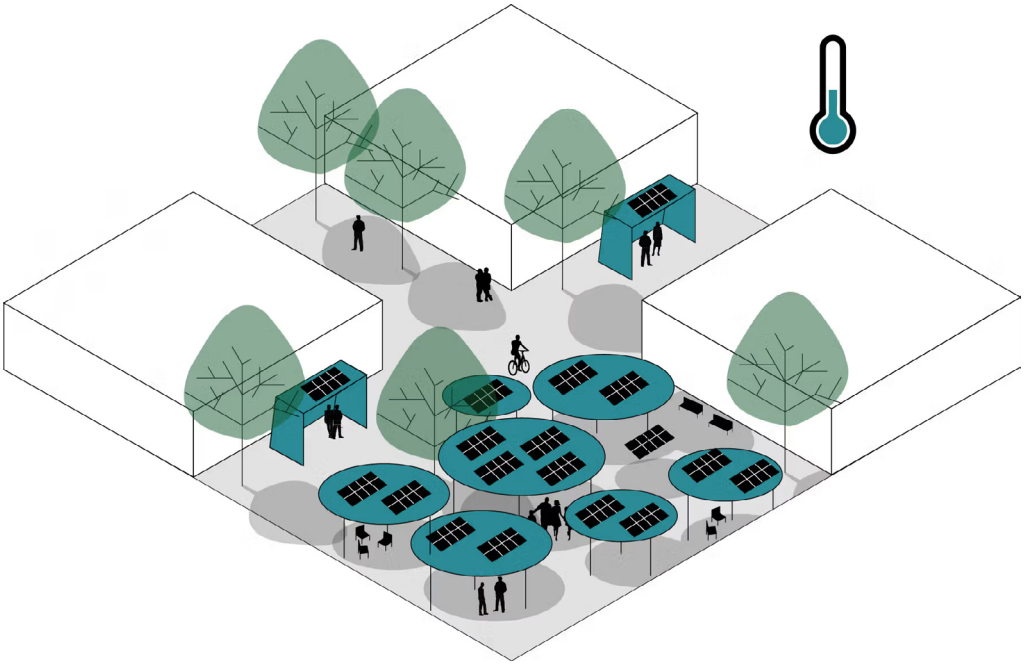
Growing a Tasty Neuperlach



"Growing a Tasty Neuperlach" integrates sustainable nutrition and edible greening through community-driven activities and education. In collaboration with local residents, the project creates hands-on opportunities in public spaces to inspire interest in climate-adapted food systems and greening. Communal planting and cooking bring diverse participants together to learn and build a greener, edible neighbourhood. Partnering with the Munich Sustainability Initiative and the Nutrition Council of Munich, the project connects agriculture, food production, and climate protection while fostering networks among initiatives, councils, and businesses to transform local food chains.


PATRICK
NIKE

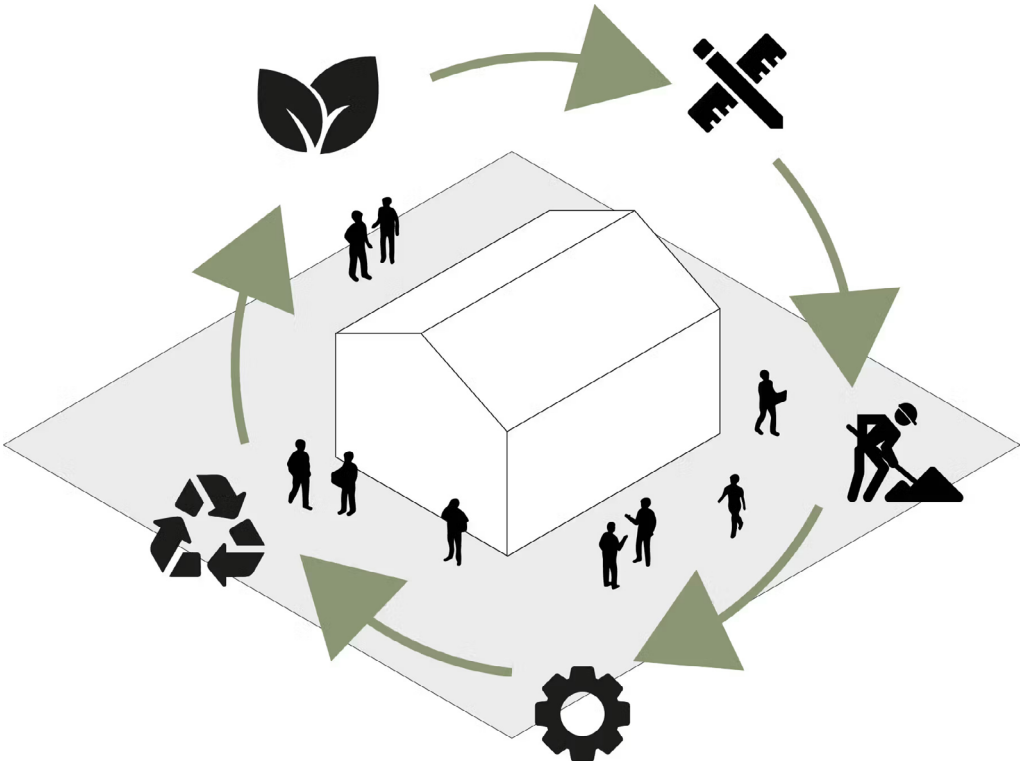
Public Power



Shade and Energy in Public Spaces focuses on combating urban heat islands through shading solutions that also generate solar energy. Heat stress mainly affects vulnerable groups, making public spaces less accessible and enjoyable.

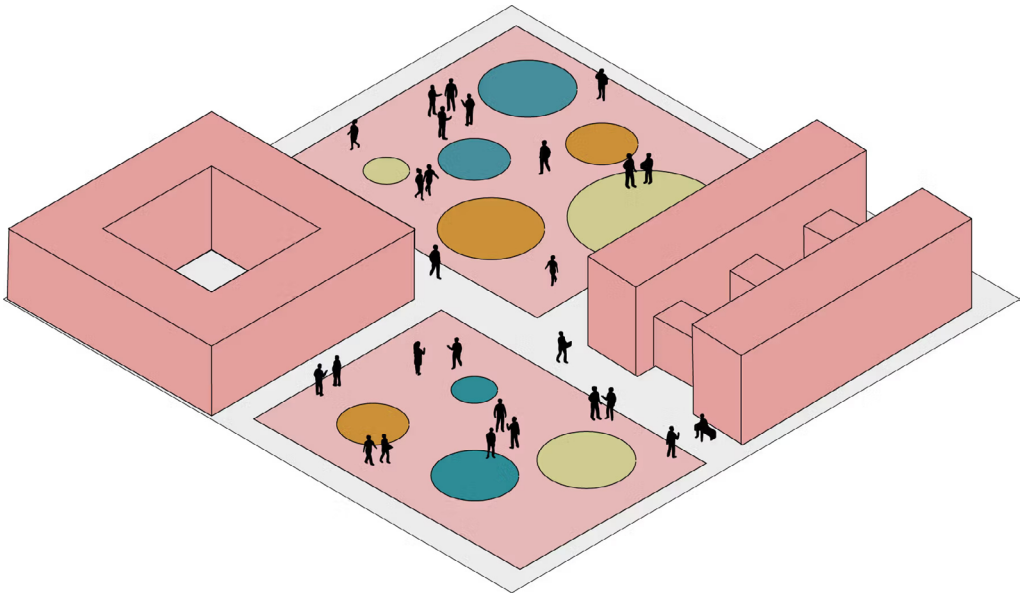
In Neuperlach, the project identified critical areas for shading interventions based on social, environmental, and economic criteria. Collaborating with architecture students from the Technical University of Munich and local residents, the project developed and implemented demonstrators that showcase the social, ecological, and economic benefits of climate-adaptive design, fostering inclusivity and sustainability in urban spaces.

Circular Neuperlach



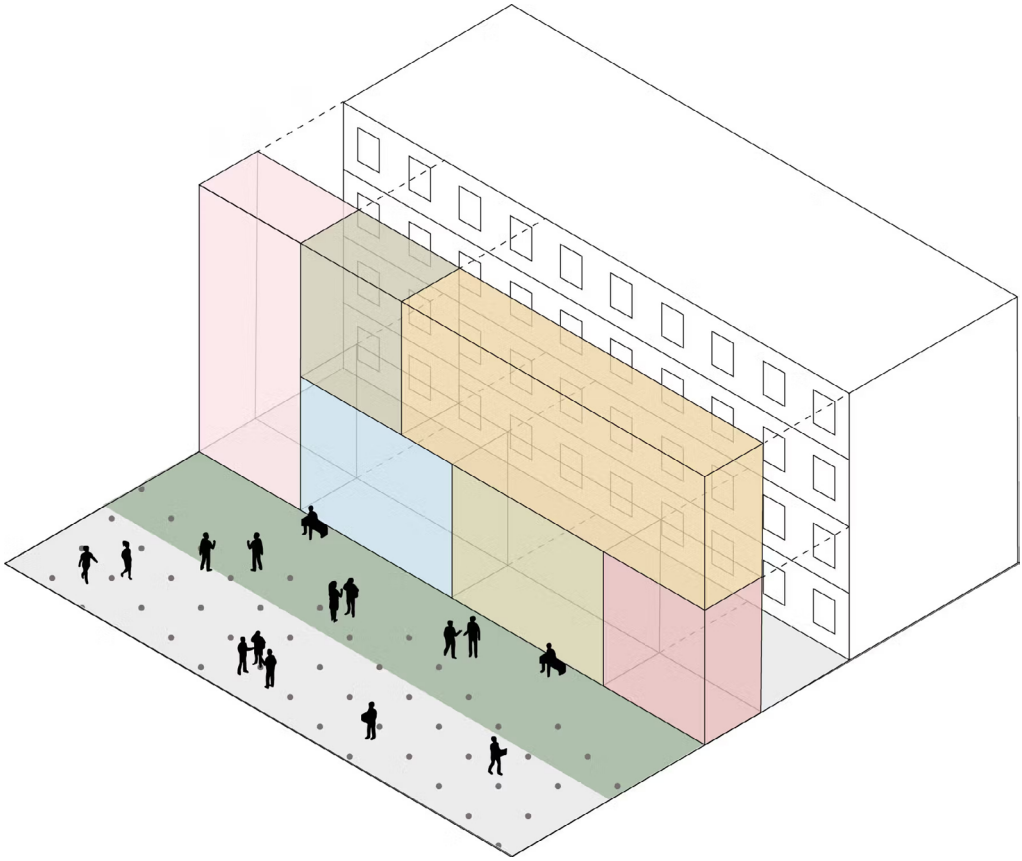
The Roadmap to Circularity for Commercial Buildings focused on transforming non-residential buildings in Neuperlach into models of sustainable design, usage, and material recycling. By analysing the spaces, uses, and construction materials of these buildings, the project aimed to reduce resource consumption, extend building lifespans, and close material loops. A collaborative methodology engaged stakeholders from the real estate industry, government, urban planning, and civil society, creating entrepreneurial opportunities and connecting participants to relevant networks.

Private Spaces for Public Use



This NEB Action focuses on integrating vacant office buildings and their surrounding privately-owned public spaces (POPS) into vibrant, mixed-use complexes that enhance urban neighbourhoods. The initiative aims to improve ecological sustainability, encourage social interaction, and enhance residents' quality of life. The project developed the "UrbanSpaceCheck," a certification system awarding gold, silver, and bronze ratings to incentivise the positive transformation of POPS across Europe. This approach integrates ecological, social, and economic considerations and leverages student projects at the Technical University of Munich to address the complexities of urban redevelopment.

Redesigning Housing Structures



The *Wohnen Weiterbauen* demonstrator showcases the outcomes of extensive evaluations of various building types, contributing to climate justice through renewable materials and improving housing efficiency to reduce land use and housing pressure. It aims toward energy-efficient upgrades and social benefits by renovating facades and expanding living spaces using prefabricated timber or reused building materials.

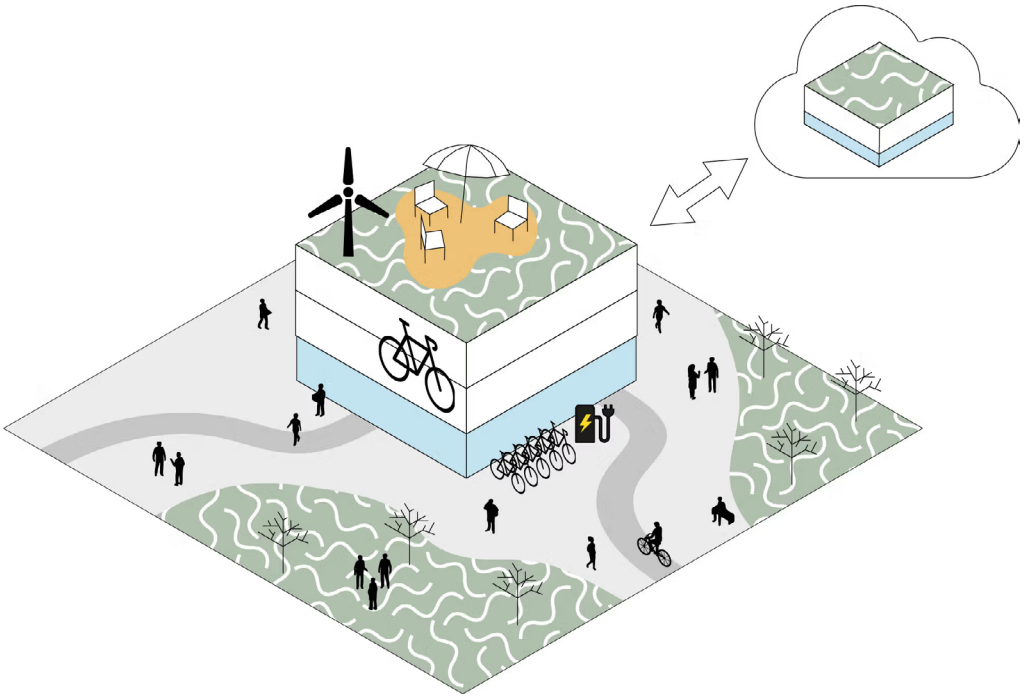
The project emphasises *never demolishing but always transforming*. It proposes a model where building facades are upgraded with prefabricated wooden structures that improve thermal efficiency and create additional usable spaces, such as winter gardens. These spaces act as thermal

buffer zones, reducing heating energy needs and enhance social interaction and living quality by creating flexible, multi-use areas. The design integrates ecological, social, and economic sustainability through the use of renewable materials, long-lasting construction, and affordable housing concepts.

As a prototype for renovating post-war housing estates across Germany and Europe, the project leverages digitised workflows to ensure the broad applicability of its findings. The project resulted in an exhibition at KulturBunt Neuperlach, where films, models and drawings suggest a variety of new living environments that can be created for Neuperlach's aging buildings. The ideas are intended to stimulate discussion about a new culture of conversion in Neuperlach.

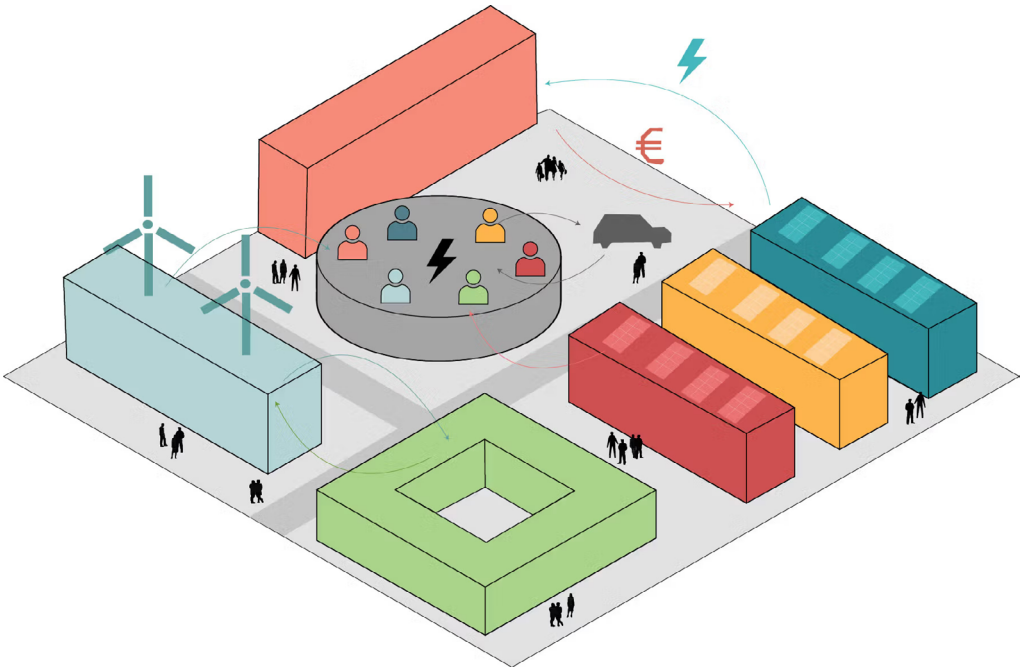
Link: https://www.nebourhoods.de/events/wohnen-weiterbauen-ausstellung/

Mobility NEBourhoods



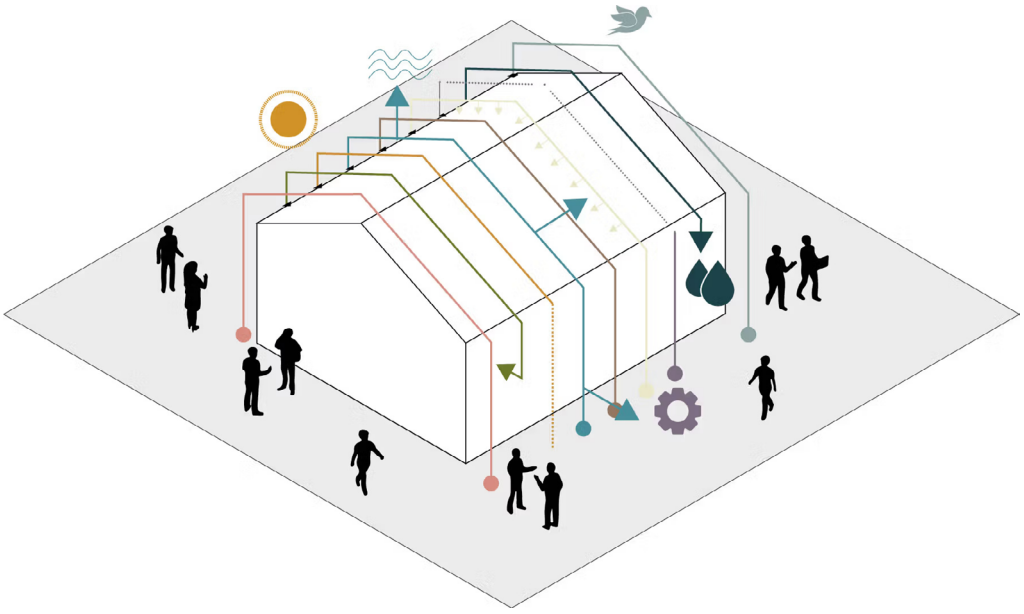
A sustainable implementation of innovative forms of mobility is essential to reduce environmental pollution and CO2 emissions. At the same time, it presents an opportunity for the design of attractive urban spaces. New transport strategies such as sharing concepts cannot be realised as purely technological solutions, but must be anchored in local communities and actual urban locations. "Mobility NEBourhoods" combines the data-based analysis of the district's Digital Twin with a collaboration among local stakeholders via playful forms of participation.

Energy Communities



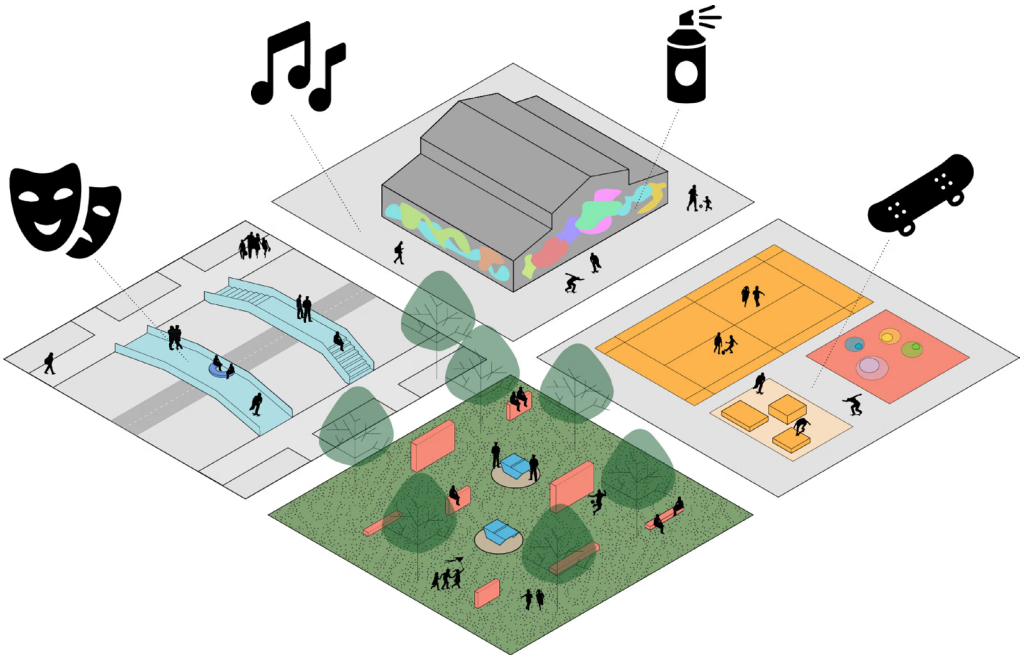
The Energy Communities initiative empowers residents to take control of their energy supply by collaboratively producing, consuming, storing, sharing, and marketing solar power at the neighbourhood level. This programme explores the potential of renewable energy plants developed through cooperative processes, focusing on inclusive financing, participation, and organisational structures tailored to the community. Beyond technological and economic optimisation, the project prioritises social innovation, fostering entrepreneurial services such as electric vehicle charging. Local participation leads to democratic, decentralised, and decarbonised energy systems.

ECOLOPES



The ECOLOPES action supports urban biodiversity by transforming building envelopes into habitats for humans, plants, animals, and microorganisms. In response to declining biodiversity in increasingly dense urban areas like Neuperlach, the project develops ecological building envelopes that address the needs of various species. These innovative structures move beyond being mere barriers between interiors and exteriors, creating transitional spaces that foster cross-species coexistence. Through a multidisciplinary approach combining ecology, architecture, landscape design, and computational methods, the project installs mock-ups of future building envelopes to test their functionality. The initiative promotes beneficial interactions between people and nature, enhances urban well-being, and contributes to biodiversity preservation in city environments.

PEARL — Places for Youth Culture



Joint development of temporary and permanent venues for youth culture that supports young people in engaging with their own living space and creates opportunities for them to actively help shape it. PEARL co-creates places where youth culture can be lived both temporarily and permanently. For example, the project cooperates with the Münchner Kammerspiele to establish a future permanent theatere laboratory where youth culture can develop ever new forms of expression. NEBourhoods work with young people in film, urban stories and music and empower them to present their ideas through performative interventions in city locations throughout Neuperlach in the hopes of initiating sustainable changes.

BAUHAUS OF THE SEAS SAILS (BoSS)

Bauhaus of the Seas Sails (BoSS) focuses the NEB principles on coastal areas and bodies of water because they represent a shared space between Europe and the rest of the world. They regulate the climate by capturing heat and carbon, providing an essential source of food, and generating jobs and wealth through tourism. Coastal regions are the areas most at risk from climate-related effects such as sea level rise, ecosystem degradation, biodiversity loss, and weather events. They also host over 40% of the EU population.

Co-Design Template

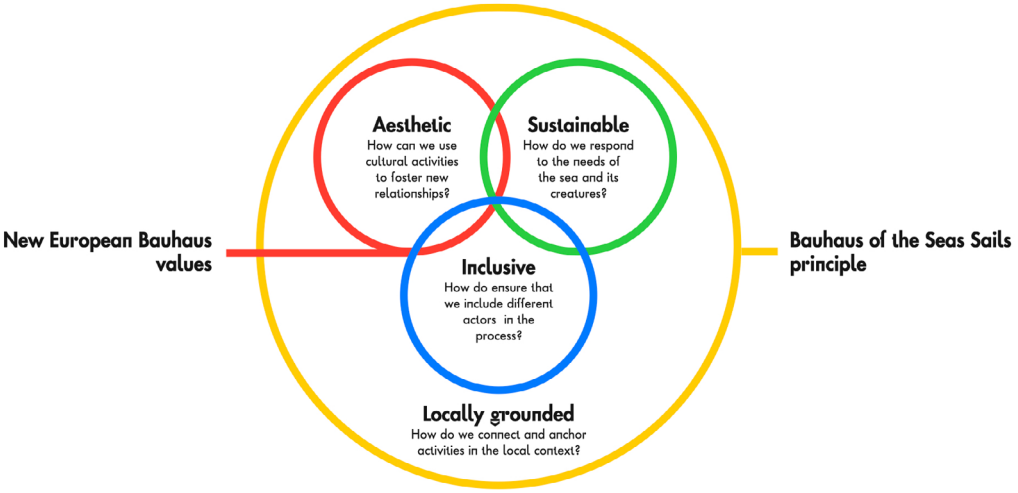
Bauhaus of the Seas Sails has published a comprehensive co-design template as part of their project, introducing a methodology for conducting co-design that addresses key considerations and reflective questions, particularly with respect to coastal communities and their relationship with the sea.

The template defines four core principles for demonstrator development: sustainable, inclusive, aesthetic, and locally grounded, and outlines how co-design engages with these principles. It provides an overview of stakeholder involvement, establishes a general timeline for the co-design

process, and offers specific guidance for developing locally relevant co-design practices.

The BoSS framework is a model for achieving sustainable transformations at regional levels. Its focus on co-design ensures that innovation with ecological and social priorities are aligned. Policymakers are encouraged to consider the four guiding principles as evaluative criteria and as tools for fostering dialogue, exploring synergies, and addressing systemic challenges in collaboration with diverse stakeholders.

The four principles reflect the NEB values as well as the contextual element of the coastal communities and marine environments that are the focus of the BoSS Lighthouse.



Sustainable

BoSS shifts from exploiting marine resources to fostering interdependence between humans, ecosystems, and the sea. This entails reconciling with the ocean as a shared space for innovation and ecological renewal.

Inclusive

Focusing on the 'blue economy', BoSS advocates engaging citizens, public institutions, and commercial organisations to counteract societal polarisation. It focuses on creating

pathways for marginalised voices and interconnections between communities and ecosystems.

Aesthetic

Cultural and artistic practices foster relationships and connections for redefining aesthetics as a medium for understanding and engaging with ecological interdependence.

Locally grounded

Sustainable societies cannot be standardised. While the three NEB Pillars are universal, BoSS emphasises managing specific predicaments that are locally experienced rather than seeking universal solutions. It requires meeting communities where they are, beginning with local concerns, needs, fears and hopes to develop processes relevant to community interests.

Those four principles inform the evaluation framework, and provide the following sliding scales for activity planning and assessment.

A local shift in relation to the New European Bauhaus grounding principles

BoSS provides comprehensive guidance for the process of co-creation with communities, and the full document is highly recommended for policymakers who wish to explore this methodology, particularly those working in coastal areas. It can be broadly summarised as follows:

Iterative Co-Design

BoSS approaches co-design as a flexible and inclusive process where problem identification and solution development are connected and cyclical. It involves engaging stakeholders at every stage to foster shared ownership, refine ideas, and then adjust approaches based on emerging results, feedback and insights. Problems are not treated as static or pre-defined. Instead, they are explored collaboratively, recognising that defining a challenge and revealing its complexity can be as significant as solving it. Proposed solutions are tested in practice, generating observations and impacts that go on to shape subsequent iterations. This allows for real-time learning and refinement.

Stakeholder Engagement

BoSS places a strong emphasis on involving a wide spectrum of stakeholders, including community representatives, institutions, cultural practitioners, local organisations, and non-human entities, including ecological systems and marine life. In this way, the methodology embodies the principle of Ecosystem Living, integrating diverse human experiences and non-human considerations, challenging anthropocentric paradigms and fostering ecological balance. Particular attention is paid to involving marginalised voices, recognising that diverse perspectives are essential for systemic change.

Creative Practices

BoSS proposes that artistic and cultural methods should be central to fostering dialogue, experimentation, and relational aesthetics. These practices serve to encourage innovative thinking by moving beyond conventional deductive and inductive problem-solving frameworks. Cultural interventions deepen participants' emotional and experiential connections to the sea and its ecosystems.

Problems and their solutions should not just be considered intellectually, but lived and felt. BoSS also proritises the facilitation of the (non-confrontational) exploration of tensions and opportunities.

Principles as Planning and Evaluation Tools

The four principles – sustainable, inclusive, aesthetic, and locally grounded –are implemented through a series of evaluative tools, including the "sliders" framework above. This allows co-creation participants to map progress, identify tensions, and balance their priorities.

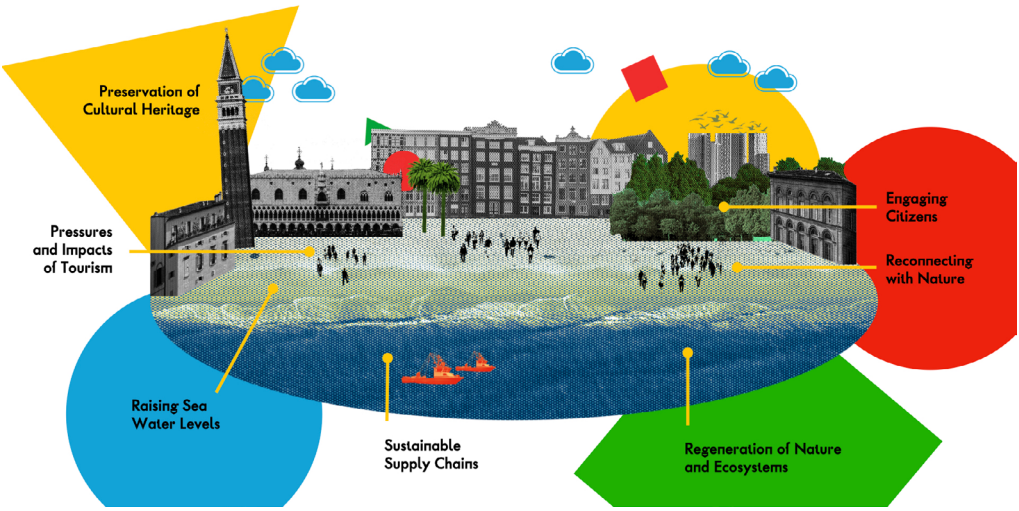
The Sea Forum

BoSS introduce the operational structure of the 'Sea Forum' – a group who ensure local relevance and alignment with the four principles. The group's responsibilities include enrolling participants with particular thought given to diversity and expertise within the group, co-planning activities and developing the project's executive plan, defining "drops" (specific initiatives) and their expected "ripples" (broader impacts) and co-evaluating to assess progress, adapt strategies and iterate in line with the principles.

Ocean Ambassadors

'Ocean Ambassadors' are community representatives who bridge the project's activities with local aspirations. Their roles include promoting long-term community engagement with sea-related initiatives, assisting in evaluating activities and suggesting adjustments, advocating for marginalised perspectives, and building connections between institutions and local groups.

Link: https://bauhaus-seas.eu/co-design/



The BoSS Co-design methodology

1. **Mapping Local Contexts** Activities begin with identifying local assets, challenges, and opportunities. This includes stakeholder mapping, participatory asset mapping, and defining target communities.

2. **Creative Exploration** Through workshops and artistic interventions, stakeholders co-create bold visions for local demonstrators (pilot projects). Techniques such as storytelling, visualisation, and role-playing help to uncover new possibilities and strengthen relational connections.

3. **Theory of Change** The BoSS methodology uses a theory of change framework to define desired impacts and measure progress. This involves identifying long-term goals, mapping the pathways by which activities can lead to these goals, and defining indicators to monitor progress and refine strategies.

4. **Integration of More-Than-Human Perspectives** The BoSS approach represents non-human stakeholders in all planning and decision-making. This requires new tools and facilitation techniques, such as identifying ecological proxies or using creative representation.

5. **Managing Tensions** Recognising the potential for conflict between the four principles, for instance balancing ecological priorities with local economic interests. BoSS views these tensions as potentially productive. Structured dialogue and adaptive planning are used to navigate these challenges.

6. **Social Learning** Mutual learning means that participants not only address immediate challenges but also develop the capacity for ongoing transformation. It includes learning from other regions and contexts and building shared understandings and capacities within local communities.

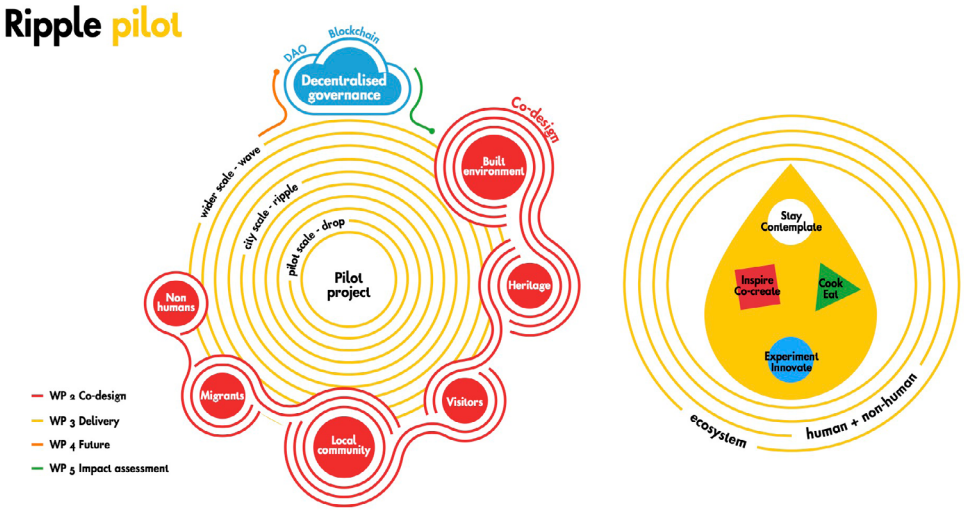
7. **Evaluation and Adjustment** Co-evaluation is embedded throughout the project lifecycle, allowing for iterative adjustments. Evaluation focuses on both the direct impacts of activities and the transformative learning among participants.

Drops, Ripples and Waves

Drops are focused, localised pilot projects developed at the regional level to engage communities through co-design, incorporating architecture, sustainability, ecology, and culture. Drops address specific environmental and societal challenges within a defined area or community.

Ripples represent the broader effects of the drops as they extend beyond the immediate context of the demonstrator projects. These impacts spread to cities and influence urban planning and policy, and roll out to regions, nations and beyond. Ripples illustrate how localised activities create a legacy of broader transformation by influencing stakeholders, encouraging replication and scaling.

Waves symbolise the long-term and large-scale systemic change resulting from the cumulative effects of drops and ripples. They are the cultural shifts in how communities and policymakers think about sustainability and inclusivity, the solutions shared across countries



or continents and the sustained, global movements for environmental and social innovation that can result.

The Drops pilots are described in brief below to give a sense of the diversity and potential impact for replication in other regional contexts. While they particularly focus on coastal areas, the examples in these drops can also provide inspiration for projects in other contexts.

Multispecies Assemblies

This drop builds on the zoöp concept developed by the Nieuwe Instituut, integrating human and non-human interests into decision-making. Each Bauhaus of the Seas Sails-zoöp pilot uses digital distributed ledger technologies (e.g., blockchain) to share governance knowledge and practices, including appointing a "Speaker for the Living" to advocate for non-human life. Multispecies Assemblies focus on climate justice, citizen engagement, and the co-creation of knowledge, using platforms to assess and address climate impacts through citizen science and social innovation.

Regenerative Menu

This initiative develops sustainable food systems that adapt to climate changes by focusing on regenerative aquatic foods. The drop combines gastronomy, architecture, and design, co-creating menus with local chefs, algae producers, and schools to promote ecosystem-friendly diets. It aims to shift eating habits to reflect environmental resilience, encouraging a "sitopia" mindset that understands the ways that food is more than just sustenance, but connects us to our environment and each other, shaping places and climates.

Blue Makerspace

Inspired by Atelier LUMA's work in the Camargue, this drop creates a design research hub for non-extractivist exploration of aquatic materials, including algae, shells, and salt. It promotes sustainable innovations in architecture, textiles, and urban design. The makerspace bridges culture, critical thinking, and entrepreneurship for a circular blue economy.

Ocean Literacy

This drop educates younger generations about ocean sustainability through partnerships with industry, cultural, and educational institutions. Inspired by the Escola Azul and Eco-Schools Network, it translates scientific findings into actionable insights. The initiative develops tools, products, and experiences to engage students and communities, encouraging a culture of responsibility towards the oceans.

Inclusive Digital Storytelling

Drawing from the MEMEX project, this drop uses AI and AR technologies for geolocalised storytelling to promote intercultural dialogue and inclusivity. Focused on displaced communities, it employs participatory storytelling to build empathy and shared cultural understanding. Stories highlight both human and non-human perspectives, fostering community-building and intercultural engagement.

Wellbeing Reefs

This drop seeks to restore degraded natural reefs to counter coastline erosion and habitat loss. Inspired by artist collective Superflex and Alex Jordan's research, it develops toolkits for creating reef systems that support marine and human populations. It trains local stakeholders to monitor and sustain reef regeneration, integrating scientific, historical, and cultural knowledge into design and construction processes.

Blue Seniors

Targeting senior citizens, this drop addresses mobility, safety, and social inclusion in coastal and island environments. It promotes intergenerational collaboration through co-designed tools and workshops that adapt urban spaces to seniors' needs. By teaming seniors with designers and families, it enhances accessibility and encourages intergenerational knowledge sharing.

Future Tidal Architectures

Focusing on coastal and wetland adaptation, this drop engages architects and urban planners to design solutions for rising sea levels and changing water patterns. By reconciling diverse interests and collaborating across regions, it envisions adaptive strategies through co-design competitions and social engagement. It connects heritage preservation with sustainable urban and rural planning.

Living with Water

Part of the Rotterdam-based New Academy curriculum, this drop positions water as central to the city's identity and resilience. In partnership with Studio Makkink & Bey's WaterSchool, it explores water's role as a material, economic driver, and cultural force. It fosters community-based knowledge production, linking education, activism, and design to shape a city-wide vision of water sustainability.

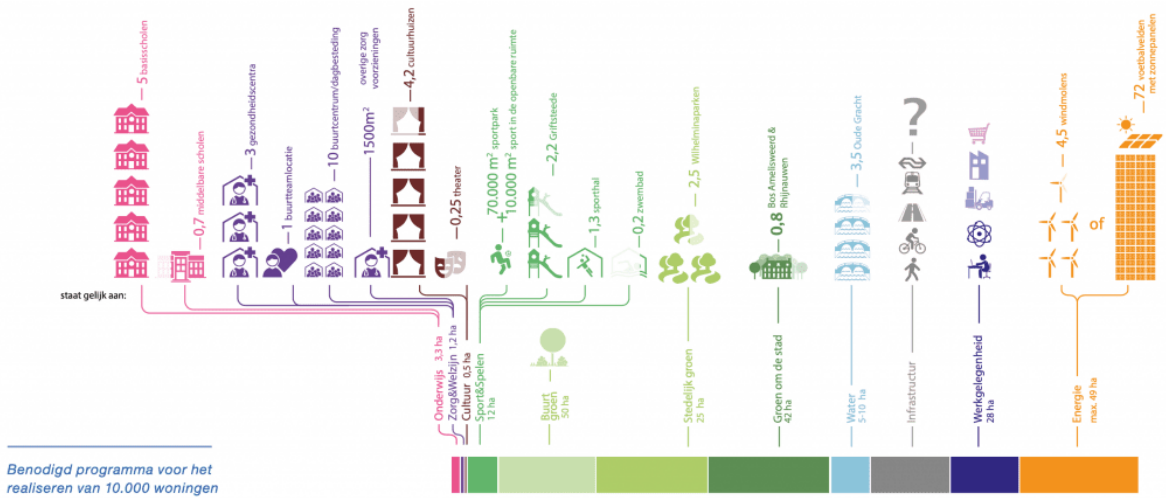
NEB-STAR

NEB–STAR focuses on innovative urban experimentation and participatory solutions to environmental and social challenges, with 16 partners involved. The tools developed in NEB–STAR involve citizens and stakeholders in urban planning processes. Some offer detailed virtual representations of urban areas, enabling stakeholders to model and test scenarios for development. Others combine research and education to embed NEB principles into local development projects, helping professionals and the public understand and contribute to urban transitions.

NEB–STAR encourages the testing of new ideas through tools that allow companies to trial innovative products or services in collaboration with municipalities, and engage students in solving real–world challenges. There are also tools to help planners balance spatial demands and priorities, fostering a "10–minute city" concept where essential services are easily accessible to all residents. The aim of all these tools is to create processes and methods that are adaptable, scalable, and replicable.

Link: https://nebstar.eu/

The Barcode



The barcode concept represents a comprehensive urban planning approach that quantifies and interconnects various city elements like housing, work, social facilities, sports, energy, and infrastructure. By demonstrating the interdependent nature of these functions, the barcode reveals that urban growth is not just about adding housing, but requires a holistic consideration of related needs—such as how constructing 10,000 homes necessitates additional space for supporting functions like greenery, workplaces, and infrastructure. This method allows cities like Utrecht to plan balanced, integrated urban expansion that prevents overburdening of existing resources and maintains a proportional development across different urban sectors.

Citizen panel

Citizen panels are a democratic innovation method that involves randomly selected ordinary citizens in meaningful civic engagement by bringing together small groups (typically 15–30 people) to learn about, discuss, and make recommendations on complex issues. By providing participants with expert knowledge and facilitating structured discussions, these panels aim to enhance public participation in decision-making processes, offering a structured approach to involving citizens in deliberations.

Guided Tours

Guided tours are a valuable tool for community development, offering site-specific knowledge, promoting citizen involvement and inspiring smart solutions. They provide insights into an area's history, culture, and physical features, helping a community make informed decisions on land use, infrastructure, and social programmes. Not just for the tourists, guided tours encourage participation, build trust, and create a sense of ownership within communities. They bring people together, promoting interaction and dialogue that strengthens social cohesion and sparks ideas for place-based innovation.

Digital Twin

A digital twin is a virtual representation of a physical object or system that mirrors its behaviour and characteristics using real-world data. It enables users to visualise, simulate, and experiment with changes that can then be applied to the physical counterpart. By integrating data from sources such as 3D models and real-time sensor updates, a digital twin provides a deeper understanding of complex systems like urban neighbourhoods by modelling elements such as energy, transport, and environmental factors. The Stavanger Municipality's "Bymodellen" allows users to explore planned developments, including viewing surroundings from different angles and walking inside virtual buildings, offering a dynamic and detailed perspective.

NEB Impact Model

The NEB–STAR Impact Model is a framework that supports the NEB principles of sustainability, inclusion, and aesthetics. Based on CrAFt's Impact Model, the model captures the environmental, social, cultural, economic, financial and governance impacts of project activities. The model's purpose is to avoid siloed decision–making and uses five impact pillars—environmental, social, cultural, economic, and governance performance—spanning 17 impact categories and 46 suggested indicators. By integrating all of the different impact considerations, the model reduces the risks of fragmented approaches.

Co-creation School

The Samskapingsskolen (Co-Creation School) is an educational initiative developed by the city of Stavanger to teach co-creation methodologies, focusing on interdisciplinary collaboration to create better and more inclusive solutions. Initially launched in 2018 as an internal training prototype, it teaches co-creation and design methodologies through practical project work. Since 2020, it has been integrated into the University of Stavanger's postgraduate and further education offerings as a 10-credit course, the first of its kind in Norway. In 2023, the course was expanded into a master's programme in transformation and innovation for team leaders, project managers, and department heads who want to lead innovative change processes, focusing on sustainability, inclusive management, and future knowledge to support the green shift.

Utopian Future Workshop

The Utopian Future Workshop is a co-creation method used in NEB-STAR to empower vulnerable and marginalised groups in urban planning. It facilitates socially and spatially equitable decision-making by asking participants to envision and advocate for desirable urban futures, counterbalancing existing power asymmetries. Utopian ideas are tested against reality, with strategies developed and experimental actions initiated. Experts and decision-makers help participants gain the political leverage to implement these ideas. The approach enables inclusive regional innovation by amplifying underrepresented voices and supporting their role in shaping policies.

Social Marketplace

The Social Marketplace method provides a forum where companies and non–profit organisations can meet to establish new social cooperation. The method facilitates collaboration across different sectors in the local community, and connects volunteering, business, and the public sector. As in a traditional market, participants specify what they have to offer or what they are looking for and seek suitable partners. The aim is to create new opportunities and form collaborations. The participants share resources such as knowledge, labour, care, relationships, internships, materials, and equipment. The Marketplace method is a good context for understanding the opportunities and needs in the local environment.

Vis det! (Show it!) Evaluation tool

Show it! is an impact measurement tool based on the Theory of Change. It's designed to link activities with the desired outcomes and the underlying rationale. It uses a qualitative and narrative approach to articulate how specific actions are expected to bring about meaningful change. The tool examines the target group's needs, identifies barriers to success, and makes the assumptions clear. Gathering insights through surveys, interviews, and focus groups, the methodology helps social enterprises develop a strategic plan for future efforts. It ensures that activities are purpose-driven and effectively aligned with their social impact goals.

Walk the Land

Walk the Land is a method developed by the architectural firm Helen & Hard to foster a deeper connection to the context and resources of a site during the early stages of architectural projects. Inspired by Aboriginal practices of relating to land, it involves walking the site to uncover its unique material, cultural, human, and aesthetic potentials. Participants explore the site, using their senses to observe its unique qualities—such as smells, sounds, and atmosphere—forming an extended and personal impression. They translate

those experiences into physical expressions, such as drawings, models, or compositions, as a way to externalise their understanding and inspiration, and the group shares and discusses these expressions, collectively distilling insights to inform the project. These outcomes are then communicated to stakeholders such as clients or municipalities.

Urban Belonging

Urban Belonging is a participatory project that explores how marginalised groups experience their relationship with the city. Partnering with local community organisations, the initiative engaged participants identifying as ethnic minorities, deaf, homeless, physically disabled, mentally vulnerable, international, and/or LGBT+. Participants documented their interactions with the city over three months using tools such as participatory mapmaking and photography, producing over 1,400 photos, 200 maps, and extensive data visualisations. The outputs include a rich catalogue that tells individual and collective stories about Copenhagen, offering insights into what "belonging" means for different identities. The initiative provides valuable perspectives for understanding and addressing inclusion in regional innovation, urban planning and design.

Situated Learning Environment

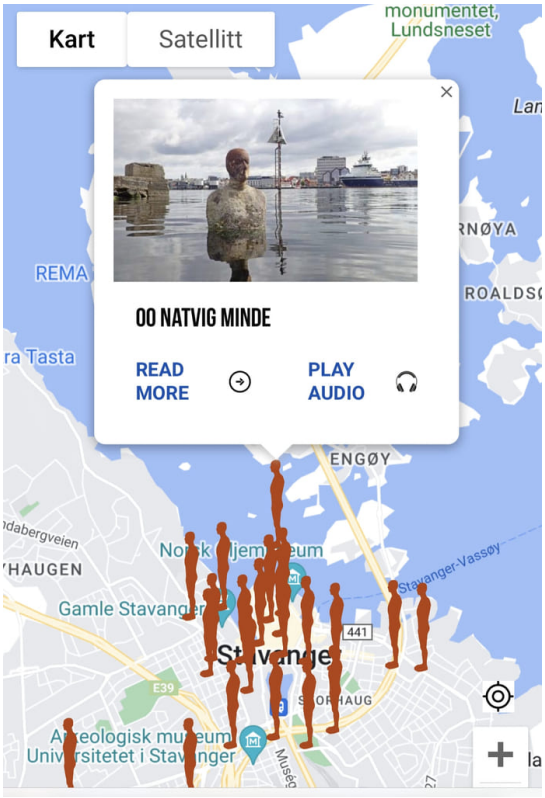
Situated learning theory is about how knowledge develops through active participation in a community of practice. Learners improve their expertise by engaging with real-world contexts, becoming active participants. Within the NEB-STAR project, TU Delft creates situated learning environments that connect students with societal partners, allowing for meaningful problem-solving, structured collaboration, and engagement in societal debates. In the "Geodesign for Circular Economy in Urban Regions" Master's course, students applied principles of sustainability, collaboration, and aesthetics in line with New European Bauhaus principles. The approach links research and education to create relevant solutions, strengthen societal connections, and amplify the impact of student contributions in regional innovation.

Agile Piloting (Kvikktest)

Kvikktest is a method used by municipalities to invite companies, start-ups, and entrepreneurs to test out innovative solutions to local challenges. The process creates a collaboration between the municipality, businesses, and citizens, focusing on a challenge defined by the municipality, who release a call inviting companies to propose solutions that can be trialled for up to six months. Selected solutions receive financial support to cover expenses, allowing for real-world testing and valuable feedback within a short timeframe.

Smart Art

Smart Art integrates art in urban planning and public engagement. It emphasises the role of art in fostering inclusion, aesthetics, and sustainability, while strengthening the artist economy and cultural industries. One significant project, Sjøkanten, brought together artists, researchers, and planners to incorporate ecological thinking with innovative public engagement methods. It involved workshops, temporary art projects, and active engagement with residents, including children, to expand participation in the urban development process. Sjøkanten introduced the concept of artists-in-residence within municipal planning teams, which is now being tested in NEB-STAR.



Another example is the Broken Column Art Hike, which uses AI technology to enhance public access to Stavanger's cultural history. Visitors can listen to synthetic speech narrating the story behind 23 sculptures across the city, making art more interactive and inclusive. These projects collectively highlight how art and technology can enhance cultural engagement and contribute to urban innovation and inclusion in Stavanger.

Innovation Camp

Innovation Camp focuses on fostering creativity, innovation, and collaborative problem–solving, often as part of the start–up phase for student or youth companies. Students are presented with a real–world problem defined by a private or public sector client. Working in groups, they develop solutions within a set timeframe and present their ideas to a jury, which selects the best solution based on specific criteria. Collaboration with local businesses and industries is a key element of the programme. Clients provide essential background information and guidance, ensuring the solutions are relevant to real–world challenges. Innovation Camp combines experiential learning with practical engagement, enhancing participants' skills in teamwork, creativity, and entrepreneurship.

The CrAFt Cookbook

The Creating Actionable Futures (CrAFt) project places the transition to climate neutrality at the forefront of urban development. The project conducted experiments in three Sandbox Cities — Amsterdam, Bologna, and Prague — to test and refine collaborative local governance models, and engaged with a broader network of more than 70 Reference Cities, sharing knowledge and insights about climate-neutral transformations.

The resulting methodology is distilled into the CrAFt Cookbook — a collection of recipes, ingredients and techniques for climate-centred regional innovation. It contains seven stages of integrated planning and implementation, each with key principles and a series of actions with ingredients and techniques needed to plan and execute local co-creation with partners and stakeholders.

> **Vision:** Redefine the problem, identify what you need, organise the local ecosystem, brainstorm, create a shared, evidence-driven knowledge base, explore legislation and commitments, and summarise in a vision document.

Decide and Commit: Translate the vision, detail roles, responsibilities and capacity, re-align goals, ambitions and strategies, jointly prioritise pathways and actions, form internal and external teams and explore different financial schemes.

Plan: Jointly define milestones, targets and responsibilities, explore the state of the art, rank relevant ongoing and possible

new projects, select preferred financial and partnership models and prepare the monitoring process.

Do: Upskill the team with additional knowledge and capacities, identify the baseline and start the monitoring process, organise access to and sharing of data, kick off implementation and execute implementation with structural support.

Check: Use the NEB Impact Model to balance perspectives, fill gaps with NEB Impact Model Indicators and co-benefits, undertake benchmarking and evaluate progress and identify potential adjustments.

(Re)Act: Decide upon and implement the most suitable improvements, report and learn.

Scale & Replicate: Engage in peer-to-peer sharing and learning, define NEB-inspired business and governance models, and perform a viability assessment.

Link: https://craft-cities.eu/craft-cookbook/

CULTUUR&
CAMPUS
PUTSELAAN

Cultuur&Campus Putselaan is an approach to urban innovation and transformation through a central hub to bring a local community together around arts, education and ecological innovation. It differs from the other NEB Lighthouse projects in that it centres around the repurposing of an historic building, the opening of which is the key milestone and culmination of the project.

The Feijenoord district in the south of Rotterdam has a highly diverse population, where the majority are non-western immigrants, including significant Moroccan, Turkish, Surinamese, and Antillean communities. The area faces considerable socio-economic challenges, with high unemployment and low educational attainment, and several neighbourhoods rank among the most disadvantaged in the Netherlands.

Cultuur&Campus provides an interesting case study for regional innovation intended to result in the creation of a new facility, community hub or building project because it brings together a wide range of stakeholders and addresses commonly shared challenges in simple and creative ways that are easily replicable and adaptable to other contexts.

Creative Campus

Putselaan is intended to act as a hub for interdisciplinary collaboration, fostering dialogue and co-creation between local residents, students, educators, researchers, and entrepreneurs, outside of traditional formal education settings.

It exemplifies how culture and education can be central to addressing pressing urban challenges, and that neither of those things need mirror the formal infrastructures usually associated with them. It will instead operate as a living lab, experimenting with innovative approaches to urban development and creating a dynamic space where anyone can contribute to sustainable solutions. Activities are designed to reflect the lived experiences of local residents while addressing broader environmental challenges such as climate change and biodiversity loss. These include ecological innovation projects, co-designed programmes, and public events that bridge cultural and educational objectives.

Local voices

One of the main ways in which Cultuur&Campus has galvanised its community is by conducting 87 street interviews that captured spontaneous and candid insights into the needs and aspirations of the community. Street interviews allowed the project team to meet residents, creating an informal and approachable avenue for dialogue. This direct engagement helped break down barriers between the community and the project organisers, fostering a sense of trust and inclusion from the outset.

The project also leveraged the stories of community "champions" through video portraits. These highlighted individual experiences and aspirations and placed the champion in their own context, personalising the broader goals of Cultuur&Campus, making them relatable and connected to lived experience. The insights captured in this way provided a more accurate and grounded understanding of the community and presented a shared 'bottom-up' vision.

Identify and Support Local Champions

Recognise and empower individuals within the community who can inspire, lead, and mobilise others. Work closely with these champions to foster trust and co-create initiatives that resonate deeply with local values.

Ensure Co-Ownership of Projects

Collaborate with residents as equal partners in the design, planning, and implementation phases. Share decision-making authority to create a sense of ownership and pride in the project's outcomes.

Tailor Activities to Community Needs

Customise programming to address the specific challenges and aspirations of the community. Educational workshops, cultural events, and sustainability initiatives should be relevant and accessible to all.

Build Strong Partnerships Across Sectors

Establish collaborations with local schools, universities, cultural institutions, and businesses. Use these partnerships to create a robust ecosystem for innovation and social impact.

Invest in Community Trust-Building Efforts

Address historical mistrust in institutions by demonstrating transparency, consistency, and accountability. This can take time, but is essential to the success and buy-in of a project like this. Celebrate local narratives through events, public art, and storytelling initiatives to strengthen the connection between the community and its surroundings.

Promote Local Talent and Expertise

The project is a place to create and foster new works and upskill local people, but it also provides a focal point to bring in, celebrate and amplify the contributions of the brilliant people already achieving great things in your neighbourhood. Encourage and build upon a local sense of achievement, pride, agency and capability.

Celebrate Milestones and Progress Publicly

Use events, festivals, and showcases to celebrate achievements and engage the broader public. These moments of visibility help galvanise community support and maintain momentum.

Link: https://putselaan.nl/

Link: https://www.cultuurencampusrotterdam.nl/

NEB Labs

NEB Labs bring together architects, designers, scientists, policymakers, businesses, and citizens to create multi-disciplinary partnerships that co-design solutions for sustainable and inclusive spaces. The NEB Labs test innovative ideas, methods, and materials to address environmental, social, and economic challenges. Pilot projects may involve creating or renovating public spaces, experimenting with circular construction techniques, or integrating renewable energy into urban environments.

They act as hubs for sharing best practices, tools, and methodologies. Workshops, training programmes, and knowledge-sharing events are hosted to equip participants with skills and insights. The work with policymakers informs and shapes local, regional, and EU-level policies that integrate NEB principles. They sometimes pilot policy frameworks that can be scaled or replicated across the EU.

Labs actively involve local communities in decision-making, ensuring that their outcomes are grounded in real needs and aspirations. Public dialogues and participatory design processes are often central to their activities, and successful initiatives are documented and showcased to inspire others and create pathways for scaling up solutions across Europe.

Examples of NEB Lab Activities:

- Designing carbon-neutral urban spaces that incorporate natural ecosystems, such as urban forests or wetlands.
- Developing sustainable building materials from recycled or biodegradable resources.
- Reimagining underutilised public spaces into vibrant, inclusive hubs for culture, education, and interaction.
- Exploring digital and artistic tools to visualise and promote the NEB principles in urban and rural settings.

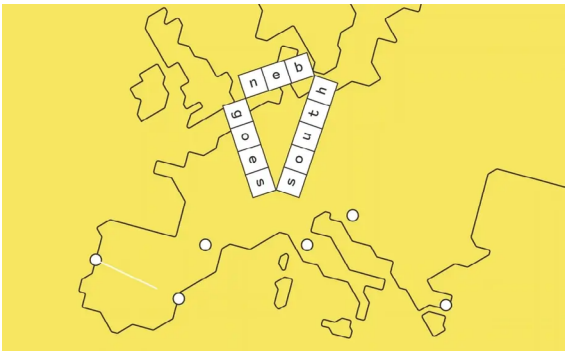
The purpose of the NEB Labs is to act as the operational arm of the New European Bauhaus, turning its visionary goals into practical, scalable actions. Each lab operates with its own unique focus, depending on the local context and stakeholders involved. This ensures their activities are relevant to their specific environment.

Nordic Carbon Neutral Bauhaus

The first of the NEB Labs, the **Nordic Carbon Neutral Bauhaus** was established by Nordic authorities as an active collaboration for preparing effective and practical policies for sustainable construction. Regular activities include Nordic stakeholder meetings and the annual Nordic Climate Forum for Construction.

Link: https://www.nordicbauhaus.eu/

NEB goes South



NEB goes South (NEBgS) was created by six schools of architecture from different European countries, expanding by a further eight schools in September 2024. The initiative is a pan-European platform for meetings and discussion about sustainable and innovative architectural practices in Southern Europe, addressing contemporary challenges through sustainable design, public engagement, and interdisciplinary research.

Link: https://www.neb-goes-south.pt/

The New European Bauhaus of the Mountains

The **New European Bauhaus of the Mountains** seeks to improve the quality of the built environment and citizens' quality of life in rural and mountain areas. The project enables a creative collaboration process between thinkers and facilitators who want to develop innovative beautiful, sustainable and inclusive solutions for complex social problems in the areas of affordable housing, sustainability, circular design, art and democracy, creative industries, design education and digital transformation for the common good. It focuses particularly on South Tyrol, as the province's landscape is dominated by mountains

Link: https://mountainbauhaus.eu/

New European Bauhaus on the Danube

The **New European Bauhaus on the Danube (NEBoD)** is a think-and-do tank driving the green transition in the Danube Region by fostering cooperation between public authorities, civil society, and the private and financial sectors to promote sustainable land use and a green economy. The initiative pioneers innovative methods to engage diverse stakeholders, revitalise degraded areas, and advance education for a just and inclusive transformation.

Link: https://danube-region.eu/nebod/

NEB Stewardship Lab

The **NEB Stewardship Lab** explores how higher education can play a transformative role in advancing the goals of the New European Bauhaus. By co-developing the NEB Stewardship model through workshops and participatory research activities, the lab provides a framework for integrating sustainability-focused education and practical innovation. This academic-led effort aims to inspire climate stewardship, particularly among students, while offering tools, networks, and proof-of-concept examples to make the NEB vision accessible and actionable.

Link: https://www.linkedin.com/company/neb-stewardship-lab/

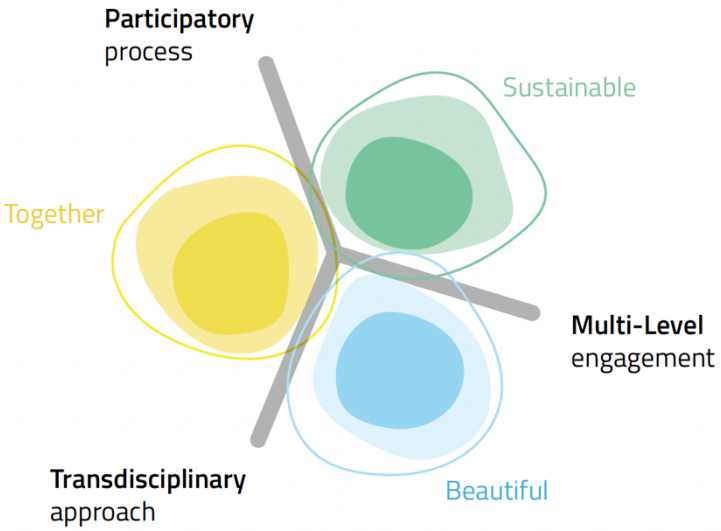
European Triennial of Modernism (ETOM)

The European Triennial of Modernism (ETOM) initiative supports trans-European collaboration focusing on Modernism through a co-creation platform and festival. The ETOM NEB Lab supports transnational cooperation, research, and the sharing of best practices and hosts a recurring European Triennial of Modernism. The ETOM motto "Diverse Modernism | Modern Diversity" highlights Modernism's inclusive and sustainable values, addressing its heritage and relevance to contemporary global challenges.

Link: https://www.triennale-der-moderne.de/2022/en/european-triennial-of-modernism-etom/

NEB COMPASS

NEB Compass



As an evaluation tool, the NEB Compass is a guiding framework for policymakers, project leaders, and regional administrators. In addition to the three core values, the Compass also allows for examining proposals and projects in terms of their participatory, transdisciplinary, and multi-level engagement approaches as essential working principles.

As these kinds of values can be particularly difficult to measure in any quantifiable way, the Compass is particularly useful as a tool for assessing — and therefore allowing project teams to reflect upon – varying levels of ambition. It encourages projects to evolve from baseline practices to transformative actions. It supports rethinking local governance models, experimenting with creative urban planning, and fostering collaboration between public, private, and community sectors. By mapping projects against three distinct and identifiable levels of ambition within

each principle, regional policymakers and stakeholders not only have a framework for contextualising their project, they can easily course-correct and adjust to ensure the kinds of impacts they wish to have.

This flexible approach means it can be applied to a wide range of projects—from urban design and architecture to educational programmes and community engagement activities. The full NEB Compass document, linked below, provides concrete examples, guiding questions, and a framework for self-assessment. It aids in designing initiatives that align with the NEB goals while addressing specific regional priorities. This ensures that the Compass not only inspires innovative solutions but also creates opportunities for scalable, systemic change that reflects local needs and aspirations.

The core elements are summarised in the next pages.

Link: https://new-european-bauhaus.europa.eu/get-involved/use-compass_en

Beautiful

The **Beautiful** value in the NEB Compass is structured around three ambition levels, each representing a progressive approach to embedding beauty and aesthetics into projects.

Ambition I: Activate focuses on enhancing the sensory and emotional experiences of individuals through cultural, social, and natural qualities. It seeks to reawaken appreciation for a place or project by encouraging interactions that improve physical and mental well-being while embracing local heritage and aesthetics. For example, a project may revitalise a neglected landscape or structure by celebrating its unique features and creating positive experiences that highlight its aesthetic and cultural value. Regional policymakers could use this ambition level to activate underused or neglected spaces, encouraging new appreciation and functional use while preserving local identity and history.

Ambition II: Connect is about building connections between people, places, and contexts, creating opportunities for meaningful social interactions and fostering a sense of belonging. It emphasises openness and mutual care by integrating the experiences of diverse groups and making spaces more inclusive. For instance, a project might involve co-design with different community members to create a shared cultural or social experience that unites disparate groups through art, design, or architecture. This ambition can help design projects that bridge divides in communities, such as creating shared spaces or programmes, encouraging collective engagement and enhancing mutual understanding.

Ambition III: Integrate is the highest ambition, focusing on enabling systemic change by embedding aesthetic, cultural, and social values into the long-term identity of a place. Projects at this level aim for deep transformation, encouraging co-creation and sustainable practices that anticipate future shifts. They integrate human and non-human needs, fostering resilience and a holistic sense of beauty that celebrates materials, community, and environmental harmony. The ambition of integration invites projects to adopt long-lasting approaches that restructure

the way cities, regions, or communities live and interact on a day-to-day basis, and encourage permanent transformative urban or rural development.

Sustainable

The **Sustainable** value in the NEB Compass is also structured around three ambition levels. These provide a roadmap for embedding sustainability into regional innovation and project development.

Ambition I: Repurpose focuses on rethinking and repairing services, products, and places to minimise resource use, reduce pollution, and lower carbon footprints. Projects aim to repurpose existing materials and spaces, emphasising durability, adaptability, and recyclability. For example, initiatives might involve reusing architectural materials or upgrading infrastructure to extend its lifespan while reducing environmental impact. This level describes projects that breathe new life into existing resources and infrastructure. It supports adaptive reuse and sustainability while reducing costs and waste.

Ambition II: Close the Loop moves beyond repurposing to transform linear processes into circular systems, minimising waste and aiming for a net zero impact. It encourages collaboration across all actors in a product's lifecycle, from design and production to disposal and reuse. 'Close the Loop' projects embrace industrial symbiosis and systemic circularity, such as using modular designs and sustainable materials to create adaptive solutions. This promotes cross-sector partnerships and efficient resource management, reducing long-term environmental impacts.

Ambition III: Regenerate is the highest ambition, which seeks to restore and enhance natural ecosystems while encouraging behavioural and systemic change. Regenerative projects give back more than they take, focusing on biodiversity, carbon storage, and ecosystem restoration. This level is about the project's broader, positive impact on natural resources, society, and worldviews, addressing long-

term sustainability and resilience. This ambition can drive transformative projects that replenish ecosystems, recover biodiversity, combat climate change, and shift societal norms toward sustainable living. It aligns urban or regional development with ecological stewardship, emphasising deeper systemic challenges.

Together

Under the **Together** theme of the NEB Compass, the three levels of ambition outline approaches to inclusion, representation, and collective social growth. These levels can guide project leaders and policymakers to create equitable and cooperative regional innovations.

Ambition I: To Include prioritises accessibility, equality, and affordability, ensuring that opportunities and services are open to all, particularly disadvantaged and underrepresented groups. Projects with this ambition break down barriers, providing equitable treatment and access regardless of gender, ability, or socioeconomic status. For example, initiatives might address affordable housing and inclusive public spaces for diverse community use. This ambition can be used to design infrastructure and programmes that directly address disparities, prioritising equity.

Ambition II: To Consolidate focuses on overcoming segregation and fostering representation and social stability. Projects with this ambition create mechanisms that reshape community relationships through a lens of societal justice by sharing resources and ensuring structural support through policies, business models, and funding tools. Initiatives could encourage intergenerational cooperation and community-building activities to strengthen ties. This level of ambition provides a framework for bridging social divides, fostering cohesion, and institutionalising inclusive practices to build lasting relationships between communities and sectors.

Ambition III: To Transform is the highest ambition. It seeks systemic change, introducing new ways of living together based on solidarity and shared social values. Projects with this ambition eliminate discrimination and inequality while creating replicable models of inclusion that break down outdated systems. For example, collaborative neighbourhood design could empower residents to co-create shared spaces, transforming social behaviours and encouraging collective action. Transformative initiatives redefine community interaction, making inclusion a foundational principle of regional planning and governance.

It's important to remember that regardless of ambition, societal challenges are never 'solved'. Instead, the intention is to create the kind of society and infrastructure in which they would not be encountered or experienced.

The NEB Compass document includes several examples and case studies of NEB-aligned projects across Europe that demonstrate the application of the Compass to a range of initiatives, from a textile process made from flower waste to a new 30-metre wooden event pavilion in a public space, each initiative demonstrating a different level of ambition across the three main pillars.

DIGITAL LIFE

CONNECTED YET DISCONNECTED

The extent to which, during the pandemic, society shifted towards data-driven systems cannot be overstated. This was not an incremental or even accelerated rate of change but radical and exponential. The unprecedented demand for technological solutions that could bridge physical distances required by remote work, the newly tech-driven requirements for the delivery of formerly analogue components of education, healthcare, food systems and democracy – to maintain a semblance of operational continuity – was just the tip of the iceberg. Substantial capital investments usually channelled to the automotive sector, aviation, commercial real estate, large-scale in-person entertainment events and other domains were severely impacted by lockdowns and other restrictions, and were redirected in bulk towards digital communication tools, cloud computing and, in particular, rapid AI development[20]. The value of Bitcoin increased by over 800% between the start of 2020 and April 2021[21], and Venture Capital funding in technology startups doubled during that same period[22]. These had the effect of

20 The Recovery will be Digital – McKinsey & Company, 2020. [Link]
21 Investopedia: Bitcoin's Price History. Last accessed 10/2024 [Link]
22 Looking Back: 2022 Venture Capital Trends Review, 2023. Vation. [Link]

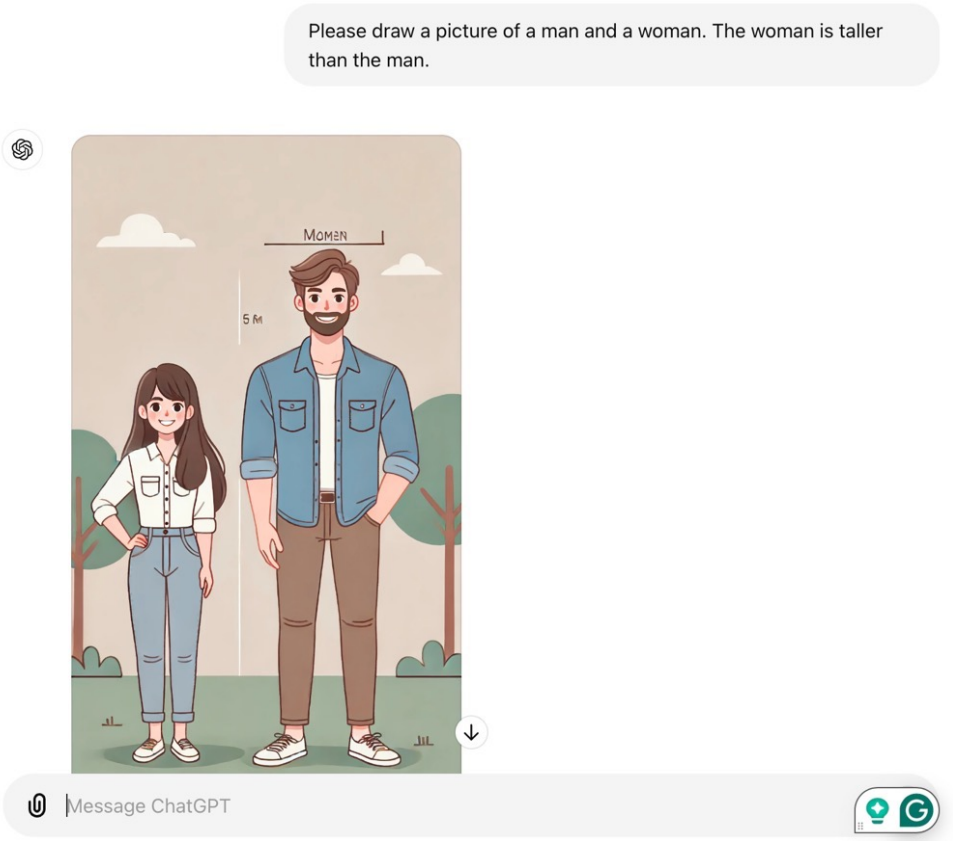
throwing fuel on an already substantial fire. All the signs were of the emergence of an entirely data-driven society as the dominant framework condition.

Prior to 2020, many in Europe were regular and accustomed users of digital tools and technology. But since 2022, we *inhabit* an almost entirely digital world — one defined by data – which not only drives economies and governance but mediates social interactions, facilitates cultural production, and shapes personal identity. This shift has positioned data not merely as a tool for decision-making but the infrastructure upon which modern life is built.

This was the societal equivalent of the music industry's 'Napster moment', distributed across all industries, the public sector, and culture as a whole. The shift highlighted opportunities and vulnerabilities in data-driven systems. It accelerated advancements in medicine, commerce, and remote work infrastructure while exposing serious gaps in data governance, ethical AI use, and digital accessibility.

Data promises emancipatory and democratic power, as well as the power of surveillance, control and concentration of wealth. The primacy of data-driven systems has deepened divides between those who can leverage them and those excluded by digital inequities. Our now total reliance on data systems raises critical questions about fundamentals such as truth, human rights, and ethical governance. It also raises questions about the disconnect between the good work on the ground and the digital systems that we build.

JUST Data



In one of the JUST Data experiments conducted with stakeholders from the health sector, participants asked ChatGPT to draw a couple, where a woman is taller than the man. No way of rephrasing the question could stop the system from repeatedly drawing a couple where a man was much taller than the woman.

JUST Data promotes Judicious, Unbiased, Safe and Transparent data practice by data scientists, industries, operators, analysts and owners – creating context and understanding beyond measurement and statistics.

Our quality of experience depends upon the qualities encoded within our digital systems. More than 400 million terabytes of data are created every day[23]. All that data is processed to train AI systems and used to make decisions about where we can live, whether we can work, which public services can be offered, what healthcare we can receive, and what measures can be taken to improve air quality, reduce local crime or ensure safety on the roads.

23 Volume of worldwide data created, 2024. Statista. [Link]

JUST Data proposes that while data can never be entirely 'unbiased', it is possible to mitigate against the negative effects of data bias by understanding the limitations and context of any data set.

A system trained on a dataset that has inherited limited views might not understand that a woman can be taller than a man.

Perhaps more importantly, data is only ever about the past, so data systems cannot imagine possible futures.

Knowledge about data can be more valuable than the data itself.

Applying JUST data practices to industry, research, and public policy reconnects the values, imagination and good work of the NEB communities with the digital systems we build.

The digiNEB project organised **JUST Industry Data Week** at Linköping Science Park, a European Digital Innovation Hub (EDIH) in the current European Capital of Innovation. In a city of 160,000 residents, Linköping Science Park is home to over 600 businesses, including large organisations like Ericsson, SAAB and Actia Nordic, and innovative SMEs addressing societal challenges through data and technology.

The universal relevance of data across industrial and knowledge domains and the shared concerns about truth, trustworthy systems and ethical governance meant that JUST Data practices proved an ideal platform to bring together a diverse cross-section of domains and areas of expertise, ensuring ongoing collaboration and knowledge exchange between NEB communities, digital, industry and business.

Link: https://mtflabs.net/just/linkoping-programme/

International NEB experts meet the local digital ecosystem

JUST Industry Data Week invited international experts from the wider NEB community to meet in Linköping to work with the local digital, technology and industry ecosystem. JUST Industry Data Week featured keynote presentations and global brainstorming on issues like circularity, data sovereignty, inclusion, representation and bias in synthetic data, AI in industry, data sonification in industrial and public sector communication, cognitive cities, JUST living environments, and AI applications for social good. These showcased the integration of NEB principles with cutting-edge digital technologies and underlined the importance of NEB to the digital and industry domains.

Sound for Urban Environments

The week-long experimentation track implemented JUST Data practice across domains. The unifying challenge focused on the technological and cultural aspects of Sound for Urban Environments, exploring how to signal and interact in the era of AI, automation and IoT devices, how this affects personal space and culture, and how to ensure that technologies are implemented for social good.

Deconstructing AI Literacy

A workshop by TU Delft researcher Diana Popa, 'Deconstructing AI literacy' is a role-based approach to defining relevant AI literacy. By engaging the NEB community and industry practitioners in conflicting narratives around what is essential when developing, deploying and using AI systems, the event explored adaptive AI governance frameworks and AI literacy responsibilities.

AI for social good: JUST Living Environments

Data-driven systems and technologies can enhance the quality of life in urban spaces. JUST Living Environments reflects on JUST Data practice as a key component of the hands-on, collaborative methods that allow for prototyping

Ana Kuštrak Korper, PhD student of service design at Linköping University, working with Naveen Venkatesh Sridharan, PhD researcher of ICT for industrial systems at Luleå University of Technology. Photo: Francisca Siza

and experimentation across the built environment, primary industry, transportation, healthcare, and earth observation.

Global brainstorming

The JUST Data event brought in a global community, with online participants interacting through hybrid brainstorming sessions in response to provocations that spark interdisciplinary dialogue. Discussions addressed data ethics, the challenges of training AI systems with diverse datasets, and whether AI can be trained to help envision more equitable and sustainable futures. Global brainstorming sessions provide a platform for international perspectives and emphasise the need for collaboration in addressing shared challenges across regions.

Field trips and hands-on prototyping

Field trips and experimental activities within Linköping allowed for hands-on engagement. Participants collected data (including audio and EMF recordings) from the local environment and began developing prototypes incorporating insights from direct experience with urban soundscapes, focusing on restoring connections between work on the ground and the digital systems we create and use.

Connecting NEB Communities with Digital and Industry

A digiNEB day focused on the application of data for social good, emphasising ethical data practices, participatory design, and ecosystemic approaches to regional innovation. Discussions centred on sustainable urban planning, cognitive cities and international examples of AI and data being used to support informal settlements in India and coastal communities in Portugal.

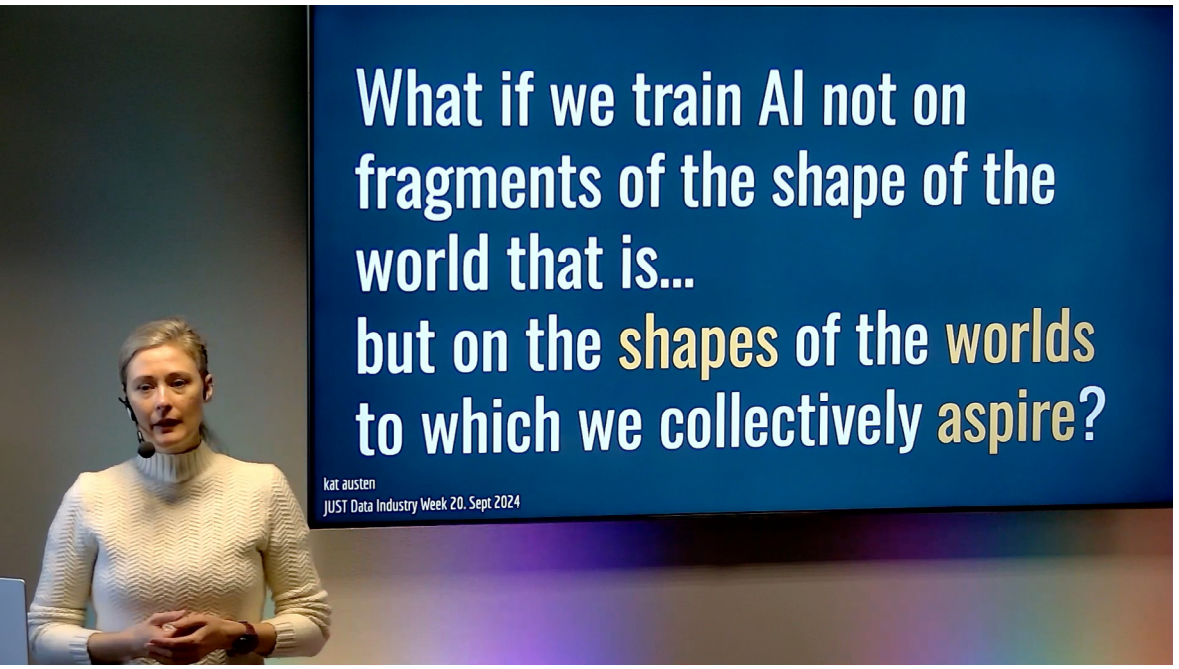
Testing with local communities

Projects were tested on local citizens in a public showcase event held at the Linköping Concert Hall, bringing the local community, representatives of regional government, industry leaders and academics to experience installations, engage with prototypes and watch performances and presentations of the works created during the week.

Establishing long-term collaborations

The ongoing results of the JUST Industry Data Week include partnerships between international experts and local actors, proposed funding for new research collaborations in industrial data sonification, continuing dialogue between NEB communities, digital, industry and business, and the establishment of new local collaborations, with several supported to scale further.

Link: Playlist – JUST Industry Data Week presentations: http://bit.ly/JUST-videos



Environmental sound and performance artist Kat Austen presented one of the most quoted provocations of the Global Brainstorming sessions at the JUST Industry Data Labs in Linköping Science Park.

As part of the JUST Data project, Vinnova funded a white paper about data governance solutions to support JUST data practices.

Link: White Paper on Data Documentation for JUST Data Practices: **https://zenodo.org/records/14228289**

The following pages list some of the tools and methods that can be used to work towards JUST Living environments:

tools and methods for fair engagement of citizen communities with the digital,

innovation lab methodologies for developing and testing technologies that embed human values,

innovative approaches to public funding for collaborative development, and

ways to examine technological artefacts for their impacts on society.

Waag Futurelab

Waag Futurelab is a pioneering organisation that has been working at the junction between the digital and citizen communities since the 1990s. The Waag Society for Old and New Media was originally founded in 1994 by Marleen Stikker (now director of Waag Futurelab) and Caroline Nevejan (now Chief Science Officer of the City of Amsterdam) as the first public access portal to the internet that engaged citizens in democratic processes.

Over the years Waag has developed a series of tools that make the interaction between technology, society and governance more open, fair and inclusive. It opened the first FabLab in Europe in 2007, launched a Fairphone in 2010 claiming the Right-to-Repair for citizens, and an Open Wetlab in 2013 for experimental learning about biotechnology. In 2020 Strikker published the book "The Internet is broken, but we can fix it" anticipating some of the current technological challenges.

Below is a list of tools that enhance engagement of citizens with their environments and democratic processes.

Co-creation Navigator
https://ccn.waag.org

Communing
https://waag.org/en/project/code-conduct-social-economy/
https://waag.org/en/project/platformcoop-incubator/
https://waag.org/en/project/atelier/

Public Stacking
https://waag.org/nl/article/toolkit-de-public-stack/

Human values for smarter cities
https://humanvaluesforsmartercities.nl/
https://civicinteractiondesign.com/projects/human-values-for-smarter-cities/

Co-creation Navigator: an interactive guide through different stages of co-creation, from preparation to execution.

Handbook Public-Civic collaboration
https://waag.org/nl/article/handboek-publiek-civiele-samenwerking/
(In Dutch but translation possible)

Urban freeing handbook of T-factor
https://hub.t-factor.eu/thematic-toolbox/

Temporary place making guide
https://waag.org/sites/waag/files/2024-08/TemporaryPlacemaking_WaagFuturelab.pdf

Power mapping
https://waag.org/nl/article/publieke-waarden-het-aanbestedingsproces/

MTF Labs

A veteran of the data-driven innovation space, MTF Labs was born out of an EU research project community centred around Music Information Retrieval, as Music Tech Fest in 2012, and grew into a global cross-domain knowledge exchange and prototyping community of over 8000 contributors from across industrial and knowledge domains.

24 global labs have enabled community experimentation with the affordances of frontier technologies, challenging notions of ability, the nature of work, and the set up of supporting systems. Week-long labs that unite artists and scientists, academia and industry are listed as a Best Practice for technology transfer and cross-domain knowledge exchange in the EU Knowledge Valorisation platform[24].

International experts engage with local knowledge

Invited international experts who participate in hands-on innovation activities engage with the local ecosystem developing a greater understanding of the local culture, regional ambition and technological affordances. This leads to long-term relationships with experts who have a vested interest in the success of the local ecosystem, and establishes an ongoing network of shared knowledge.

Global brainstorming establishes ongoing collaborations

Hybrid online and in-person brainstorming sessions gather expertise from different parts of the world and knowledge domains to incentivise long-term collaborations.

Participants immerse themselves in the local context

Field trips connect the international expertise to the specific lived reality of the regional ecosystem, allowing for applied knowledge rather than theory and abstraction.

24 https://bit.ly/mtflabs-valorisation

MTF Labs in the Laguna de Aveiro in Portugal: experiments between oceanographers, neuroscientists, artists and the local community. Photo: Francisca Siza ©MTF Labs

Prototyping translates thought into practice

Conducting practical experiments and building prototypes allows locals and internationals from different domains to work together and turn ideas into tangible results that cement these partnerships and create momentum for ongoing development and scaling.

Prototypes become part of a collective experience

Final demonstrations and showcases test the impact of the resulting technology prototypes on humans and ecosystems by making them part of the lived experience.

Results are embedded in long-term collaborations

Identifying and supporting the most successful prototypes through funding mechanisms, industry partnerships, and institutional support allows for scale and impact.

Innovation Commons

> "The key resource in an innovation commons is not the technology itself, but the distributed, partial and heterogeneous information that surrounds it. Much of this information is experimentally acquired, often tacit and of little value by itself, but of high value when combined with other information that reveals how the technology might be applied, and by whom, to do what, in combination with what, and so on."[25]

The concept of Innovation Commons presents a useful approach to fostering innovation within regional ecosystems. As a catalyst for creative experimentation and the coalescence of ideas, they function much like the historical example of the Homebrew Computer Club at Stanford, which famously nurtured early personal computing innovations. In today's context, similar environments can be observed in hacker and maker spaces and various collaborative communities, where open-source software development thrives. These spaces balance competition and collaboration, allowing for the collective development of shared resources crucial for innovation.

One significant challenge to this space of commons is the mechanism by which innovation is funded and financed. While often effective in addressing specific challenges or knowledge gaps, public funding does not often foster long-term value creation or sustainable operations. As a result, many innovation-supporting assets, such as tools, methods, and models, fail to be utilised effectively beyond the initial project phase, leading to a cyclical pattern of "reinventing the wheel."

Swedish innovation agency Vinnova has funded a preliminary study into funding, governance and development models for Innovation Commons approaches.

25 Allen & Potts, 2016. How innovation commons contribute to discovering and developing new technologies. International Journal of the Commons, Vol. 10, No. 2 (2016), pp. 1035-1054.

The proposed actions are:

1. **Transition** from traditional project financing **to more dynamic investment models** that act as enablers for long-term collective action.
2. **Promote** not only initial knowledge enhancement but also **long-term strategic learning** to capture the uniqueness of each commons' experimental design of rules required to achieve desired outcomes.
3. **Explore and develop technical platforms** for active management and continuous development of commons in innovation ecosystems.
4. **Explore and develop monitoring and evaluation methods** by identifying the factors that determine if and when commons create value, the effects of use, behavioural changes and shifts within the ecosystem.

Link: https://digitalwellarena.se/wp-content/uploads/2024/05/policypaper_commons_eng.pdf

The study provides a proposal for structured experiments by financiers:

Link: https://digitalwellarena.se/wp-content/uploads/2024/05/financing_commons_eng.pdf

A legal memorandum is provided on how to view the commons in relation to Swedish state aid rules. Different models for describing, organising and analysing the commons have been compiled. Swedsih documents can be accessed here:

Link: https://digitalwellarena.se/en/innovation-commons-en-forstudie/

The Tetrad

The Tetrad is an insightful and analytical co-creation activity based on Marshall and Eric McLuhan's book The Laws of Media (1992). While some may be put off by the apparently academic nature of the source material, the exercise invites participants, ideally from diverse departments or stakeholder groups, to examine proposed approaches through a framework that helps to analyse the effects of any system based on four aspects: Enhancement, Obsolescence, Retrieval, and Reversal.

This kind of analysis, applied to various technologies and initiatives, can reveal hidden effects and long-term implications, aiding policymakers in crafting measures that are more resilient and in tune with societal needs.

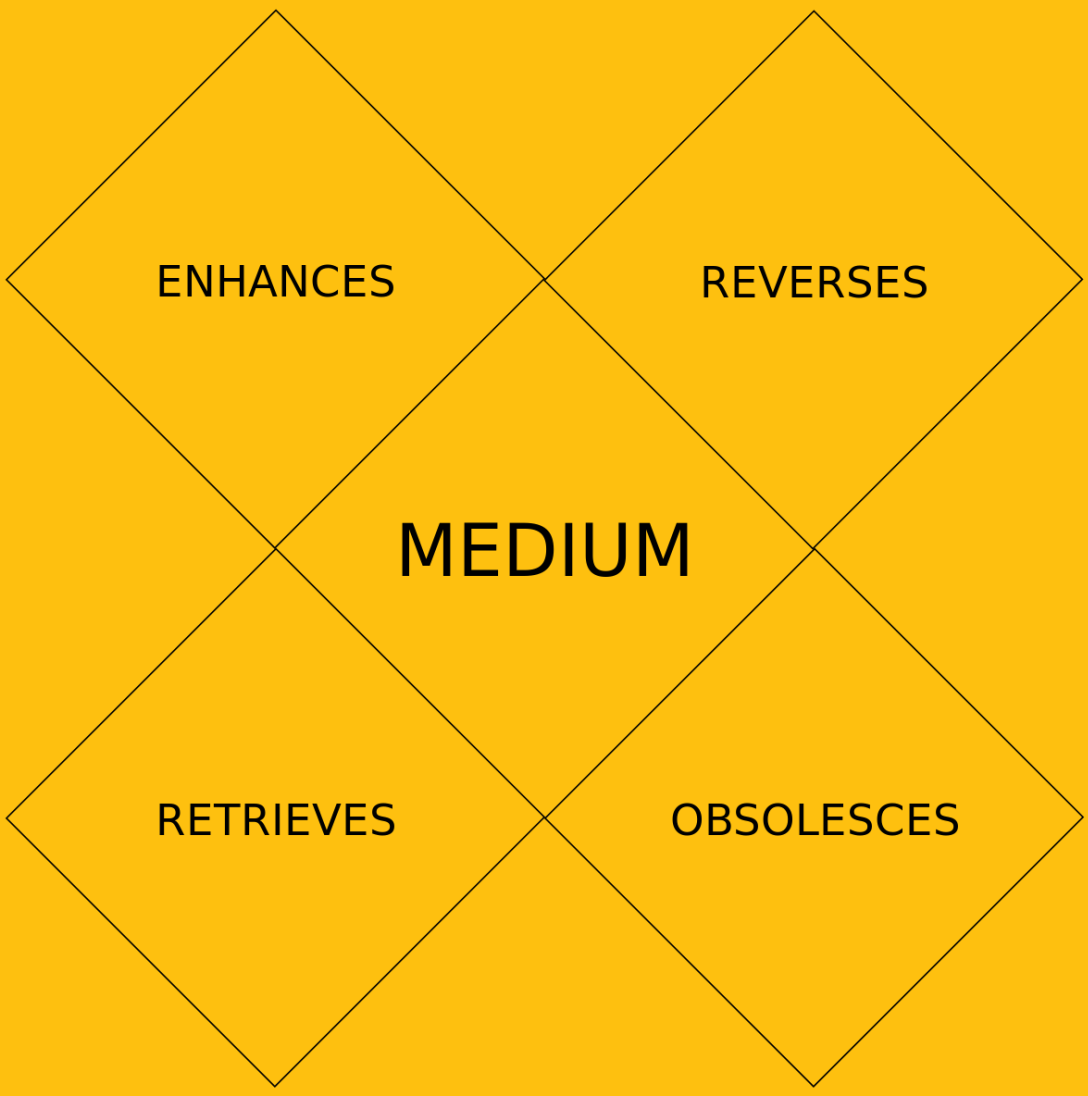
For instance, let's examine the introduction of the smartphone:

Enhancement (What does it improve?): Smartphones enhance communication by making it instant and multimedia, allowing users to connect through voice, text, and video from virtually anywhere. It enhances understanding of the world through instant access to information wherever you are.

Obsolescence (What does it render obsolete?): The smartphone renders traditional landlines and even earlier forms of mobile phones less necessary, along with media such as standalone cameras, radios and newspapers.

Retrieval (What does it retrieve that was previously obsolesced?): Smartphones retrieve the personal touch in communication that was lost with the advent of email and texting by reintroducing video calls and social media connections.

Reversal (What does it become when pushed to its limits?): The prevalence of smartphones can lead to information overload, a lack of privacy, the loss of in-person social interaction, over-reliance on external information sources, and addiction to social media and gaming.


ENHANCES
REVERSES
MEDIUM
RETRIEVES
OBSOLESCES

PODCAST: **NEB Concepts**

The digiNEB project has produced a 'modular' podcast series that features conversations about sustainability, innovation, and human-centred design with leading architects, educators, and project leaders from the NEB community.

NEB Concepts allows listeners to explore themes by topic tags such as climate adaptation, technology integration, and interdisciplinary collaboration — or continue with the wide-ranging thoughts of a single interviewee. Each short episode provides a collection of ideas and practices, projects and reflections, highlighting the twin transitions and the transformative potential of the New European Bauhaus for a more inclusive and sustainable future.

Link: https://digineb.eu/podcasts

FURTHER READING

New European Bauhaus: Inspiring projects and ideas
https://new-european-bauhaus.europa.eu/inspiring-projects-and-ideas_en

Innovation for place-based transformations
https://publications.jrc.ec.europa.eu/repository/handle/JRC135826

Mission-oriented innovation — a handbook from Vinnova
https://www.vinnova.se/en/publikationer/mission-oriented-innovation---a-handbook-from-vinnova/

A practical guide to the New European Bauhaus self-assessment method and tool
https://publications.jrc.ec.europa.eu/repository/handle/JRC139118

The Square: Putting place-based innovation policy for sustainability at the centre of policy making
https://publications.jrc.ec.europa.eu/repository/handle/JRC131244

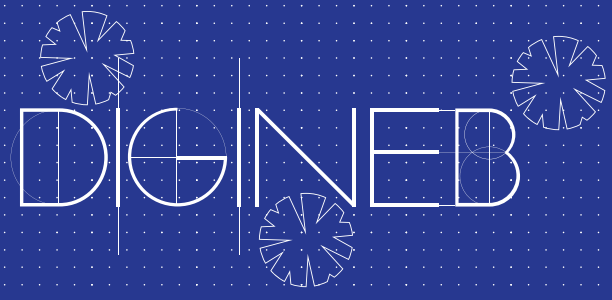
Designing for the Common Good
https://www.archdaily.com/tag/archdaily-topic-2024-designing-for-the-common-good

Humanity's Biggest Problems Require a Whole New Media Mode
https://www.wired.com/story/media-climate-change-film/

Handbook for Sustainable Urban Development Strategies
https://urban.jrc.ec.europa.eu/strategies/handbook-sud/

Partnerships for Regional Innovation Playbook
https://publications.jrc.ec.europa.eu/repository/handle/JRC129327

Why Sustainable Development requires societal innovation and cannot be achieved without this
https://www.mdpi.com/2071-1050/12/3/1270



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