RE-SOURCING
EUROPAN 18 THEME

Europan is a competition of projects at different scales – from territory to proximity – **aimed at young European professionals in architectural, urban and landscape design under the age of 40**.

Each biennial session, **around fifty cities in Europe offer sites** on which these professionals (more than 3,000 each session) answer. They imagine a better future for the proposed contexts, adapted to major ecological and societal changes. The competition takes place **simultaneously in several European countries and is evaluated by juries of renowned experts** with varied skills. Each session more than a hundred projects are awarded, with several ideas on each site.

For young professionals, Europan is a rare opportunity to be able **to show and share their visions for the future of these inhabited milieus** that must be taken care of. They will be promoted through catalogues, national events and exchanges on an European scale (forums). For a certain number of teams, their **winning ideas are discussed at the local level by involving stakeholders in a collaborative process and spirit, and some can be implemented either on an urban scale or through built projects**.

And what creates **the unity of a session**, through the diversity of actors, contexts, award-winning ideas, **is a theme common to all**. For **Europan 18 the theme is RE-SOURCING**. It is part of the contemporary challenges faced by site representatives: adapting to global warming, fighting for better inclusion of inhabitants, regenerating natural and urban environments, adopting constructive sobriety using different types of resources, natural, social, material. These ambitious objectives can be achieved through projects which are new visions, strategic hypotheses, process projects which local stakeholders can take ownership of, and which they can put into debate and into practice.

In this brochure we present this common **Europan 18 theme through illustrative references and texts clarifying the main ideas**. We hope that it will interest those who will propose the sites, and then that it will motivate many young professionals from all over Europe. The launch is planned at the beginning of March 2025.

The Europan Europe secretariat

CONTENTS

p3-4 RE-SOURCING - EUROPAN 18 THEME

1- RE-SOURCING WITH NATURAL ELEMENTS

p7 Example 1 - Designing with the wind
p8 Example 2 - Designing with water

p9-10 Sponge Cities: What is it all about?

p11-12 Which Biodiversity Inside the City

2- RE-SOURCING WITH SOCIAL DYNAMICS AND INCLUSIVITY

p15 Example 1 - Revitalising spaces through co-living
p16 Example 2 - Revitalising with social/cultural dynamics

p17-18 An Inclusive, Resilient and Sustainable City… What is it?

p19-20 Can a City Really Be Inclusive?

3- RE-SOURCING THROUGH MATERIALITY AND CIRCULAR ECONOMY

p23 Example 1 - Building in urgency thanks to materials
p24 Example 2 - Building by hybridising structure and nature

p25-26 Circular Economy / Regenerative Architecture

p27-28 Reuse as Primary Resource

RE-SOURCING
Europan 18 Theme

Article by the **Europan Scientific Committe**

The fragility of the Earth's ecosystem and social crises lead to the imagination of alternative practices to harmful extraction of resources, overconsumption and pollution of living milieus. Regenerating projects embracing nature and culture are to be though and implemented. It is about weaving synergies between biogeophysical data with socio-spatial justice and health ones.

Three main directions for designing forms of resilience and resourcing of inhabited milieus make possible to reactivate other forms of dynamics and narratives around the ecologies of living and caring.

1 Re-sourcing in terms of natural elements / risks

The natural and vital elements of water, air, earth and fire are today linked to risks and disasters which affect places, and the entire ecosystem of milieus from the moment that are triggered cataclysms, resulting from deleterious developments.

In order to enable a new alliance with inhabited milieus, it is time to rethink these vital elements, by finding logics of adaptation with the built environment, and by combining them together in projects.

2 Re-sourcing in terms of ways of life and of inclusivity

The reconsideration of living conditions also requires sustained attention to changes in lifestyles in a hyper-connected digital world. Arrangements capable of simultaneously preserving intimacy, commonality and solidarity are at stake, correlated with bioclimatic and permacultural strategies in which humans and non-humans can cooperate.

3 Re-sourcing in terms of materiality

The already built now constituting a phenomenal source of materials, it is important to design devices for transforming existing buildings driven by the strategy of the 3 R's (Reduce, Reuse, Recycle): Reduce new construction. Reuse in the sense of reusing already constructed spaces and materials. Recycle by using bio-geo sourced materials (earth, stone, fiber), anticipating deconstruction and becoming local again (mobilizing know-how and materials present on the sites). This is to promote the preservation of natural resources.

Recommendations for searching sites

The selection of sites will be based on their potential to find these three types of resources – "natural elements, uses, materiality"

Each site will be presented at two scales:
- The territorial scale known as the "reflection site" (red limit) which will reveal the geographical and ecological elements (topography, geology, natural elements, etc.), the logic of mobility and large-scale lifestyles and which impact the project site today and, potentially, in the future.
- The proximity scale, known as the "project site" (yellow limit), where the existing situation (physical space, nature, lifestyles) and the city's intentions for its development in the future will be presented in a clear and precise manner.

The complete site folder must both remain compact but provide elements of information with links to maps (geography) allowing to understand natural dynamics (water, land, sea, etc.), and to studies on ways of life allowing to understand current social dynamics and those desired in the future.

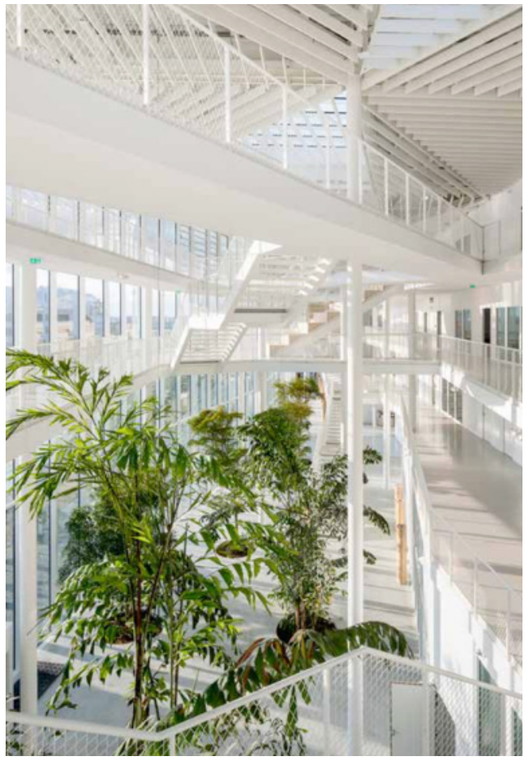
The brief must, based on the characteristics of the site, express the intentions of the site representatives at different scales and clearly formulate the questions they wish to ask the competitors regarding the future of their contexts. Some interesting briefs from previous sessions are made available.

Questions for competitors

The challenge for competitors, in their project-processes, will be to converge the three types of resources because it is their intersection which will generate a promising spectrum of resilient projects in the face of the scarcity of resources and the vulnerability of sites.

The questions asked are:
- What are the new ways of designing to adapt to climate change: rising water levels, air pollution, drought, etc.?
- How to introduce into projects the regeneration and remediation of soils making them more porous and alive, increasing the biodiversity in the built spaces, in order to make them more livable?
- How can we imagine new dynamic and productive use scenarios to revitalize communities of humans and other than humans?
- How can we invent a new materiality of the spaces that can result from the use of bio-materials originating mainly from local resources and falling within the logic of a circular economy?
- How can we hybridize inside the teams the different skills necessary for these projects which combine the consideration of natural elements, new lifestyles and the use of bio-materials?
- which scales should be mixed to make the proposed answers relevant? Can a project on a proximity site be combined with reflection on the larger scale of the territory? Should an urban project also be available on a proximity scale to illustrate its impact?

I - RE-SOURCING WITH NATURAL ELEMENTS



@Sergio-Grazia

1- Re-sourcing with natural elements

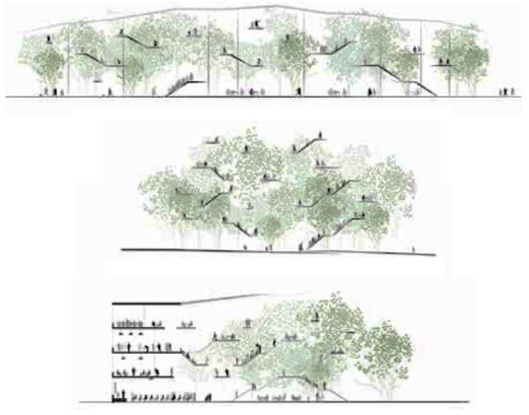
A porous architecture using the wind as climatizer

BEM mutualized learning's building
Paris Saclay - Campus de l'Ecole Polytechnique, France

Client: Ecole Polytechnique + Epaurif
Architects: Sou Fujimoto Architects, Nicolas Laisné, Dimitri Roussel and Oxo Architectes
Engineer: Franck Boutté

Designed as an extension of the park, the building is characterized by its great porosity and opening onto the plateau, its great transparency, its interior vegetation and its overhanging origami-shaped roof. The environmental aspect of this building was worke on with the natural ventilation of the place by integrating openings on the facade with automatic opening and closing, allowing the vast hall to be ventilated and refreshed. This plays a role as a thermal buffer for classrooms, allowing overall temperature management without resorting to air conditioning systems, with the exception of lecture theaters with specific hygrothermal requirements.

@Sergio-Grazia



1- Re-sourcing with natural elements

Designing with water
6 principles to urban and architectural adaptation to sea level rise - *Sea level rise catalogue*

Client: City of Vancouver, Canada
Architects: MVRDV

Starting from an analysis of Vancouver, MVRDV shows how the water's edge in False Creek has minimal space dedicated to the inter-tidal zone – the land between high and low tide – and often no land serving as land that can be expected to flood seasonally or during extreme weather events.

What can be done to allow these areas to form a more natural transition between sea and land? Can existing and new buildings be redesigned to work with the tides and floods? And in return, can the city expand to make symbiotic life with the water part of its urban culture?

Six fundamental principles are developed to make adaptation to sea level rise on urbanized coasts: upgrading utilities and elevating some of them away from the water; finding new flood-proof uses for underground structures; lifting the ground floor of buildings; developing raised walkways to connect structures; rearranging buildings' programs and making them more flexible; and adapting structures to enable changes in use, as well as designing new structures to be more easily adapted.

All images @MVRDV

Sponge Cities: What is it all about?

Article from the **World City Council**

http://www.worldfuturecouncil.org/sponge-cities-what-is-it-all-about/

Sponge City. Yet another term on the growing list next to regenerative, sustainable, green, eco, resilient, low-impact, future proofing, zero-carbon, and the list goes on.

Strange as it may sound, this term has actually gained a huge amount of support.

What are the key issues the Sponge City wants to solve?

Before explaining in more detail what a Sponge City actually is, it is important to appreciate the main issues that the Sponge City intends to tackle. These are mainly four:

Less water available in urban and peri-urban areas. First of all, a key question we need to answer to explain this issue is: Where do we get the water that comes out of our taps? Many times, it is actually coming from aquifers underneath our feet. As it rains, water is absorbed by the ground and naturally filtered by the soil. We can then extract this water by drilling wells into the ground and pumping water out of it. The water is then collected and treated before is distributed across the city and can reach every tap in each of our houses and offices. The problem is that extensive urbanization and urban sprawling led to the formation of thousands of square kilometres of impermeable areas made up of impervious roads, pavements, roofs and parking lots that do not allow water to be absorbed into the ground but that simply collect the rainwater through the urban drainage infrastructure and channel it into rivers, lakes or into the sea. This traditional type of design led to the creation of cities which are increasingly impermeable and have an increasingly greater impact on the natural water cycle. In practice this means that since less rainwater is allowed to filter through the urban soil, less water is available to be extracted from aquifers in urban and peri-urban areas.

Polluted water discharged into rivers or the sea. Another key issue is related to the fact that rainwater and wastewater (namely water from our sinks and toilets) is collected by one single drainage system. This drainage system (imagine one big pipe) collects all the rainwater (when it rains) and the wastewater from our houses and directs it to a wastewater treatment plant where it gets treated before it is discharged again into rivers or the sea. When it rains, many times the wastewater treatment plant cannot accommodate all the water that the drainage systems carry. Therefore, much of the rainwater mixed with the wastewater is discharged untreated into rivers. The more impermeable the city is, the more water will be mixed with wastewater and will not be able to be treated but discharged directly into rivers. This increases the level of pollution of local water bodies.

Degradation of urban ecosystems and green areas due to sprawling. This led to a considerable loss of urban biodiversity, a drop in available green areas for natural ground filtration of storm water, a decrease in CO2 capture by plants, fewer spaces for natural cooling through urban green microclimates and generally less liveable, healthy, comfortable and attractive public spaces.

Increase in the intensity and frequency of urban flooding particularly considering predicted increase in extreme weather events due to climate change. As the absorbing capacity of the urban surface is decreased, storm flooding risk is increased. Flooding leads to increased groundwater pollution and has considerable impact in terms of damage to properties and health related issues.

What is a Sponge City?

The Sponge City indicates a particular type of city that does not act like an impermeable system not allowing any water to filter through the ground, but, more like a sponge, actually absorbs the rainwater, which is then naturally filtered by the soil and allowed to reach into the urban aquifers. This allows for the extraction of water from the ground through urban or peri-urban wells. This water can be easily treated and used for the city water supply.

What does a Sponge City need in practise?

A sponge city needs to be abundant with spaces that allow water to seep through them. Instead of only impermeable concrete and asphalt, the city needs more:

- **Contiguous open green spaces**, interconnected waterways, channels and ponds across neighbourhoods that can naturally detain and filter water as well as foster urban ecosystems, boost bio-diversity and create cultural and recreational opportunities.
- **Green roofs** that can retain rainwater and naturally filters it before it is recycled or released into the ground.
- **Porous design** interventions across the city, including construction of bio-swales and bio-retention systems to detain run-off and allow for groundwater infiltration; porous roads and pavements that can safely accommodate car and pedestrian traffic while allowing water to be absorbed, permeate and recharge groundwater; drainage systems that allow trickling of water into the ground or that direct storm water run-off into green spaces for natural absorption
- **Water savings and recycling**, including extending water recycling particularly of grey water at the building block level, incentivizing consumers to save water through increased tariffs for increase in consumption, raising awareness campaigns, and improved smart monitoring systems to identify leakages and inefficient use of water.

What are the benefits of a Sponge City?

There is wide range of benefits associated with the implementation of sponge cities. These include:

- **More clean water for the city.** Replenished groundwater and thus greater accessibility to water resources for cities. This also entails greater water self-sufficiency which allows cities to increasingly rely on water sources from within their boundaries
- **Cleaner groundwater** due to the increase volume of naturally filtered storm water. This means lower environmental and health costs due to considerable decrease in water pollution
- **Reduction in flood risk** as the city offers more permeable spaces for the natural retention and percolation of water. This leads to better resilience and in particular greater ability to deal with higher flood risks resulting from climate change
- **Lower burdens on drainage systems**, water treatment plant, artificial channels and natural streams. This also entails lower costs for drainage and treatment infrastructure
- **Greener, healthier, more enjoyable urban spaces.** Greener urban spaces improve quality of life, create more pleasant landscape aesthetics and recreational areas that are enjoyable and attract people. This also means increase in land value due to aesthetically more pleasing, cleaner and healthier open spaces close to private properties
- **Enriched biodiversity** around green open spaces, wetlands, urban gardens and green rooftops

Which Biodiversity Inside the City?

Extracts from the article by **Nathalie Machon (FR)**, professor of plant ecology

Encyclopedia of the Environment (Creative Commons BY-NC-SA license)
https://www.encyclopedie-environnement.org/en/life/what-biodiversity-in-the-city/

Even if the urban environment imposes strong constraints on the animals and plants that inhabit it, the biodiversity of our cities is rich in many diverse species. All these species form the urban ecosystem that provides valuable services to urban dwellers. We still need to make cities welcoming for fauna and flora.

1- The City, a Place Where Many Animal and Plant Species Live

A city is a an environment where a large human population is concentrated and which organizes its space according to needs and activities. The ecological characteristics of cities are quite particular due to the concentration of buildings of all kinds and the importance of human activities. In reality, these characteristics may vary according to the density of human populations, the geographical location and the type of activity (city centre, peri-urban districts, etc.). Nevertheless, the human presence is still more significant than in rural areas.

What are the consequences of the high human concentration in cities? Areas likely to support biodiversity are very small in size, and surrounded by buildings, streets, walls, structures that do not suit the lifestyle of a number of species because they cannot find food or shelter there… In fact, the isolation of these areas, within an inhospitable urban matrix, prevents most organisms from migrating from one area to another. The consequence of this isolation is a loss of viability of plant or animal populations through genetic impoverishment and inbreeding.

Another particularity of the urban environment is its artificial microclimate, which is warmer and drier than its surrounding areas. This phenomenon called "urban heat island" is due to human activities concentrated in cities, some of which produce a lot of heat, such as factories, vehicle engines, building heating, air conditioning, hot water circulating in sewers, etc. It is also the result of waterproofing urban soils that absorb solar radiation and then return it as heat, something that plant covered soils do not do.

Finally, organisms, animals and plants, like humans, are subject to urban pollution to which they are more or less sensitive. This pollution is the result of the emissions of various gases from road traffic, industrial activities and district heating. The main pollutants encountered are nitrogen oxides (NO and NO2), carbon monoxide, volatile organic compounds, ozone formed by photochemical reaction in sunny weather and fine particles. All these molecules are absorbed by living organisms causing more or less damage. Rainwater in cities is loaded with pollutants along its route, linked to car traffic and industrial activity. Polluted air and water as well as liquid or solid gaseous discharges from human activities also load the soil with toxic substances. These frequently reworked soils are a heterogeneous substrate that is not always ideal for the harmonious growth of a wide range of plants…

2- Why Preserve Biodiversity in the City?

The growing literature on the subject clearly shows that the quality of life of urban dwellers, and even their health, is closely linked to the quality of biodiversity in the neighbourhoods in which they live.

Through the services they provide, urban plants help to improve the quality of air, water and soil. Trees in particular absorb significant amounts of pollutants. They play a significant role in the carbon cycle and have a significant impact on neighbourhood temperatures, especially in the event of severe heat waves. Indeed, the water taken by the roots of the trees and circulating (the sap) to the leaves evaporates thanks to the stomata. This conversion of liquid water into water vapour (evapotranspiration), which uses large amounts of solar energy[1], has a particularly appreciable local cooling effect during the summer months.

Nature in the urban environment provides psychological and physical benefits for urban dwellers when they live in neighbourhoods rich in green space. This is why many cities set up many parks or squares, so that each city dweller has a public garden within walking distance. Studies show that in greener neighbourhoods, urbanites are less prone to allergies, cardiovascular disease… Indeed, these spaces improve local air quality and their pleasant landscaping encourages residents to use them for walking or playing sports. As a result, they have a positive impact on the health of city dwellers..

Urban biodiversity also has cultural and educational virtues. It provides an opportunity to raise awareness of environmental issues among a wide audience, starting with children. A large proportion of small urban dwellers are in contact with nature only in the areas around their homes. The growing interest in associative initiatives whose objective is to show the nature of cities (nature festivals and other events around biodiversity for example) or the success of certain participatory science programmes whose objective is to collect data on the functioning of biodiversity in cities (Sauvage de ma rue[2], Lichen go[3], garden biodiversity…) demonstrates the importance in preserving green spaces in the most central districts.

Urban agriculture tends to be renewed in our cities. Whether for leisure or economic reasons, vegetable gardens are returning to the neighbourhoods. Fruit and vegetable production is based on good quality soils and water as well as pollinating or regulating organisms for crop pests...

1• A large tree can evaporate hundreds of litres of water vapour, using 0.7 kWh/L of energy to convert liquid water into vapour

2• http://sauvagesdemarue.mnhn.fr/

3• http://www.particitae.upmc.fr/fr/participez/suivez-les-lichens.html

2- RE-SOURCING
WITH SOCIAL DYNAMICS AND INCLUSIVITY

2- Re-sourcing with social dynamics and inclusivity

Co-living

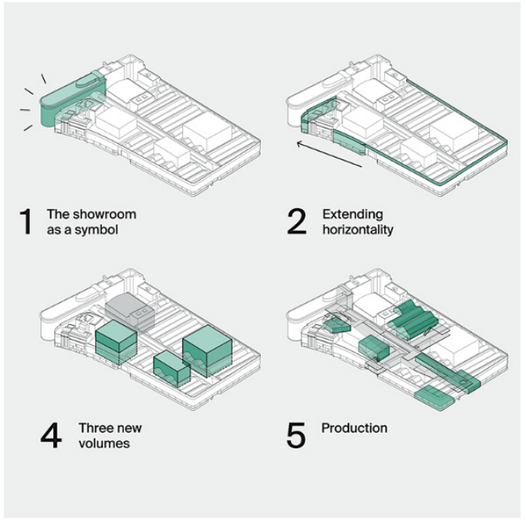
40 co-living units, 4 townhouses and 8 apartments
Stavanger, Norway
Architects: Helen & Hard
Timber Engineering: Holzbau Saurer

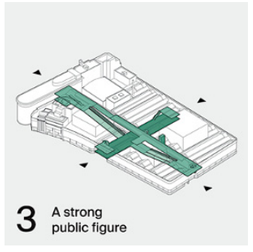
The Vindmøllebakken co-living project is raised on an old office ground. It is constructed entirely out of wood. Privately owned apartments are built around 500m2 shared space with different programs and a spacious indoor courtyard. Located in the centre of movement, the double height living room becomes the beating heart of the breathing, all-wooden complex.

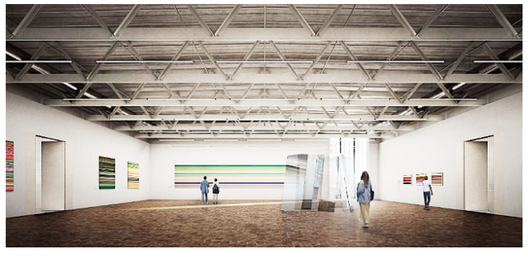
Throughout the project, architectural choices are made to support sharing with, and caring for, one another's neighbour. It is a natural way of urban living – especially when encouraged by the architecture itself. All residents have had a direct input in the layout of their apartments and the shared common areas.

Gaining by Sharing is a model based on principles of sharing. It shows how human, social, environmental and economic needs can be met in a sustainable and symbiotic way.

All images @Helen&Hard







2- Re-sourcing with social dynamics and inclusivity

Transforming a former Citroën Garage into a new cultural, social and urban place
Brussels, Belgium
Client: Gouvernement de la Région de Bruxelles-Capitale, City of Brussels
Architects: EM2N

The former Citroën Yser car factory is transformed into a 40,000 m² art and cultural centre in Brussels. The building will home all forms of cultural creativity: the visual arts and architecture, but also dance, drama, film, literature and music. KANAL, as the venue will be known, will provide opportunities for learning as well as a framework for diverse curatorial opportunities, a network of buildings and public spaces that act as an open forum, a catalyst for debate and social interaction.

The project retains as much as possible of the existing structure and the traces of its past that will give the venue a productive, social and informal feel rather than the all-too-often rarefied atmosphere of many international art venues. More than a container of art and a stage for performance, Kanal aims to be a public forum that can be appropriated by local residents: a welcoming place inviting visitors to wander, rest, meet or simply be.

The building is understood as a place of production as much as a place of display..

Visualisations © Secchi Smith, London

An Inclusive, Resilient and Sustainable City... What is it?

Extracts from the article by **Carlos Moreno (FR/CO)**, researcher and urbanist

https://www.latribune.fr/regions/smart-cities/une-ville-inclusive-resiliente-et-durable-c-est-quoi-617909.html

...Understanding the City Cycle

We need to understand what is essential: the life cycle of the city. We can indeed compare the city to a living being: it is complex and has its own metabolism, born of the interaction of the many systems that make it up. As a result, it is also very fragile and sudden violent crises often remind us of it. In the age of the multitude, in these ubiquitous times when deep changes are taking place in the geopolitics of nations, the history of the city, its governance and its role in relation to States are intertwined. Getting interested in the intelligence of the city means above all getting interested in its identity, its specific socio-economic, cultural and ecological features, and in the increasingly stringent demands of its citizens in terms of governance: mobility; security; social housing; energy issues; land; networks; infrastructure; public spaces; local economy; culture; leisure; taxation and attractiveness.

At its heart lies the quality of life of its inhabitants. Cities are becoming more complex because of growing urbanisation, the rise in the number of urban dwellers, the increase in needs to be met as a result of the demographic explosion, as well as the pressure due to diminishing resources, and also the socio-economic divides visible in the social fabric. This creates serious problems and large sections of the urban population are increasingly living in poverty and insecurity.

Urbanisation, World-Cities and Transcriptions

Today, the planet counts more than 7 billion inhabitants and for the first time in human history more than 50% of the population lives in cities; in Europe, it is up to 77%. By 2030, it is estimated that nearly 5 billion of the world's 8.3 billion people will live in urban areas. Some 12% of the world's population now live in 28 cities; 140 cities now account for 44% of Europe's GDP and by 2030, 750 cities will account for 60% of global GDP....

…The exponential growth of cities is consuming resources, further weakening an environment that has already been considerably affected. New vital needs are emerging in terms of food, health, climate, mobility, etc., requiring new responses in these rapidly changing contexts, where nature is more than ever under threat. It is also important to consider the ruptures that are needed in order to develop other paradigms for the design and transformation of city life driven by innovation...

…The Sustainable Development Goals (SDGs) set by the UN include the imperative need to "make cities and human settlements inclusive, safe, resilient and sustainable". The New Urban Agenda […] proposed at the Habitat III Citizens' Conference in Quito emphasises on the priority of social inclusion and the right to the city for all with access to basic living needs and participatory democracy to promote equitable cities and for life. The very strong commitment of local governments and mayors showed that their international networks are a key element. Cities are at the heart of the solution and are the backbone of transformative action.

The City that We Want

The city is at the crossroads of a multitude of societal needs and uses. The challenges of social, urban and technological innovation affect our daily lives in areas such as housing, mobility, education, work and care. How do we bridge the gap between 'living well', 'housing well', mobility and the workplace? Is it really necessary, for example, to travel so much to work, to learn, or to be treated? What is the link between residents, their city centre and the suburbs? Public services and private offer? These issues are leading to real transformations in our lifestyles and working relationships, as well as social and urban transformations, which are affected and amplified by the impact of the technological revolution. The issues of energy management, energy-efficient housing, green mobility, safety, personalised health and access to culture all come to the fore. And through these reflections, it is a truly transversal, living, decompartmentalised city that will take shape before our very eyes as we speak of an inclusive, resilient, sustainable city driven by innovation.

But only a city that puts the citizen at the centre of its concerns can meet the many challenges of our urban future. It is built around the citizens, in a territory of its own. What is true in Paris is not necessarily true in Rio, Sydney or Lagos. Hence the need for the citizens' identities within their territory...

…today's citizens have the technical means to inform themselves and mobilise on a daily basis. Social networks can help hundreds of thousands of people gather in the streets in just a few hours. On the other hand, urban intelligence and the citizens' new uses, multiplied by social networks and new technologies, enable the emergence of new initiatives to get involved in change. These technologies are changing the relationship between citizens and governments, while governance and the way politics is conducted are also changing. There is also clearly a shift away from traditional representative democracy. At a time of energy transition, decentralised energies, new forms of mobility, the development of local distribution networks and unbreathable cities because of pollution, giving meaning to the city is above all a social fact. Without this consistency, we are going to cut ourselves off from the public support that is essential if we are to bring about fundamental change, because the heart of the value lies in the way it is used, in the creation of social value, and not in technology itself.

Can a City Really Be Inclusive?

Article by **EGIS**, leading global consulting, construction engineering and operating firm
https://www.egis-group.com/all-insights/can-a-city-be-truly-inclusive

Cities are often the product of their history: their streets tell the story of their successive expansions (for example, Paris's boulevards follow the old walls built by Charles V in the 14th century and the wall of the Farmers-General erected in the 18th century); their more or less tumultuous relations with their neighbours (as shown by the dozens of citadels created by Vauban all over France); or, more prosaically, the will of their political leaders (the transformations undertaken by Baron Haussmann, Prefect of the Seine, being an emblematic example).

Even in the absence of historical upheaval the city is a living being in perpetual transformation. It is constantly evolving after the inhabitants, the uses and the needed conditions. Cities therefore have to adapt to growing urbanisation – which means accommodating more and more people –, to urban sprawl – which profoundly alters uses, for example in terms of mobility –, and to changing conditions – particularly as a result of global warming.

An Inclusive City, but for Whom?

Cities must also, and above all, make room for all the very diverse profiles that make them up, in other words, become inclusive cities. The inclusive city is defined by the desire to welcome all people to its territory, including vulnerable or minority groups. It means enabling everyone to enjoy the spaces, infrastructures and services, whatever their age, gender, standard of living or physical and cognitive abilities.

For many cities today, this is still far from being the case. On the issue of gender, for example, Yves Raibaud describes in his book "La ville faite par et pour les hommes" ("The City Made By and For Men") how urban planning can contribute to reinforcing inequalities between women and men. In this sense, the width of a pavement, lighting and public transport provision are not experienced in the same way by men and women.

Inclusivity, of course, is not just about gender. How can we ensure that people with reduced mobility can also get around? Or that elder people enjoy public spaces as much as younger people? Have we considered how residents who cannot read can find their way around? Do the poorest people feel as much at home as the better-off?

Shifting the Perspective

In reality, these questions can only be answered by asking the people who are most affected. To make the city more inclusive we first need to think about projects for everyone upstream, starting from the human element. This means taking into account the real needs of all users and above all shifting the perspective of those who design the city through a complete diagnosis of current and future uses, shortcomings and the main points of friction. To do this, we need to use a participatory approach to bring out the city as it is really experienced. Exploratory walks, which bring together citizens and professionals, have been organised in a number of cities so that the profiles concerned can identify and bring forward the problems. Above all, there needs to be a real political will to bring about change.

There are already many examples abroad: in Vienna (Austria), for example, the city council introduced a gender budget in 2005 requiring it to demonstrate that its services benefit both men and women. In Seoul and Singapore efforts have been made to make everyday life easier for senior citizens and encourage them to go out.

In France too, initiatives have been undertaken: in Paris, the "rues aux écoles" initiative ("streets to the schools") has given children more space in front of their schools and made them feel safer. Initiatives such as the "Le Carillon" programme ("The Bell") also enable homeless people or people in serious difficulty to visit participating local shops to benefit from essential services – drinking a glass of water, accessing a toilet or even recharging their mobile phone.

3- RE-SOURCING
THROUGH MATERIALITY AND CIRCULAR ECONOMY

3- Re-sourcing through materiality and circular economy

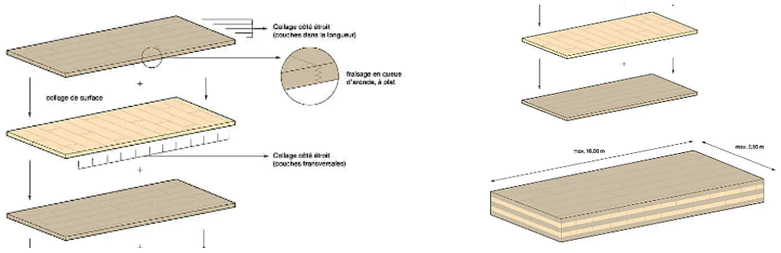
Building quickly an hospital in Ukraine with cross-laminated timber + prefabricated panels
Lviv, Ukraine

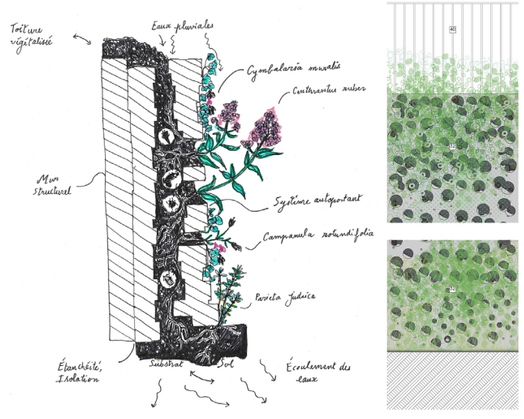
Architects: Shigaru Ban architects

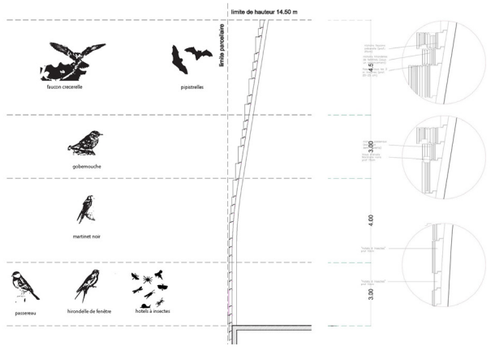
To expand medical care services for those impacted by the war, Shigaru Ban proposed to implement an extension of the existing hospital of 25 thousand square meters, including various crucial departments as for cardiac surgery, intensive care, liver, kidney, lung transplantation, an oncology department, along with operating units, and a training centre.

Central to the proposed structure is the innovative use of Cross-Laminated Timber (CLT), an engineered wood made by laminating thin layers of solid lumber to create large panels able to resist structural loads.

Incorporating hardwood dowels and wood-to-wood joints ensures seamless connections between the elements, reinforcing the hospital's structural integrity. Furthermore, the use of CLT significantly reduces carbon emissions for the construction. The prefabricated panels have the added advantage of enabling fast and efficient construction, leading to reduced labor and on-site disruptions.







3- Re-sourcing through materiality and circular economy

Experimentation on biodiverse wall

Research programme FAIRE

Architects: ChartierDalix. Architecture & Landscape

The work by the ChartierDalix office on the connection between nature and architecture has allowed them to consider the building as an ecosystem that welcomes the living, thus highlighting its ability to carry its own landscape. The first prototype allows them to test the concrete material and its ability to embody all of the properties studied: insulation / structure / a substrate network / porous surface for plant expression and inclusion of nest boxes.

The biodiverse wall is a new type of vertical vegetation system designed to promote biodiversity in dense cities by welcoming local and indigenous flora and fauna. Rather than a fully covered vertical garden generally composed of exotic plants, it is an inhabited wall with a unique architectural quality, which gives the opportunity for plants to settle sustainably and which is more autonomous than the hydroponic systems of green walls.

Circular Economy / Regenerative Architecture

Extracts of articles part of the **ArchDaily** Topics: Circular Economy

www.archdaily.com/tag/archdaily-topic-2023-circular-economy?ad_source=monthly_article&ad_medium=bottom_link

What is Circular Economy?

By Camilla Ghisleni (BR), architect, urbanist

…Therefore, the circular economy would gain strength as an opposition to the linear (or traditional) economy, in which the production chain motto is "extract, produce and discard". A model deeply rooted in our economy that has become unsustainable for several reasons, like the depletion of natural resources and the contamination of the environment resulting from production and disposal.

In this context, circular economy inspired by the cyclical logic of nature, focused on the reduction, reuse, recovery and recycling of materials and energy. The concept associates better management of natural resources with economic development, which requires closing cycles with waste and resource reuse, reducing the speed of material cycles, and developing reusable and durable products. It uses a systemic approach to maintain the circular flow of resources by adding, retaining and regenerating their value, contributing to sustainable development.

However, the concept goes beyond waste management and recycling, incorporating broader activities such as production process redesign, new business models and optimization of resources use. It is characterized as a dynamic process that requires technical and economic compatibility (capabilities and productive activities) and social and institutional framing (incentives and values). New elements and services that are economically viable – and ecologically efficient – are created in an ideally permanent cycle of conversion between raw material and product.

In terms of architecture itself, the scope of the circular economy concept is being explored in different ways. Among them, it is worth mentioning some strategies: cradle to cradle, which postulates the circularity of the productive chair; regenerative architecture, with structures that mimic restorative aspects found in nature; eco-capitalism, encouraging the application of materials and technologies in favor of the environment, and the materials passports, which rethinks how materials are recovered and reused during renovations and demolitions. It is possible to notice that both architecture and the circular economy approach a systemic vision, a characteristic shared by both that reinforces the possibility of dialogue between them.

Furthermore, more than any other industry, construction – responsible for 38% of all global CO_2 emissions, according to a 2019 UN report – is at a tough standstill in which sustainable solutions (like incorporating circularity) have become vital to the future. Despite some efforts, such as the current EU regulation determining that 70% of demolition materials do not go to landfills, there are still many obstacles to its effective implementation. The European Commission recently admitted that while some countries send 6% of their demolition materials to landfills, others send around 54%. Many reasons keep construction away from the circular economy, including schedule, budget requirements and lack of knowledge.

However, it is worth mentioning important initiatives that have brought the concept to the forefront in the architectural field, focusing on buildings with evolutionary, modular, efficient and resilient uses, such as Casa Ensamble Chacarrá, in Colombia, which uses local materials and labor in its modular structures, or the CNAD National Art, Crafts and Design Center, in Cape Verde, and its structure made up of lids from recycled oil barrels.

What is Regenerative Architecture? Limits of Sustainable Design, System Thinking Approach and the Future

By Ankitha Gattupalli (IN), architect, writer

A heavily cited fact within the architecture industry is that the built environment accounts for 40% of global carbon emissions. The concerning statistic puts immense responsibility on construction professionals. The idea of sustainability in architecture urgently emerged as a way of bandaging environmental damage. A wide range of sustainability practices aims no higher than making buildings "less bad", serving as inadequate measures for current and future architecture. The problem with sustainable architecture is that it stops with 'sustaining'.

In order to maintain the current state of the environment, the architecture community has been working towards greener means of production. Conventionally, a green building employs active or passive features as a tool for reduction and conservation. Most sustainable designs view buildings as a vessel of their own rather than integrated parts of their ecosystem. With the planet's current needs, this approach is not enough. It is not enough to sustain the natural environment, but also restore its processes.

What is Regenerative Architecture?

In biology, regeneration refers to the ability to renew, restore or grow tissues in organisms and ecosystems in accordance with natural fluctuations. When applied to building design, this can look like structures that mimic restorative aspects found in nature. Regenerative architecture is the practice of engaging the natural world as the medium for and generator of architecture. Living systems on the site become the building blocks of the structure built in harmony with the overall ecosystem.

Regenerative architecture demands a forward-thinking approach. In contrast to sustainably designed buildings, regenerative buildings are designed and operated to reverse ecological damage and have a net-positive impact on the natural environment. Shifting from a sustainability lens to a regenerative one means that architects should question how we can design structures that not only use limited resources but also restore them. Regeneration also seeks to facilitate a more resilient environment that can resist natural challenges.

Regenerative vs. Sustainable Design

Sustainable and regenerative design may seem like different approaches - sustainability limits resource use, while regeneration replenishes them. Sustainability, however, is a subset of a larger regenerative model. Both methods overlap and incorporate similar practices, each emphasizing different green goals. Just as 'reduce', 'reuse' and 'recycle' can't operate in isolation, sustainability practices lend a hand towards regenerative goals by forming the first step towards replenishing resources - limiting their consumption.

One way both practices differ is in their scale of interventions. Regenerative design demands architecture be seen as an extension of the place, the site, the flora and fauna, and the ecosystem. Buildings are treated as part of a larger system, helping to produce and share resources like clean water, energy, and food. For example, Splitterwerk and ARUP's SolarLeaf bio-reactive façade generates renewable energy from algal biomass and solar heat. The energy generated can be used by the building, stored for future use, or provided to the utility grid…

…The Need for Regenerative Design

The regenerative design process is fundamentally rooted in a system thinking approach. Interventions may include biomimicry to imitate nature, air-cleansing building skins, water-purifying structures, or carbon-capturing architecture. Shifting thoughts from sustainable to regenerative architecture will account for a better strategy to tackle the climate and biodiversity emergency that plagues society today. The regenerative architecture will allow the construction industry to "do good" rather than merely "less bad".

Reuse as Primary Resource

Extracts from the article by **Philippe Simay (FR)**, Philosopher, researcher, lecturer

Les cahiers de la recherche architectuale, urbaine et paysagère, N°11, 2021
Thinking About Architecture Through Resources (licence CC BY-NC-ND 4.0)

https://journals.openedition.org/craup/7092

…All processed architectural products whether chemical or mechanical require large quantities of raw materials: hydrocarbons, minerals, sand and water, all non-renewable resources. Far from calling into question our ways of building and living, the scarcity of resources has led to an intensification of raw material extraction activities with techniques that are ever more aggressive and dangerous for health and the environment – they tripled between 1970 and 2017 and are now responsible for over 90% of biodiversity loss. By continuing to predominantly build with concrete, steel or petrochemical materials the construction industry is one of the major predators of the earth's resources. We have long pretended not to see this, relocating the most intensive production or extraction activities to distant territories, former colonies or poor countries where economic and environmental links of exploitation remain in order to ensure our living conditions while preserving the quality of our environment. But the "sacrifice zones" - gutted or poisoned soils, decimated forests, populations driven from their lands by rapacious industries - are now too numerous not to question the deleterious effects of our ways of building and envisage a different use of resources.

Today, reusing construction materials is one of the main ways of combating extractivism and reducing its environmental impact. In 2014, this sector generated 227.5 million tons of waste in France, including 46 million tons for the building industry, and on a European scale it accounts for 33% of total waste production. In its 2015 Circular Economy Action Plan the European Union set member countries a target of reducing construction waste by 70%, giving priority to reuse by 2030. Besides creating jobs that cannot be relocated this plan allows for reconditioning existing materials collected from dismantling sites and reducing waste and the consumption of new material and energy resources. Despite these advantages those involved in reuse have to overcome a number of obstacles in order to structure their sector. They are mainly of a regulatory and insurance nature, linked to the supposed loss of quality or performance of reused materials. Others are of an ethical and political nature and relate to the status or at least the ambiguous representation of reuse. Insofar as it uses materials that are mass-produced, mass-consumed and mass-rejected by the construction industry, reuse seems to depend on what it criticises, torn between resistance and compromise, as if it were biting the hand that feeds it. It is therefore fair to ask how and under what conditions reuse is likely to renew the culture of construction…

…Recycled materials from construction or demolition waste (concrete, glass, metals, plaster, etc.) also make it possible to slow down the extraction of raw materials and reduce energy consumption, air and water pollution and greenhouse gas emissions. In this area, recycling is still far from fulfilling all its promises: only a small proportion of the collected waste can be recycled and this requires costly processing in factories to ultimately produce materials that are little or not sustainable. Cement manufacturers claim that 80% of concrete is recycled, but the proportion of recycled aggregates used in new cements is no more than 15%. In this sense, it is difficult to talk about "recycled concrete" and imagine virtuous circles. Recycling, while giving the illusion of infinite regeneration of materials, is in no way similar to the so-called cradle-to-cradle approach, which incorporates materials that lose none of their raw qualities at every stage of design, production and reuse. Reused materials, on the other hand, are reconditioned and used with a minimum of processing, as part of a "least impact" approach. As a strategy based on what is available, reuse uses only what is there, or more precisely what has already been transformed; it therefore limits as far as possible the use of any new raw material, whether organic or inorganic; it considers as a resource only what has already been consumed. In this sense, refusing to consume new raw materials and only using the existing materials is a sound criterion for discriminating between products and promoting architecture that is respectful of ecosystems…

…Even if the performance of materials from deconstruction sites varies according to the quality of the building and changes in construction standards they should systematically be favoured in view of the ecological emergency… In recent years, a number of platforms specialising in reused materials have developed activities involving resource assessment, characterisation of reused materials, storage and supply, repackaging and product insurance. They offer architects and clients the possibility of building with a low carbon cost and an equivalent or lower financial cost, but with the same performance and without consuming more raw materials. In a world where new construction must become the norm rather than the exception, reuse invites us to think of architecture in terms of its relationship with existing resources rather than in terms of their production…

…Making the most of a material that has been deconstructed does not consist solely or mainly in reducing it to a stabilised, standard, normalised form. There is an urgent need to move away from the logic of the catalogue and to find back the material behind the product. The value of reuse lies in the fact that it is an art of making, the result of an encounter with materials that work on us as much as we work on them. As Gaston Bachelard so aptly put it, "matter reveals our strengths […], it is a mirror that focuses our powers by illuminating them with imaginary joys". And yet, redeploying a material imagination of architecture is no mean feat.

…If we fail to rethink our relationship with living things, the call for a more sober architecture, which is essential to the ecological transition, risks being exhausted by the capitalist imperative to optimise available resources. Arrogating to ourselves the right to manage resources that do not belong to us makes the hope of a new alliance with the biotic community improbable.

Reuse is therefore a good starting point for questioning our building culture and our ways of living. Not only because it makes the most of neglected resources by reconditioning materials from deconstruction sites. Beyond this practical dimension and its environmental benefits, reuse leads us to politicise the use of resources by exposing the power relations and intrinsic violence of conventional construction practices. In this sense, it can be seen as an act of resistance to the extractivist and productivist model. And there is more: reuse is now shaping a new way of thinking inviting us to move away from an anthropocentric vision of resources and redefine their scope and meaning. What has already been transformed is de facto a resource that we should now take care of by reusing it in the most sustainable way possible. Everything else, on the other hand, should not be considered as such or as resources shared by all the inhabitants of the earth, humans and non-humans, and over which we have no exclusive rights. And we should add here, in the words of Aldo Leopold's Land Ethic (1887-1948), that the use of a resource "is right when it tends to preserve the integrity, stability, and beauty of the biotic community". It is in the light of this criterion that we should consider the reuse and use of resources to which he urges us in order to build while preserving the dynamics of living things. Isn't this a fine way of promoting an architecture of relationships, attentive to the value of the already-there and sensitive to the preservation of life in all its forms?

CALENDAR OF THE EUROPAN 18 COMPETITION

Launch: **March 3rd, 2025** Submission: **June 29th, 2025** Results: **November 4th, 2025**

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