

# WW UD S

WorldWide  
UrbanDevelopment  
Strategy



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## PART I

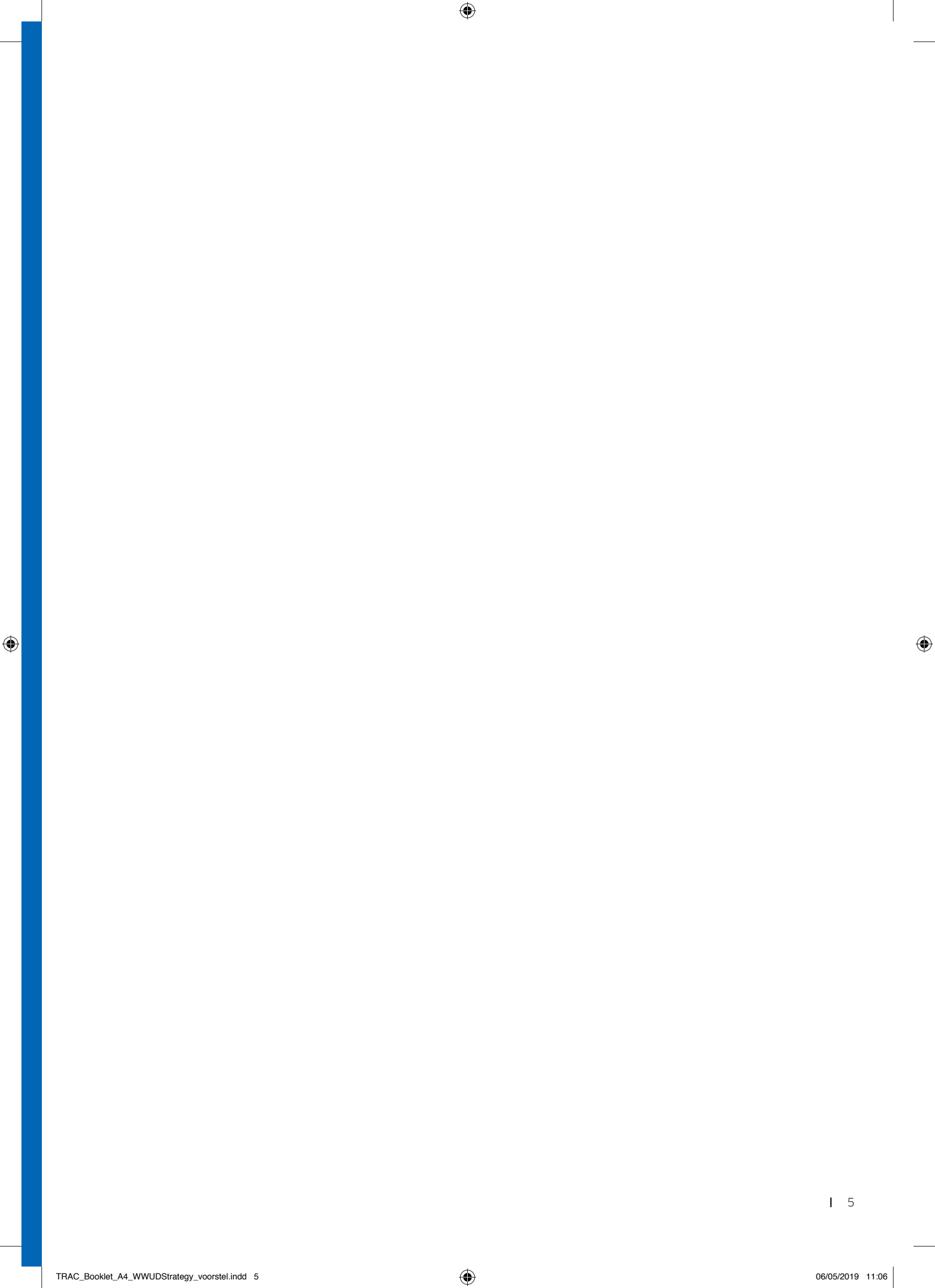
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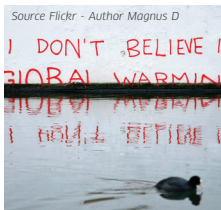
# PART I



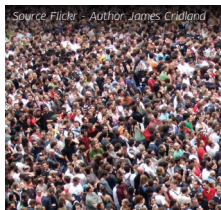


# CONTEXT

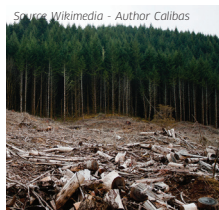
## KEY GLOBAL ISSUES



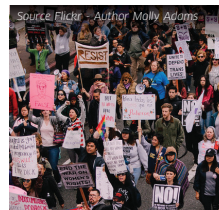
● CLIMATE CHANGE



● DEMOGRAPHIC CHANGES



● RESOURCE SCARCITY



● SOCIAL TRANSFORMATION



● TECHNOLOGISATION



● GLOCALISATION

Designing and managing urban areas has become one of the most important development challenges of the 21st century. **The world is urbanizing on a massive scale and this century will be the century of cities** and urban development. The urban population of the world has grown rapidly from 746 million in 1950 to 4 billion in 2016. Globally, that means over 50% of the population lives in urban areas today. By 2045, it is expected that the world's urban population will increase by 1.5 times to 6 billion.

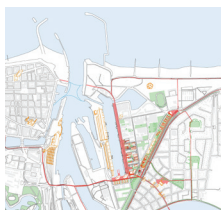
The dilemmas and opportunities presented by this ever-increasing global urban population come together with several **major challenges** such as climate change, resource scarcity, demographic changes, social transformations, technologisation and glocalisation. The complexity of this context urgently demands sustainable development based on integrated designs aligned to current and future urban growth.

While there are challenges, if well managed, cities also offer important opportunities for economic development and for expanding access to basic services, including health care and education, for large numbers of people. Providing public transportation, as well as housing, electricity, water and sanitation for a densely settled urban population is typically cheaper and less environmentally damaging than providing a similar level of services to a dispersed rural population.

# INNOVATIVE TRENDS



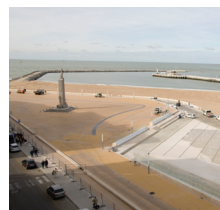
● INTEGRATION



● PROCESS ORIENTED



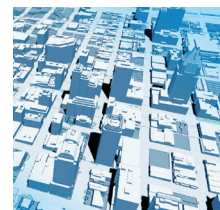
● LOCAL EMBEDMENT



● DISCIPLINES' SYNERGIES



● QUALITATIVE DESIGN



● DIGITALIZATION

Against this setting, several **innovative trends** are emerging and becoming more and more relevant for a successful sustainable urban development:

A mono-dimensional approach to city projects no longer works. The integration of different competencies and expertise has become necessary to deal with the complexity of issues and challenges that cities face worldwide. Synergies between different disciplines is, in this sense, key to unlock hidden potentials and find creative solutions to complex problems.

As urban processes become increasingly complex, with fast-changing evolution of stakeholders, policy governance and political processes, a more process oriented and collaborative way of working is encouraged. Different in-between goals of diverse scale and nature, instead of one blueprint masterplanning approach, open to new and more democratic decision making processes, enabled by digital tools, and allowing a stronger local embedded and bottom-up approach involving a large set of stakeholders from the beginning to the end, are proving successful.

Technology is also changing the way citizens live, move and work. BIM and City Information Modeling tools are emerging and cities themselves are becoming data platforms. As more data becomes available, urban development projects benefit from its exploitation to build new sustainable and liveable cities. For this reason technologies need to be combined with a strong focus on qualitative design in the entire range of elements that compose a city: from infrastructures to public space and buildings.



# WHO WE ARE & HOW WE WORK

TRACTEBEL is a worldwide, multi-disciplinary engineering, consultancy and design firm; a part of ENGIE, a global actor in energy and infrastructure services amongst others, driven by sustainable city development in response to fast growing cities and population expansion.

In the field of Urban Development we deliver services to a wide range of clients, from public authorities, local and regional, to private parties concerned with large scale development, from private industries and corporations to public agencies, from property developers to service providers. Our experts work on a wide range of city-oriented projects, in all global regions, helping our clients find creative and feasible solutions to the complex challenges of sustainable urban development.

In this field, it's our MISSION to actively shape the world of today and tomorrow. Every day we see in our work the urgent need for more sustainable urban development to build a better world for all – and our focussed efforts to become a key partner for city stakeholders and provide state of the art integrated and transversal services for all key city domains, all along the value chain of urban projects, from planning to operational support consulting, supports this.

To provide solutions to key global challenges and represent the needs and interests of cities and citizens, Tractebel has developed an integrated STRATEGY to approach the urban development domain.

This strategy is developed along three main axes: **Attitude, Integrated Competences** and **Integrated Approaches** – the coherence of these three axes being crucial to the development of a shared vision of 'project' approach, sustainable solutions and the achievement of expected outcomes.

**ATTITUDE:** Our values and beliefs underpin everything we do. As consulting experts or city stakeholders, the responsibility we take in shaping a better world is our common ground. We define these in **7 pillars**.

**INTEGRATED COMPETENCES:** When disciplines meet and connect, creative solutions to complex problems are found, turning creative ideas into tangible projects. Tractebel's Integrated Approaches to Sustainable Urban Development rely on **8 Integrated Competences**, combining the diverse skills and expertise of our different sectorial domains (water, energy, mobility, spatial design, policy, and more...) to help our clients meet their objectives.

**INTEGRATED APPROACHES:** Representing a broad spectrum of cities and citizens' needs and interests, our **eleven Integrated Approaches** provide an effective framework to tackle the complexity of issues that cities and territories face today.

# PART II



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# STRATEGY

## THREE STRATEGIC AXES

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ATTITUDE



INTEGRATED COMPETENCES



INTEGRATED APPROACHES

# ATTITUDE



#### HUMANITARIAN ATTITUDE

Be responsible for the construction of a just and equal world

#### STEWARDSHIP OVER THE WORLD AND ITS RESOURCES

Take care of the world addressing climate change and resource scarcity

#### DRIVING CULTURAL RENEWAL

Strengthen the cultural imagination of the cities

#### DESIGN AS A KEY

Use design as a tool to challenge reality and foresee future scenarios

#### COLLABORATIVE

Promote social innovation and democratic decision-making processes

#### GLOCAL MINDSET

Think globally and act locally

#### MAN NATURE

Imagine a fruitful synergy between human beings and nature

Together, these **7 pillars** constitute our **common ground** and shared values. They express the aims for what we strive for and what continues to motivate us, as individuals, as stakeholders, and as an organization. They express **the responsibility we have, and take, in shaping a better world for all.**



# HUMANITARIAN ATTITUDE



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## Be responsible for the construction of a just and equal world

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Urban development needs innovative solutions to be **socially oriented and able to address the emerging trends of cultural divide and increasing inequalities**. In this we stand for values such as **care, wellbeing, respect and responsibility**, both in our organization, for the societies in which we live and work and throughout the relationship with our customers.

#  
innovation  
social usefulness  
care  
respect  
responsibility  
fairness

# **STEWARDSHIP OVER THE WORLD AND ITS RESOURCES**



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## Take care of the world addressing climate change and resource scarcity

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Climate change and resource scarcity force us to **rethink the global resource landscape**. We need to develop innovative projects based on decentralized networks and strategies to **reduce, recycle and reuse** resources. In this respect, it's urgent to strive **for decarbonization**, working towards a low-carbon or zero-carbon energy society.

#  
resource scarcity  
decarbonization  
decentralization  
efficiency  
reduce-recycle-reuse  
innovation

# DRIVING CULTURAL RENEWAL



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## Strengthen the cultural imagination of cities

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City development needs to drive cultural renewal, addressing the fundamental issue of 'how to live together'. We look for new innovative perspectives that strengthen the cultural imagination of the city and **promote creativity, productivity, prosperity, diversity, identity and sense of belonging.**

#  
local culture  
societal imagination  
productive cities  
diversity  
identity  
beyond tourism-recreation

# DESIGN AS A KEY

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## Use design as a tool to challenge reality and foresee future scenarios

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Contemporary cities demand a new design-centred approach able to shape both physical and digital environments. We imagine a process in which theories, practices and hypothesis are constantly tested in a continuous exchange of feedback. We use **design as a helpful tool to discuss and negotiate different perspectives** with different stakeholders. An open field where multiple disciplines, sectors and scales interact.

#  
research by design  
digital  
technological revolution  
design as process  
open field  
multidisciplinary

# COLLABORATIVE



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## Promote social innovation and democratic decision-making processes

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The increasing complexity of our societies challenges us in finding **effective, innovative and democratic decision-making processes**. We look for a collaborative approach, both in our organization and in our relationships with society and our clients. A wide range of tools - including innovative digital platforms - are used to **develop knowledge, create relations in collaborative actions and stimulate decentralized and tailor-made processes and solutions**.

#  
co-creation  
decision-making innovation  
decentralization  
tailor-made  
from a to z  
inclusive strategies

# GLOCAL MINDSET



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## Think globally and act locally

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Cities are major nodes in the globally interconnected system of information, capital and people. There is currently a vast multiplication of the global circuits that criss-cross the world. The richness of local cultures are put under pressure by this globalization. To deal with this complex condition we have to **combine an openness to, and awareness of, the diversity within and across different cultures, with an ability to see common patterns between countries, cities and cultures**. We need to work towards **site-specific** solutions and, at the same time, be prepared to implement best international practices to improve local qualities. We need to think globally and act locally.

#  
diversity  
decentralization  
proximity  
local knowledge  
think globally  
act locally



# MAN NATURE



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## Imagine a fruitful synergy between human beings and nature

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We need to imagine a new relationship between human beings and nature. **Creative practices need to be developed between ecology, engineering and landscape architecture** that reactivate the relationship between man and nature. This attitude focuses on the **design of open and active processes, strategies, frameworks that makes it possible to develop a variety of relations**, to create, connect and differentiate.

#  
new urban nature  
making with  
living matters  
adaptive systems  
design processes  
open strategies

# INTEGRATED COMPETENCES



LANDSCAPE & ECOLOGY

MOBILITY & SPACE

URBANITY & HERITAGE

ENGINEERING & ARCHITECTURE

ENERGY & RESOURCES

ENERGY & MOBILITY

WATER & SPACE

ENVIRONMENT & LIVEABILITY

Specially integrated teams, **combining diverse disciplines and expertise** from our different sectorial domains (water, energy, mobility, spatial design, policy, etc.) create the Integrated Competences needed to address the Integrated Approaches sustainable urban development demands. These Integrated Competences make it possible for new synergies to be identified and achieved in city projects. They also provide **fertile ground for new ideas, inventions and creative solutions** to be fully developed.

# INTEGRATION

## APPROACHES <> COMPETENCES

### INTEGRATED APPROACHES

- TERRITORIAL TRANSITIONS
- URBAN RESILIENCE
- PRODUCTIVE LANDSCAPES
- PLACES OF MOBILITY
- WATER URBANISM
- ECO DISTRICTS
- RECYCLING TERRITORIES
- SMART NETWORKS
- CIVIC ARCHITECTURE
- SUSTAINABILITY @ WORK
- DIGITAL URBAN SOLUTIONS

LANDSCAPE & ECOLOGY  
 MOBILITY & SPACE  
 URBANITY & HERITAGE  
 ENGINEERING & ARCHITECTURE  
 ENERGY & RESOURCES  
 ENERGY & MOBILITY  
 WATER & SPACE  
 ENVIRONMENT & LIVEABILITY

HUMANITARIAN ATTITUDE  
 STEWARDSHIP OVER THE  
 WORLD AND ITS RESOURCES  
 CULTURAL RENEWAL  
 DESIGN AS A KEY  
 COLLABORATIVE  
 GLOCAL MINDSET  
 MAN-NATURE

ATTITUDE

INTEGRATED  
 COMPETENCES

⊕ High engagement  
 ⊕ Medium engagement

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# INTEGRATED APPROACHES

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### TERRITORIAL TRANSITIONS

Transforms territories through spatial and temporal transition strategies and interventions

### URBAN RESILIENCE

Prepares cities and regions for environmental, social, cultural, economic stress and shocks

### PRODUCTIVE LANDSCAPES

Transforms landscapes into productive entities for the city providing food, clean water, energy, biodiversity, fresh air ...

### PLACES OF MOBILITY

Transforms mobility nodes and lines into significant public spaces

### WATER URBANISM

Exploits water as a positive and generative agent for cities and citizens

### ECO DISTRICTS

(Re)develops neighborhoods and districts into sustainable living environments

### RECYCLING TERRITORIES

Re-activates abandoned sites, infrastructures and buildings into vital places

### SMART NETWORKS

Constructs vital synergies between urban systems and networks

### CIVIC ARCHITECTURE

Builds places with a broad cultural added value

### SUSTAINABILITY @ WORK

Makes sustainability tangible and profitable during the entire life of a project

### DIGITAL URBAN SOLUTIONS

Designs services for cities and territories able to monitor, manage and interact with the urban life

These Integrated Approaches address a broad spectrum of **cities and citizens' needs and interests**. They provide an effective framework to tackle the complexity of issues that cities and territories face today.



# TERRITORIAL TRANSITIONS

## Transforms territories through spatial and temporal transition strategies and interventions

### why?

Complex urban projects are crucial for the future of cities and regions: they offer great opportunities for change and development. At the same time they represent a high risk as they can often go off the rails with regard to their environmental-social-economic impact. **The past build-as-usual way of dealing with these complex projects has failed** for many reasons: the engineering mono-dimensional approach, the research of instant solutions, over optimism about the expected results, underestimation of complexity and the top-down approach. **The complexity of contemporary societies and the dominant characteristic of uncertainty we live with question the effectiveness of big infrastructural and urban projects or plans.** The future or direction of major trends in urban development – such as transport transitions (AVs, EV, demand-responsive transport), travel demand, innovation speed (risk of obsolescence), citizen behaviour and technology acceptance – are highly uncertain and difficult to predict. The inclusion of the notion of time and transition is therefore essential for the success of such complex projects today.

### what?

Territorial Transitions is a holistic approach that focus on a **step-by-step transformation of territories and cities.** It can apply to different scales, varying from buildings to infrastructures and urban areas, landscapes and regions. At its core, there is the inclusion of the notion of time in the definition of future spatial strategies and transformations making it a medium to generate both solutions for urgent issues and **new narratives and values for the future.**

Territorial Transitions integrates different disciplines to develop **design proposal or strategies able to deal with uncertainties** (concerning major issues as climate change, economic, demographic, urban developments) **and disruptive changes.**

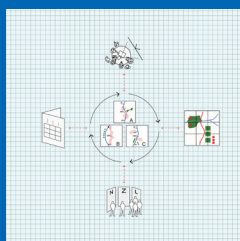
Creative experiments, a trial-and-error attitude, the definition of different spatial scenarios and collaborative workshop with stakeholders and local communities are recurrent elements of our work method related to Territorial Transitions.

*“Different possible scenarios for a spatial transformation of the viaduct B401 are explored in strong collaboration with the city and local communities “*

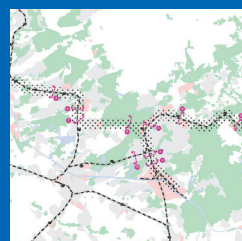
## references



Fly Over B401



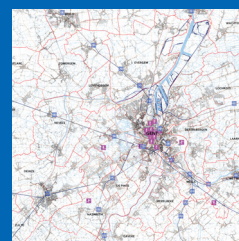
Noord Zuid Limburg



Kolenspoor



N60



Labo Ruimte



# URBAN RESILIENCE

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**Prepares cities and regions  
for environmental, social, cultural,  
economic stress and shocks**

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## **why?**

Today, **54 % of the world's population lives in urban areas**, a proportion that is expected to increase to 66 % by 2050. This makes urban areas the major testing ground for the achievement of a sustainable development (UN SDGs) in which economic growth, social inclusion and environmental protection are ensured.

Yet, **cities are increasingly affected by a wide range of natural and man-made stresses** that could cause important disruptions; social breakdown, economic decline or physical collapse. If well managed, cities offer important opportunities for economic development and for expanding access to basic services, cost effectively spread over a broad population.

## **what?**

Urban Resilience concentrates on the overall capacity of a city to live, adapt and prosper regardless of the recurrent stresses or shocks they encounter.

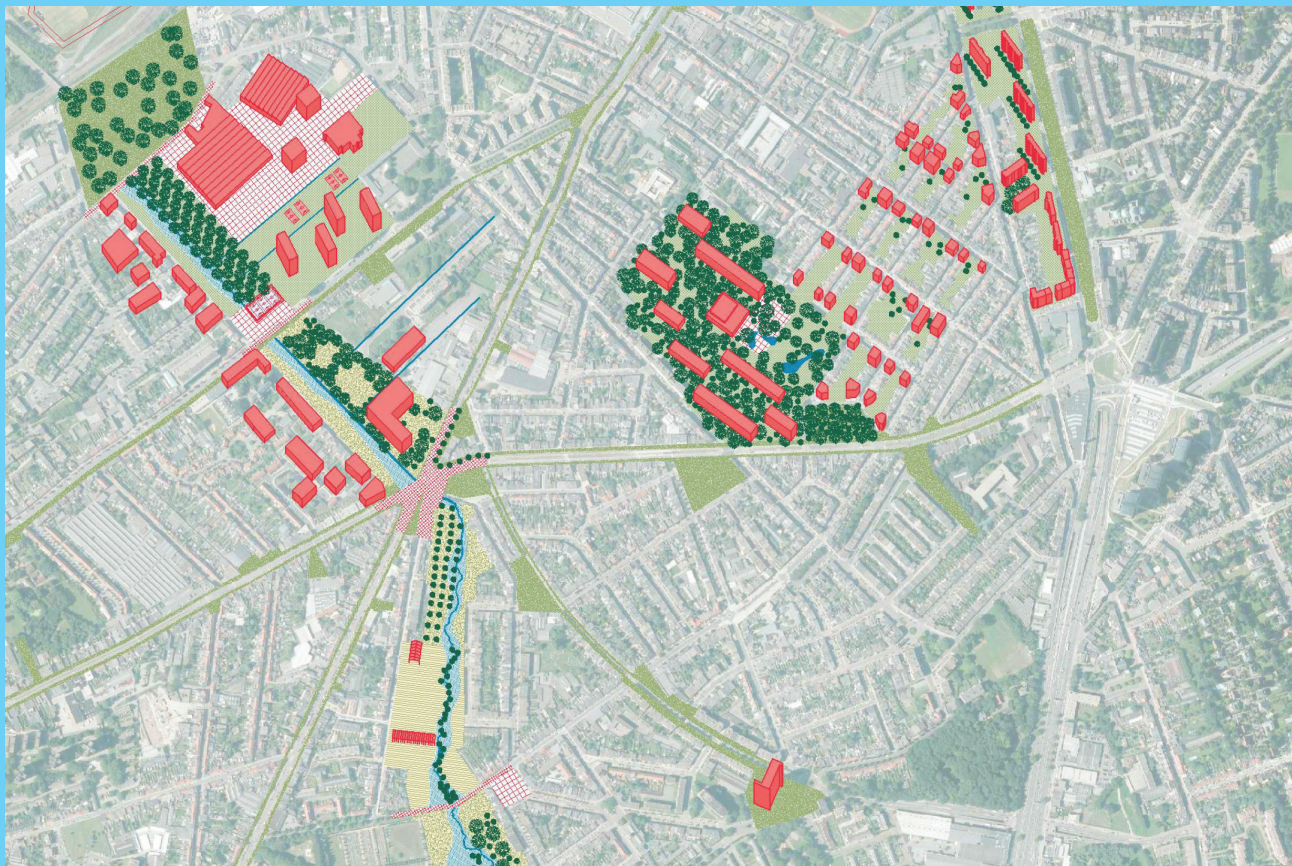
**Urban Resilience takes a systemic approach** that, following the forecasting of the interdependencies and risks that cities (citizens, communities, governance, businesses and systems) may face, provides solutions and strategies to absorb future expected and unexpected shocks and mitigate risks.

Urban Resilience applies to many aspects of urban development **including climate change adaptation, disaster risk reduction, inclusive access to basic services, sustainable economies, governance support, and integrated development planning.**



*“Strategies and guidelines are formulated to translate the issue of climate change in the development of vital and climate resilient cities in Flanders”*

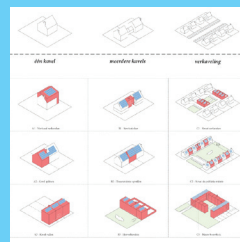
## references



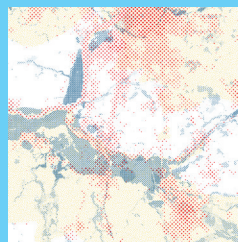
Research by Design on Climate adaptation, Flemish Region



AUDI Energy optimization



Climate Adaptation Study, Belgium



Climate map, Flemish region



# PRODUCTIVE LANDSCAPES

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**Transforms landscapes into productive entities for the city providing food, clean water, energy, biodiversity, fresh air ...**

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## **why?**

**Due to the effects of climate change** (flooding, heat stress, massive pollution, degrading of biotope), **energy scarcity and unsustainable strategies in the field of production** (energy, food, waste) **it is necessary and urgent to develop new productive landscapes** fostering local economies. The percentage of land assigned to food production is predicted to reduce by 8-20 % by 2050 due to land degradation, urban expansion and the use of agricultural land for the cultivation of non-food crops such as biofuels. Within the same period, yields will be reduced by 5-25 % due to climate change, soil erosion, increase of pathogens, weed and insect infestations and water scarcity. The future challenge is to design new living landscapes with interconnective features able to respond to the fundamental necessity of production. We need new productive methods, rituals and solutions that will enable us to live within our environment.

## **what?**

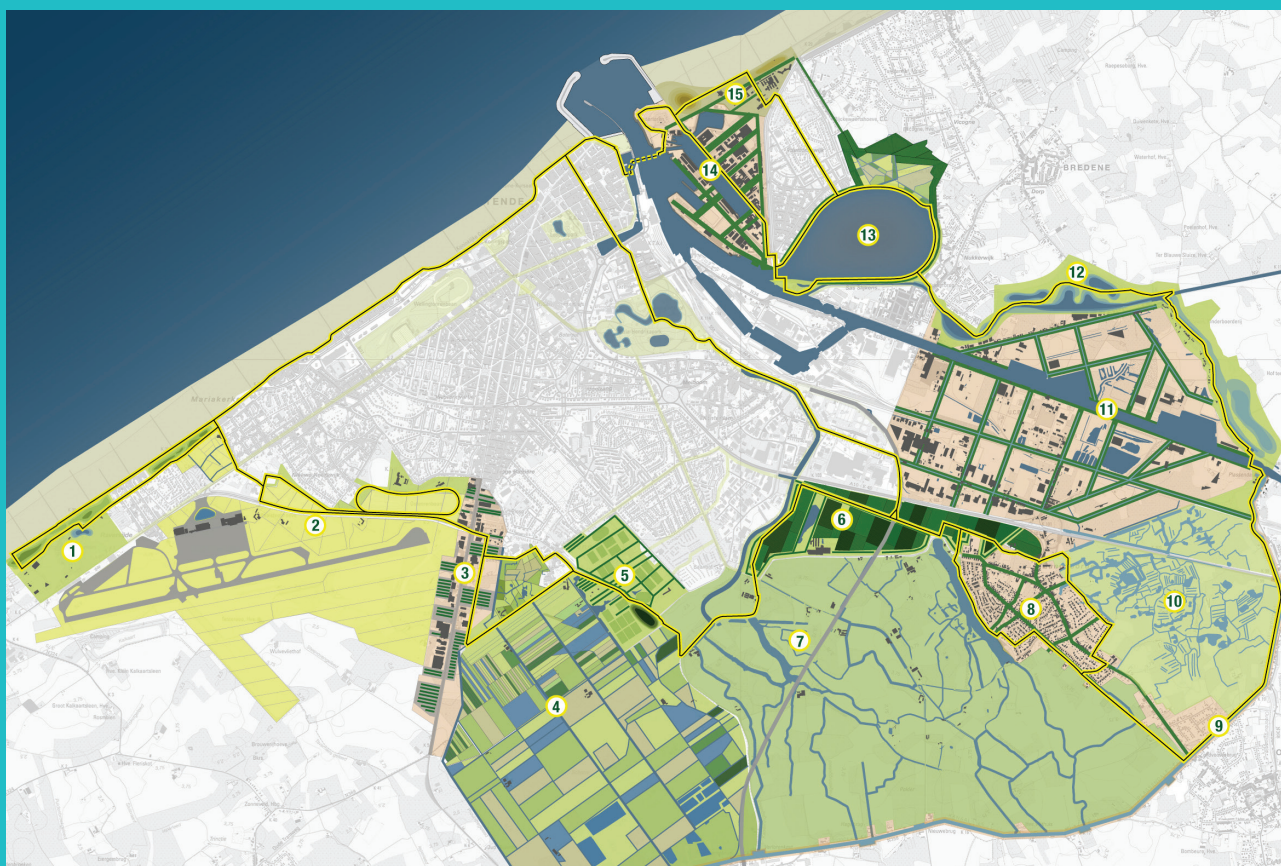
Productive Landscapes deals with the (re)development of (urban)landscapes by giving them a productive quality: solving issues related to climate change adaptation, carbon sequestration, biodiversity, energy production, fresh air, clean water, healthy soils, food production.

**Productive Landscapes provides a wide range of products and (ecosystem) services fulfilling the social, economic and environmental requirements of present and future generations at the local, national and global level.** Productive Landscapes can be applied on different scales: from regions to cities and neighborhoods.



*“The peri-urban fringe of the city of Ostend is transformed into a diverse productive landscape giving space to urban agriculture, water retention, ecological areas”*

## references



Groen Lint, Oostende



Tuinen van Stene, Ostend



Open space strategy, Kortrijk



Stiemberbeek, Genk



Gentbruggemeersen, Gent



Sigmacluster, Bonheiden





# PLACES OF MOBILITY

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## Transforms mobility nodes and lines into significant public spaces

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### why?

Mobility as we know it is about to change. **Combustion propelled vehicles will be replaced by clean, zero emission substitutes. Individual controlled vehicles will be replaced by autonomous vehicles and collective transport.** Traditional models of ownership are changing, and platform based, peer-to-peer services are emerging. Soft, Sharing and **Seamless mobility are trends that spell great change for mobility sectors.** Infrastructures will change accordingly. However, mobility will remain a catalyst for urban development and the places of transit will become more and more fundamental in the cities of tomorrow.

### what?

Places of Mobility refers to high quality urban places, nodes of outstanding mobility in an urban or regional transport network. **The complexity of the mobility landscape of the future requires a specific focus on places able to integrate new forms of mobility** (autonomous and/or electrical vehicles, collective transport with flexible routing, shared transports), in the urban environment while enhancing a strong urban experience. Spatial planning is seen as a medium to steer and guide the mobility transition towards new sustainable transport patterns and mobility demand.

Places of Mobility integrates different disciplines to design cities, territories and infrastructures able to **deal with the mobility issues in a creative, integrated and healthy way.** Places of Mobility can be applied on different scales: from regions to cities and neighborhoods.

*“The introduction of new tram lines in the urban fringe of Brussels is used as an opportunity to introduce new significant, public places/ spaces”*

## references



Brabant-net, Flemish Brabant



Station, Ieper



Urban Plateau, Turnhout



Station, Wetteren



Plug my car, Worldwide



# WATER URBANISM

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## Exploits water as a positive and generative agent for cities and citizens

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### why?

The challenges brought by **growing populations, the ever-expanding reach of urbanization and climate change** (water supplies needs, drought and flooding, storm waters and basin management) ), as well as **the use of water for massive energy production, make water an essential issue in the future.**

The fact that rivers are often transnational or even transcontinental structures makes water a possible issue of conflict. The use of water in one country has an impact on the presence of water in another country and can influence flooding or drought. Already today there are conflicts between for instance China and India for the Brahmaputra River or between Turkey, Syria and Iraq for the Euphrates River. New international efforts are needed to protect water as a common resource for all.

### what?

Water Urbanism can provide sensitive and resilient solutions to these challenges, effectively designing self-sustaining urbanized environments.

Water Urbanism concentrates on water as the main agent in the process of development of human settlements, from neighborhoods to cities and territories - **water being understood as a common resource, a need, a potential threat and an opportunity.** Water urbanism integrates different disciplines to design cities, territories and infrastructures able to deal with water issues in a natural, integrated and socially equal way.

Water Urbanism applies to many aspects of urban water management including **reliable access to clean water, flood protection, coastal protection, ground water protection, design for climate-sensitive areas, land and water based natural systems.** Water Urbanism demands per se a territorial approach.



*“The upgrade of the coastal defense is combined with the creation of a vital public space”*

## references



Zeeheldenplein, Oostende



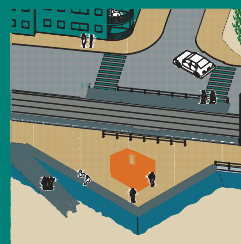
Open up Demer, Diest



Leiedoortocht, Wervik



Materialenkaai, Brussels



Coastal defense,  
Raversijde



Water canal,  
Brussels Charleroi



# ECO DISTRICTS

**(Re)develops neighborhoods and districts into sustainable living environments**

## why?

Due to the effects of population growth, climate change, resources and space scarcity a new approach for the (re)development of city districts is necessary. These **global trends threaten the stability of life in metropolitan regions and push cities to search for innovative and sustainable urban solutions**. A more sustainable approach is already present in the development of new districts (residential, industrial).

The biggest challenge now is to upgrade existing districts and neighborhoods to achieve higher performance on the level of energy efficiency, water use, diminishing health stress.

## what?

Eco Districts can provide sensitive solutions to these challenges, effectively designing and re-designing self-sustaining and climate-adaptive urbanized environments.

Eco Districts refers to the (re)development of sites within a city aiming to apply the principles of sustainable development at the scale of a neighborhood. Eco districts are **(partly) self-sufficient green neighborhoods and buildings in the city**. They are conceived **as climate adaptive environments, characterized by local or decentralized energy supply and a low (zero) ecological footprint**.

Eco districts offer a way to test and apply high-impact, district-scale sustainable projects and public-private partnership that drive experimentation and innovation.

*“A functional, transparent and compact building with a glass ‘bioclimatic skin’ that helps achieve greater energy performance”*

## references



RTBF, Brussels



Kingdom City, Jeddah



Vloerstraat masterplan,  
Antwerp



Eco Quartier, Tournai



Tivoli, Brussels



# RECYCLING TERRITORIES

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**Re-activates abandoned sites, infrastructures and buildings into vital places**

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## why?

The rapid rate of urbanization of the last decades has resulted in a massive expansion of urban territories. This process lead to the **destruction of green fields and the abandonment or degradation of outdated sites in cities**. These sites include both badly polluted brown fields (old industrial sites) as well as urban neighborhoods with an obsolete building fabric or infrastructural assets. They represent a **potential threat to the health and well-being of the inhabitants and the environment**.

The high recycling cost can only be cost-efficient and culturally relevant when the redevelopment is integrated into a broader strategy of transformation considering their site-specific spatial, ecological and socioeconomic dimensions.

## what?

Recycling Territories focuses on the processes behind the redevelopment and re-territorialisation of human settlements, from neighborhoods to cities and territories. It's **an essential point of view that cross-scales and thematically addresses contemporary urban questions surrounding the environmental and social crisis**.

Recycling Territories integrates different disciplines to develop site-specific strategies, projects and tactical actions that foster the re-activation of the site as a valuable part of the city.

Recycling Territories applies on many aspects of urban development projects including **brown-grey-green fields' development, soil-water-air remediation, design for climate-sensitive areas, energy strategies, water management in site redevelopment projects**.



*“A polluted site is reclaimed and transformed into a vital urban park integrating remediation strategies and landscape design”*

## references



Zigh Lake, Baku



Boyukshor Lake, Baku



Spoor Oost, Antwerp



Nieuw Gent, Gent



IGLO masterplan,  
Antwerp



Heritage harbour,  
Antwerp





# SMART NETWORKS

## Constructs vital synergies between urban systems and networks

### why?

A city is made up of different infrastructures, a system of systems. **Current infrastructure elements typically operate in a mono-dimensional way**, solving separate issues related to specific topics (water, waste, mobility). This old approach is challenged by issues cities are now experiencing due to unprecedented urbanization, the effects of climate change, scarcity of resources and energy transition. Over the last few decades these challenges have become the driver for an increasing cultural and environmental interest in networks, leading to more and more integrated solutions for infrastructural projects. There is an urgent need for new ways to ensure the optimal use of the current resources, improve system and network performance and bring more innovative and culturally robust solutions.

### what?

Smart Networks is based on **a system of integrated multifunctional devices dealing with the metabolism of the city: the interaction of the rich and diverse flows of the city: people, waste, water, energy, goods, animals, plants, air**. Using **technology and design as an enabler**, Smart Networks use data and space intelligently to ensure the best use of resources, to boost performance and to tangibly improve the way people live, work, move and play in cities.

Smart Networks integrates different disciplines to design, foresee and exploit new or unexpected synergies. For example, Smart Networks **combines mobility with climate adaptation, sewage water collection with energy production, rainwater harvesting with drink water supply, parking places with food production, new infrastructures with new landscapes**.

*“The realisation of the Missing Link A11 creates a new landscape with connections between non-motorised traffic and ecological corridors”*

## references



Missing link A11, Brugge Knokke



North South Kempen,  
Geel



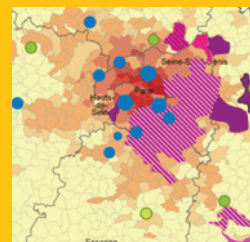
Brabantnet,  
Woluwe-Diegem



SubicSolar & Wind,  
Philippines



Green H2, Chile



100% RES Vision,  
Ile de France



# CIVIC ARCHITECTURE

## Builds places with a broad cultural added value

### why?

Civic architectures and public spaces are vital and primary structuring elements in cities. **Streets, squares, promenades, boulevards, public parks and gardens, buildings, like schools, city halls, hospitals... and public structures, like bridges, tunnels, market halls and pavilions... are all key civic architectures. Civic architectures are** – when well developed – **true democratic places that support local cultures and economic life.** They are the place where a rich civic culture can flourish, where people can interact, encounter and relate to each other. They are crucial places where the collective consciousness of the city is produced.

Today's public spaces are increasingly more controlled and even privatized. The use of public spaces and civic architectures in the cities is also challenged by the effects of climate change (heat-stress, flooding, etc...) or massive (mainly air) pollution. These trends present an issue in relation to the democratic character of public spaces and a threat to their functionality and meaning. **Civic architectures are key in conveying the way we want to live: how we live together, how we relate to nature, how we work and recreate.**

### what?

Civic Architecture resists the above mentioned threats. It focusses **on improving the relation between people and society, between man and nature, enabling the city to become a better-oiled machine for social integration, environmental consciousness and for welfare-wellbeing distribution.** Civic Architecture acts as a catalyst for entrepreneurship, social cohesion and cultural renewal.

The development of civic architectures in cities needs to be sensitive in relation to their context and **open to the appropriation and transformation by its users.** Walking, cycling, playing, cooking, gardening, resting, debating, for example are important activities that need to be accommodated in these public spaces. The urban fabric, the inhabitants and the public program define the daily use and the needs and potential of the site. Civic Architecture integrates different disciplines to design places and structures able to deal with the issue of 'how to live together' in an open, creative, integrated and socially equal way.



*“A large parking lot is transformed into a green heart for the city,  
a vibrant public space created to accommodate a diversity of uses”*

## references



Dokzuid, Antwerpen



Muntplein, Brussels



Passerelle,  
Gentbrugse Meersen



Kortrijk Weide, Kortrijk



Markt, Lokeren



Hendrikapark, Ostend



# SUSTAINABILITY @ WORK

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**Makes sustainability tangible and profitable during the entire life of a project**

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## why?

Sustainability is often perceived as an abstract, somewhat theoretical concept. Nevertheless, sustainability is becoming a key issue in all development plans and projects. **The future focus will be on making sustainability tangible and profitable in all project's phases.** Integrating sustainability will engender better environmental results and create a broader support and more security (financial, procedural and legal).

## what?

Sustainability @ work concentrates on sustainability as the main aspect in the process of development of human settlements, from neighbourhoods to cities and territories. Sustainability is considered as an ultimate ambition within urban developments: **a needed shift from existing schemes (production-consumption-disposal) to new models that enable communities to live in harmony with the environment.**

Sustainability @ work takes into consideration the economic, social and environmental advantages of applying circular principles and processes during the entire life of a project. Sustainability @ work develops **strategies and actions to regenerate and restore natural capitals, maximise resource usage, reduce consumptions, optimise performances, recycle materials and products, virtualise services** and more. Integrating sustainability in plans and projects is not a cost, it's an investment.

Sustainability @ work applies to all the aspects of development projects, from (policy) planning to realisation, focusing on quality and sustainability throughout the full process.



*“Transforming a neglected historical landscape into a productive park for the city in which local food production, water retention, ecological optimization and recreational facilities are combined”*

## references



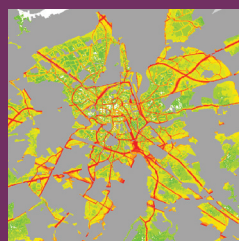
“ Transforming a neglected historical landscape into a productive park for the city in which local food production, water retention, ecological



Coastal Urban System,  
Belgium



Climate Spatial Planning,  
Belgium



Air quality mapping,  
Belgium



FALCO



# DIGITAL URBAN SOLUTIONS

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## Designs services for cities and territories able to monitor, manage and interact with the urban life

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### why?

The digitalization of urban culture and of public and private sector and industries brings with it new issues and possibilities for digital design, architecture and planning.

**Technology innovation and the increasing availability of data regarding city life patterns, provide means to solve global-local challenges** (density growth, resource scarcity, climate change, etc.) and to shape a more efficient, inclusive, healthy and user-centered city. As digital is transforming all aspects of people life, **cities are increasingly willing to develop digital solutions as interface with their citizens: a way to improve their service performance, citizens' engagement and quality of life.** They are however facing the challenge to deal with these new technologies and seek support in selecting appropriate solutions and designing the associated services.

### what?

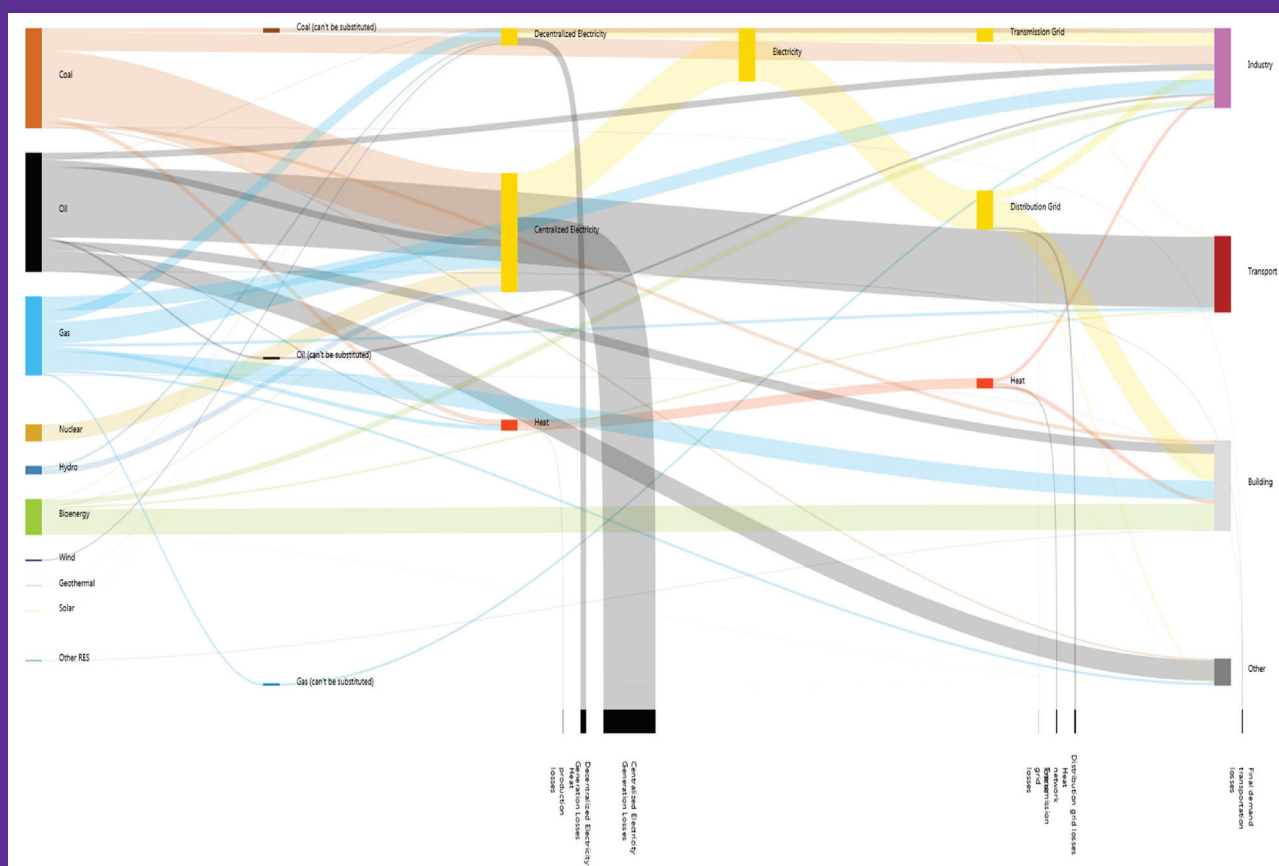
Digital Urban Solutions focuses on digital as the key lever to support the development of human settlements, from neighborhoods to cities and regions.

Digital Urban Solutions integrates different disciplines using digital infrastructures (from IT systems to platforms) to design services for cities and territories able to monitor and manage or interact with urban life in a creative, efficient and citizen-centered way.

Digital Urban Solutions apply to many aspects of urban development from **integrated urban planning, to the development of new services platforms** leveraging on the opportunities offered by technologies such as **real time urban data management and optimization, 3D visualization**, etc. Among the new urban services enabled by digital we find citizen engagement, traffic-waste-energy-water management applications, forecasting and decision support systems, cooperative management tools and more.

*“A tool to visualise quantitatively energy scenarios at any territory scale and the implication of energy strategy decisions through indicators like energy consumption, CO2 emissions...”*

## references



Energyviz



Plug My Car



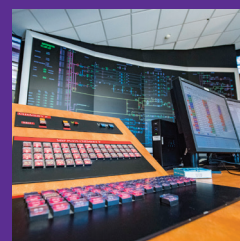
PlanGridEV



Pentagon simulation tool



EYES tool



SCADA Distribution Network





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