



TRACTEBEL

ENGIE

URBAN RESILIENCE

Urban Development

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

Tractebel is a worldwide multidisciplinary engineering, consultancy and design firm working on a wide range of projects in geographies around the world. Every day our teams of engineers, consultants and designers feel the need for a more sustainable urban development to build a better world for all, today and in the future. Therefore we developed together 11 integrated approaches for cities and territories; they represent the needs and interests of cities and citizens and aim to provide solutions to key global challenges.

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.**



Climate adaptation study on Flemish Region

Strategies and guidelines are formulated to translate the issue of climate change in the development of vital and climate resilient cities in Flanders. This study researches the link between climate adaptation and spatial organisation of cities and urbanized areas.



Strengthening Climate Change Resilience, Raipur and Kakinada (India)

Advanced climate risk and vulnerability assessments were conducted to improve the urban infrastructure and services in the selected cities.



Sigma flood protection plan, Belgium and The Netherlands

The purpose of the Sigma plan is to better protect Flanders from flooding of the river Scheldt and its tributaries, and at the same time give the valuable nature of the river a boost. The Sigma plan is about security, nature, recreation and economy.



Climate adaptive mobility system for Brussels 2040

Define future evolutions of mobility and accessibility up to 2040, taking into account population evolution, displacement patterns, changing modes of transport and impacts of climate change.

10 other integrated approaches to discover

- Territorial Transitions
- Productive Landscapes
- Places of Mobility
- Water Urbanism
- Eco-Districts
- Recycling Territories
- Smart Networks
- Civic Architecture
- Sustainability @Work
- Digital Urban Solutions