



# CONFÉRENCE CONSTRUCTION DURABLE POUR DES VILLES RÉILIENTES

—  
SÉRIE DE DÉVELOPPEMENTS TECHNOLOGIQUES AU LIST

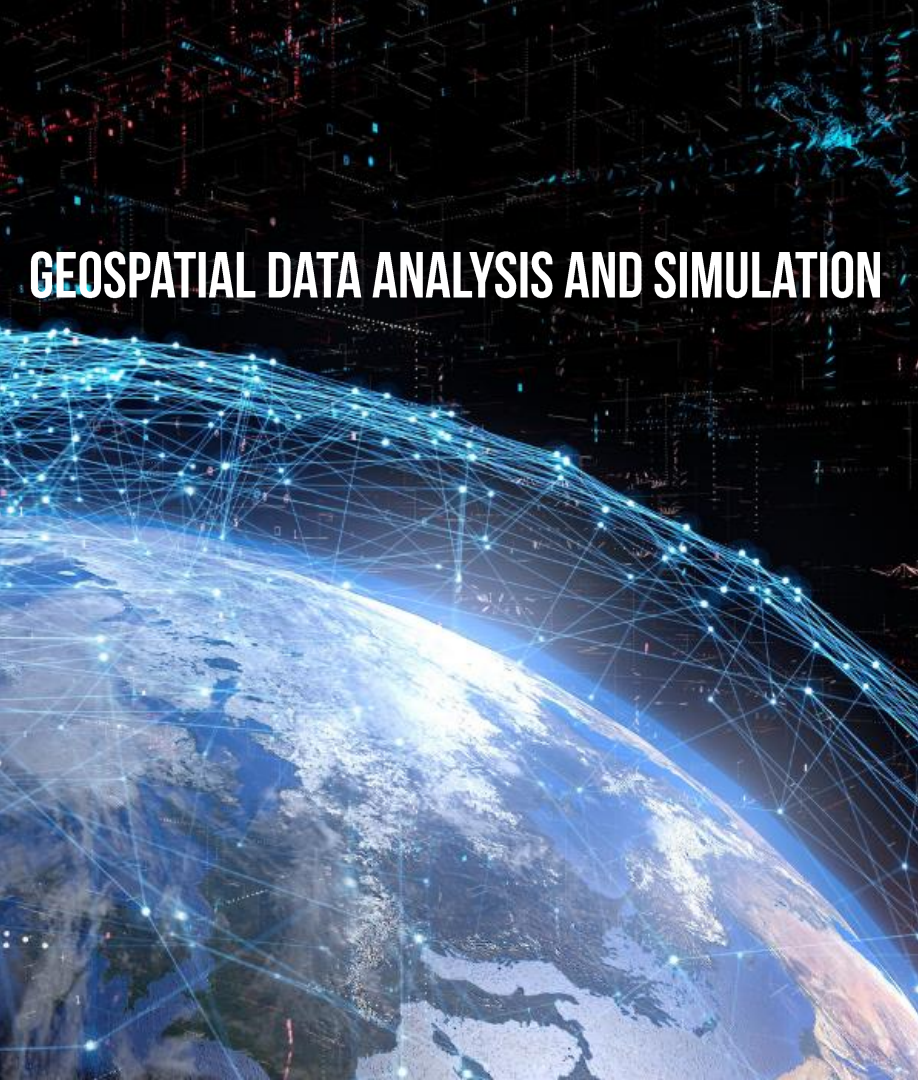
# TOOLBOX FOR PLANNING, SIMULATION AND ASSESSMENT OF DECARBONIZATION STRATEGIES

## Our objectives

Improve **urban planning** and **design processes**  
in order to enable **informed decision**  
to transform the territory into a **smart and sustainable** territory

**Geospatial data analysis  
and simulation**

**Collaborative design  
of sustainable districts, cities, regions**



## GEOSPATIAL DATA ANALYSIS AND SIMULATION

To allow people who are unfamiliar with **urban planning** to comprehensively **visualise** and **manipulate** complex concepts related to city and territory management

**Results:** a set of tools/assets:

- Core platform for the development of urban and regional spatio-temporal decision support tools (**iGuess**)
- Ecosystem services of nature-based solutions (**NBenefit\$**)
- Urban Digital twin (**Luxemverse**)



Augmented Reality

## MAIN TOOLS

- Managing Urban Space Together (**MUST**)
- Development of digital tools for managing energy communities



**COLLABORATIVE DESIGN OF SUSTAINABLE  
DISTRICTS, CITIES, REGIONS**

# DIGITAL TOOLS FOR SUSTAINABLE CONSTRUCTION AND DECONSTRUCTION

## Our objectives

To reduce both  
the quantity of **energy** to provide **comfort** for occupants (energy efficiency),  
the quantity of **resources** to construct or refurbish built assets (resource efficiency).

Smart solutions for sustainable,  
healthy yet comfortable buildings

Digital tools  
for optimized resource-efficiency  
of construction and deconstruction phases



# SMART SOLUTIONS FOR SUSTAINABLE, HEALTHY YET COMFORTABLE BUILDINGS

## MAIN TOOLS

- Inhabitants comfort and wellbeing
- Architectural design optimization
- Energy Renovation
  - Energy poverty platform
  - BIM enabled LCSA
- Energy performance certificates : EPC & SRI

## MAIN TOOLS

- Digital tool for a construction logistics supplied by a CCC ([TwiSCo](#))
- Digital tool to improve raw material sorting by In-situ construction waste identification through Machine Learning ([IRMA](#))
- Deconstruction:
  - Digital Deconstruction Platform
  - Inventory for deconstruction based on AI models

## DIGITAL TOOLS FOR OPTIMIZED RESOURCE-EFFICIENCY OF CONSTRUCTION AND DECONSTRUCTION PHASES





# SNEAK PEAK

- Europe's #1 destination for EU research collaboration and market opportunities
- #12<sup>th</sup> edition organised by LIST, September 2024 Luxembourg
- For more info

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