



#5DATA MURAL



THE CHRONICLES OF THE GEOMATICS GUILD

The Géo Évènement, hosted annually by Esri France, showcases the potential of Geographic Information Systems (GIS) technology. As a leader in GIS solutions, Esri provides tools like ArcGIS for managing and analyzing geographic data. The event unites professionals from various sectors—urban planning, environmental management, and more—to share innovations that address global challenges such as climate change and resource management.

Participants engage in sessions featuring user presentations, technical workshops, and demonstrations of advanced solutions like AI integration and 3D modeling. Keynotes from experts highlight GIS's societal impacts, discussing topics like policy improvement and crisis management.

The event fosters community with networking spaces and a two-day program of interactive activities designed for hands-on learning. Social interactions, like family-friendly evening gatherings, enhance the experience. Overall, the Géo Évènement combines technical discussions, practical demonstrations, and networking, making it essential for GIS professionals and the largest francophone gathering dedicated to geospatial solutions.



KITS FOR WORKING ON DIGITAL MODELS, WELL- BEING, AND CITY DATA

Inspired by the Methodkit, a Swedish design thinking tool for exploring urban and housing challenges, we have developed kits dedicated to the themes of the day: reaching out to big data solutions in a human scale overview. At the same time, our teams have designed tools to stimulate imagination and facilitate understanding of data collection, processing and production.



THE TOOLS



4H

CASUAL & COLLECTIVE

THE FORMULA

1 COFFE, 1 DISCUSSION, 1 CREATION

Objective of the day: understand the issues specific to sectors, locations and / or communities and identify the tools and institutions able to answer to those needs.



BUILDING SMARTER CITIES THROUGH DATA:

A COLLABORATIVE APPROACH TO URBAN CHALLENGES

During the workshop, attendees used problem-oriented cards to explore urban challenges, promoting discussions on data models and the coherence of datasets. This hands-on approach fostered collaboration and emphasized data literacy for urban planners and decision-makers.

A notable aspect was the involvement of researchers from the Ville Durable et Bâtiment Innovant France 2030 program, who shared insights on big data and advanced analytical tools. This engagement highlighted how research can benefit territorial projects.

The workshop underscored the importance of urban data in creating resilient environments, enhancing awareness of urban data challenges, and encouraging collaboration among diverse stakeholders to improve urban planning practices.

The workshop was structured in three key phases:

- **Problematisation:** Participants explored questions surrounding sustainable and inclusive cities, engaging in discussions about the challenges and opportunities inherent in urban development.
- **Characterization of Datasets:** The focus shifted to identifying and characterizing the datasets that can effectively measure the progress towards sustainable and inclusive urban environments. This involved assessing data availability, quality, and relevance to the posed questions.
- **Mapping with ArcGIS:** Finally, the workshop introduced the use of ArcGIS as a powerful tool for visualizing and analyzing urban data. Participants learned how to leverage this platform to create impactful maps that can illustrate the dynamics of urban sustainability and inclusivity.

This structured approach facilitated a comprehensive exploration of urban challenges, emphasizing the integration of data analysis in urban planning.

Let's see about some of the people that worked on our mural on that day!

- The participant focuses on the legacy of the Paris 2024 Olympic Games, particularly in terms of the sports infrastructure left for young people and its accessibility. The central question is how these Games will help bring young people closer to sports facilities in a city where access to nature and outdoor activities, like cycling, is often limited by distance.

One of the key issues raised is the creation of accessible sports infrastructure to bring sports closer to residents and promote a healthy lifestyle post-Games. This is particularly relevant in a dense city like Paris, where outdoor spaces are often scarce.

The participant mentions the use of urban data, especially from platforms like Open Data Paris, to analyze the effects of the Games on sports facility accessibility. This data can be used to:

- Map the proximity of sports facilities before and after the Games.
- Analyze changes in the usage of these facilities.
- Study the impact of the Games on youth engagement in sports.

- The idea is to reassess the legacy of the Olympic Games a few years after they are held, using this data to measure their impact and better plan future editions, especially for the 2030 Olympic Games.

THE OLYMPICS LEGACY !



LISTEN TO HIS
TESTIMONY!



CONNECTING A WORLD EVENT TO THE
CONSEQUENTIAL LOCAL CONCERNS

Let's see about some of the people that worked on our mural on that day!

- The participant addresses two main areas in urban mobility analysis: cycling in the city and the urban walking program. Both initiatives aim to promote active mobility within urban environments. For cycling, the goal is to optimize bike distribution at sharing centers by studying bike mobility between availability sites, demand density, and travel times across the Greater Paris area. The use of open-source data, such as hygiene data and population maps, is essential to better understand population density and adjust bike availability accordingly.

The second area focuses on urban walking to encourage short-distance walking trips. This analysis requires real-time GPS data to track routes, monitor traffic and road conditions, and analyze travel times. The participant also emphasizes the importance of considering meteorological factors to assess walking and cycling conditions, determining whether the conditions (temperature, road state) are optimal for these active transportation modes.

- The tools identified for this analysis include ArcGIS modules such as ArcGIS Urban for 3D modeling, ArcGIS Navigator for route tracking, and ArcGIS GeoBeam for high-quality urban planning.

CYCLING AND WALKING THROUGH THE CITY



LISTEN TO HIS
TESTIMONY!



A CITY SUITED
NOT JUST FOR CARS.

Let's see about some of the people that worked on our mural on that day!

- The participant, a professional landscape designer, focuses on urban development, highlighting key themes related to public spaces, urban health, and sustainable stormwater management. The main urban issues identified include the role of public squares, urban walking paths, shared gardens, and water management. These elements are viewed as essential to improving public health, which he considers a central concern in urban planning.

From a data perspective, the participant faces challenges in accessing relevant datasets, especially for topics like sustainable stormwater management and urban gardens. Mentioned data sources include:

- INSEE to measure activity on public squares and urban walking programs.
- BRGM for stormwater management data.
- Météo France for meteorological data, particularly relevant to stormwater management, though he notes this data is often tabular and requires significant processing.

The challenge lies in integrating multi-source data (national initiatives, scientific data) and ensuring its accessibility for urban planning. The participant also notes a gap in audiovisual data, which could enhance visualization and explain urban planning decisions, especially regarding public health and sustainability.

RAIN IN THE CITY



LISTEN TO HIS
TESTIMONY!



FROM CLOUDS TO CONCRETE,
MANAGING RAIN IN URBAN AREAS.

Let's see about some of the people that worked on our mural on that day!



The participant highlights three interconnected pillars in urban projects: urban planning and mental health, citizen participation, and heritage renovation. These aspects are unified by the belief that cities should be designed for citizens, with their involvement being crucial for creating living spaces that foster mental well-being and social cohesion.

Urban Challenges

- **Mental Health and Urban Planning:** The effects of urban design on mental health are often underestimated but increasingly evident. Factors like noise, public space quality, and the built environment significantly impact mental well-being.
- **Citizen Participation:** Involving residents in city-building is essential to ensure projects meet their needs and create livable spaces. Without inclusion, projects risk failing to function effectively.
- **Heritage Renovation:** Preserving heritage is vital to safeguard history and collective memory, while also serving as a foundation for future projects.

The participant utilizes various data sources to address these challenges:



- **data.gouv and local government portals:** These provide urban data on infrastructure, public spaces, and citizen initiatives.
- **CREMA:** Urban surveys offering valuable insights into city life quality.
- **Noise Capture:** An urban noise measurement tool crucial for assessing its impact on mental health.
- **Archis:** Tools that process and transform data into accessible formats, facilitating citizen participation and transparency in urban management.

The goal is to leverage this data to engage citizens in decision-making, making results understandable and actionable to enhance urban quality of life.

HAPPILY LIVING IN THE CITY



LISTEN TO HIS TESTIMONY!



ADDRESSING THE CHALLENGE OF A HEALTHY ENVIRONMENT FOR HUMANS.

Let's see about some of the people that worked on our mural on that day!

○ The participant addresses the challenges linked to digitizing services for seniors within policies aimed at supporting aging in place and promoting intergenerational inclusion. The primary obstacle is that current technologies do not adequately meet the needs or digital habits of older adults.

- Digital Inclusion for Seniors : While digital services can be beneficial, they are often not adapted for seniors, who struggle with usability and comprehension. This digital divide hinders their access to essential services and rights.

- Technology Adaptation : Developing digital tools specifically tailored to seniors, supported by digital mediation programs, is crucial for meaningful engagement.

- Intergenerationality : Strengthening intergenerational interaction through projects like story maps helps familiarize seniors with digital tools while sharing the history of their community, enhancing their engagement and inclusion.

The participant emphasizes the importance of demographic data to assess the impact of digital policies on seniors and adjust public strategies. This data enables:

- Tracking evolving needs for digital services among seniors.

- Tailoring programs to better include this population in technology use.

○ Using open-source story maps creates a bridge between generations, teaching seniors how to use technology while valuing their stories. This helps facilitate access to more complex services, like digital forms or administrative tools.

A QR code is displayed on a white background. Overlaid on the bottom left of the QR code is the text "LISTEN TO HIS TESTIMONY!" in a bold, black, sans-serif font. The word "TESTIMONY!" is on a new line and is larger than "LISTEN TO HIS". The text is slightly tilted to the right.



A circular logo with a dark blue border. Inside, the words "DATA SOURCE" are written in a dark blue, sans-serif font along the top arc, and "PURE CREATION" is written along the bottom arc. In the center, there is a stylized illustration in a reddish-orange color of a pencil pointing upwards, surrounded by three interlocking gears. Two small red dots are positioned on the left and right sides of the circle, separating the top and bottom text.

Shaping Tomorrow's Cities: Data-Driven Solutions for Urban Innovation







THE STRENGTH OF OPEN DATA

Open data is a key asset for advancing sustainable urban development and improving the quality of life in cities. By providing transparent access to data, it allows urban planners, policymakers, researchers, and citizens to collaborate on addressing challenges such as transportation, air quality, and infrastructure management. Through the use of open data, cities can optimize resource allocation, promote transparency, and ensure data-driven decision-making. For example, platforms like Open Data Paris provide valuable datasets that can be analyzed to improve urban planning and enhance public services.

An illustrative tool on this topic is NoiseCapture, developed at Université Gustave Eiffel. This participatory app allows citizens to record geolocated noise data, which is then shared to map and analyze noise pollution in urban areas. By collecting and integrating this data, cities can develop quieter, healthier living environments, addressing one of the many aspects of urban well-being that open data can impact. Overall, open data enhances collaboration and drives innovation in making cities more sustainable, livable, and responsive to citizens' needs.

TO EXPLORE THE THEME AND OPEN NEW HORIZONS

1. United Nations Sustainable Development Goals (SDGs)
 - Link : <https://sdgs.un.org/goals>
2. European Environment Agency (EEA) – Urban Adaptation to Climate Change
 - Link : <https://www.eea.europa.eu/publications/urban-adaptation-to-climate-change>
3. World Bank Group – Data-Driven Urban Development
 - Link : <https://www.worldbank.org/en/topic/urbandevelopment>
4. World Health Organization (WHO) – Urban Green Spaces and Health
 - Link : <https://www.who.int/sustainable-development/cities/health-risks/urban-green-space/en/>
5. Esri White Papers on Urban Planning
 - Link : https://urls.fr/__vtjT
6. NoiseCapture – Environmental Noise and Urban Health
 - Link : <https://urls.fr/aU8SM1>
7. French Ministry for Ecological Transition – Smart Cities and Sustainable Territories
 - Link : <https://www.ecologie.gouv.fr/politiques-publiques/ville-durable>
8. C40 Cities Climate Leadership Group
 - Link : <https://www.c40.org/>
9. Open Data Platforms – Data.Gouv.fr
 - Link : <https://www.data.gouv.fr/fr/>
10. ICLEI – Local Governments for Sustainability
 - Link : <https://iclei.org/>

The PEPR SIVDBI team would like to express its sincere thanks to the agents of Le Géo Evènement and ESRI France, in particular to the network of data ambassadors, for their serious commitment and creativity.

Thank you also to all of the people whom talked to us on that day at the Géo Evènement



PROGRAMME
DE RECHERCHE
VILLE DURABLE

SIG 2024
Le Géo évènement



**RÉPUBLIQUE
FRANÇAISE**

*Liberté
Égalité
Fraternité*

anr®

agence nationale
de la recherche



**Université
Gustave Eiffel**



#5DATA

MURAL

Created in october 2024.

Lou Hamonic- Eliott Leclerc – Tasnême Louartani –

Ophélie Templier

Photo credits : Eliott Leclerc