



NUM-DOCKS

A COLLABORATIVE DIGITAL TOOL FOR SUSTAINABLE DISTRICTS

NUM-DOCKS ALLOWS ASSESSMENT OF DISTRICTS' SUSTAINABLE DEVELOPMENT INDICATORS AND IMPROVEMENT OF BEHAVIORS

NUM-DOCKS is a digital tool which is developed by ARIA Technologies on the Docks de Saint-Ouen district, an eco-district of Metropole du Grand Paris. It allows the evaluation criteria of urban sustainable development: energy, waste, air quality, social cohesion ... thanks to the participation and involvement of stakeholders. NUM-DOCKS is a scalable web tool: many features can be integrated (mobility, circular economy ...) and it is adaptable to any other territory. The development of NUM-DOCKS is funded by the European institution Climate-KIC, it contributes to climate adaptation and mitigation on the territory.

INNOVATIONS

- **Innovative citizen consultation method** implemented very early in the project to allow the involvement and expression of all stakeholders and create a useful tool for all and used by all → **new method of governance**.
- **Simple tools for monitoring and anticipation of consumption**, for each building and for the whole district, electricity, heating, hot water and cold water, and waste generation curves (qualitative and quantitative) → **climate mitigation**.
- **A collaborative map** enabling exchange of information between stakeholders about works, environment, culture, shops... → **social cohesion and solidarity**.
- **A discussion forum in each building** → **social cohesion and solidarity**.
- **Tools for all people in order to monitor their local environment**, as maps of industrial plumes of industries located

in the district → **climate mitigation and protection of the atmosphere**.

NUM-DOCKS assesses whether the commitments made to get the Label EcoQuartier of the French Minister are achieved.

STAKEHOLDERS

- **The CITIZENS:** residents and employees of the district, park users, neighborhood associations: **associated with the project since its launch, essential users of NUM-DOCKS tool**.
- **SEQUANO AMENAGEMENT:** public development agency of the Docks district: **asked ARIA Technologies to create NUM-DOCKS tool**.
- **PUBLIC ESTABLISHMENT PLAINE COMMUNE and the CITY of SAINT-OUEN:** the NUM-DOCKS tool is developed on an area of their territory: **consulted and involved in the project**.
- **The companies CPCU, Sycotom, EDF, real estate developers, social landlords:** **consulted and involved in the project**.
- **The CLIMATE-KIC:** European institution for Climate, **financing of NUM-DOCKS project**.
- **ARIA Technologies:** private consultant: **designer of the tool and coordinator of the NUM-DOCKS project**.
- **TUM:** Technical University of Munich: **designer computer architecture NUM-DOCKS**.

KEY DATA

- NUM-DOCKS is developed within the European collaborative project «Smart Sustainable Districts» of the Climate-KIC, which has selected 4 districts : Moabit in Berlin, QEOP in London, Centre-West in Utrecht and the Docks of Saint-Ouen in the territory of Métropole du Grand Paris.
- A tool created by citizens and for citizens, helpful to all stakeholders of the district.

For citizens to engage in climate related projects and change their behavior, it is necessary to identify first their immediate and concrete issues. Hence the importance of the dialogue phase.

For each of these issues, the dialogue and then the digital tool will show clearly the financial consequences (energy bill, water bill) of everybody's behavior. Environmental consequences (f.e. air quality) and long term climate impacts are also discussed during the dialogue.

The digital tool increases the awareness about the impact of daily decisions and creates the right conditions for a sustainable change in behaviors.

IMPLEMENTATION

- **A true dialogue with citizens:** so that all can express themselves et see that their ideas, wishes, desires are taken into account. It is required, in order for them to make this tool their own tool and they use it regularly. This in turn will engage them and make them aware of the environmental and climate related issues, so that they can adapt their behaviors accordingly.

- **The willingness of public authorities,** which have the legal power, : City Mayor, Local Authorities, Urban public developer,...to build a real sustainable district.
- **The engagement of urban utilities providing** electricity, heating, water and collecting waste so that they supply consumption data and waste production volumes.

RESULTS

/// The Docks de Saint Ouen eco-district is one of the 4 European districts selected by Climate-KIC, among 31 districts initially identified, to develop innovative "Climate-friendly" solutions. NUM-DOCKS is about :

- The active engagement of district inhabitants to the design of the digital tool through 3 « DOCKS-Forums » which have gathered more than hundred participants → **wellbeing and social cohesion**,
- The precise definition of functionalities demanded by inhabitants and other stakeholders and the corresponding data contributions which are needed → **environment protection and improvement and sustainable use of resources**,
- An open, versatile and upgradeable numerical 3D database → **sustainable use of resources**,
- The creation of a collaborative 3D map in which all stakeholders can register their contributions → **wellbeing and social cohesion**.



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FINANCIAL ELEMENTS

- /// Funded by the EIT / Climate-KIC and the project partners (700 k € over 3 years to develop and to create the prototype)
- /// Commissioning of demonstrator in December 2016
- /// Measuring the impacts of NUM-DOCKS tool in 2017

- The budget needed to adapt and implement the tool in a neighborhood is between 300 k€ and 600 k€, depends on data available at the start of the project and on the complexity of the tool design.



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