Press release — 16/06/2026

Paradigm brings together the European partners of TreeCity in Brussels, an innovative project making tree roots visible for improved protection of urban infrastructure

Brussels, 16 June 2026 – From 9 to 11 June, Paradigm welcomed members of the TreeCity consortium for a series of workshops and demonstrations focused on a reality hidden beneath our cities: the impact of root systems on urban infrastructure and developments. Led by Paradigm and its European academic and technology partners, TreeCity is developing a 3D modelling solution designed to improve the anticipation of interactions between trees, roads and underground networks.

In a city where trees play an essential role in public spaces, managing the coexistence of urban trees, roads and underground networks is a growing challenge. Deformed pavements, damaged infrastructure and trees weakened during construction work: interactions between tree roots and urban facilities remain difficult to predict.

TreeCity, led by Paradigm and its European partners, offers a practical response even before the first spade breaks the ground. Taking account of the tree species, soil type and growing conditions, the solution creates a 3D digital model of the root systems and integrates them into digital urban planning tools. This solution can be used to simulate various scenarios relating to the evolution and interaction between the roots, infrastructure and future developments, thereby supporting informed decision-making. Urban planners, road managers, network operators and public authorities can therefore visualise root systems, assess the impact of a construction project, identify high-risk areas and compare different development scenarios before work begins.

An innovation supporting sustainable cities

By integrating root systems into digital urban management tools, TreeCity is contributing to the development of urban digital twins. These are virtual representations of the city that make it easier to understand, simulate and plan interactions between the various elements of the urban landscape. In this way, the project helps to bring living systems more fully into cities' digital transformation processes.

In addition to preventing damage to infrastructure, TreeCity helps to preserve existing urban trees, facilitates the planting of new trees in suitable conditions and reduces the costs associated with repairs and changes to construction sites.

"*TreeCity makes it possible to reveal essential elements in the digital world that have remained invisible until now: tree roots.* "*This places living systems on the same footing as technical infrastructure and marks a key step towards cities that are more environmentally friendly and climate-resilient,*" explains Kristiina Kupper of the FinEst Centre for Smart Cities.

A need identified by urban stakeholders

- **Municipality of Etterbeek**

"*On construction sites, the main difficulties often stem from unforeseen issues related to the subsoil. "A better understanding of how roots behave and interact with infrastructure would help to limit many conflicts and guide more informed decision-making in emergency situations.*"

A European work week in Brussels

From 9 to 11 June 2026, Paradigm welcomed the project's European partners to the Iris Tower and BeCentral for a series of workshops, prototyping sessions and co-creation sessions with experts, researchers and potential users in Brussels.

This work week was an opportunity to advance the development of the solution, share feedback from the other two pilot cities, Tallinn and Helsinki, and prepare the next testing phases in Brussels. Discussions focused in particular on the use of artificial intelligence, data management and the integration of TreeCity into urban planning tools.

The project is being tested in three European pilot cities — Brussels, Tallinn and Helsinki — in order to assess its effectiveness in different urban settings and prepare for its wider deployment.

A European project led by seven partners

Launched in January 2026, TreeCity is one of the winning projects of the 2024 Smart City Challenge, organised by the FinEst Centre for Smart Cities.

The project consortium brings together:

- Paradigm, a key player in the digital transformation of the Brussels-Capital Region
- TalTech – Tallinn University of Technology
- University of Liège (GeoScITY Laboratory)
- GreenTwin.ai, a spin-off specialising in 3D modelling
- FARI – AI for the Common Good Institute (ULB-VUB)
- The cities of Helsinki and Talinn

The project will continue until December 2027. Ultimately, the partners aim to make this tool available to public and private stakeholders involved in the development and management of urban spaces.

More information?
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Paradigm is the public interest organisation driving digital transformation in the Brussels-Capital Region. In this capacity, it acts as an orchestrator of digital capabilities by developing greater coherence, pooling and cross-functionality, while accelerating the transition for the benefit of all.

Project partners:

This project is financed by the European Regional Development Fund (ERDF) and the Estonian Ministry of Education and Research as part of the FinEst Centre for Smart Cities pilot programme.