



URBAN HERITAGE CONSERVATION



DAREIUS

Innovation by Nature

URBAN HERITAGE CONSERVATION (URGENTO)

The Urban Heritage Conservation tool (URGENTO) is part of URBRAINS, the Toolbox in which we have collected our different analytical tools for complex urban water problems. The combined implementation of these tools will make cities more resilient and more sustainable.

FUTURE-PROOF HERITAGE: A SUBSURFACE VIEW

Each and every historic building is unique. And thanks to their built heritage, streets, lanes, squares and entire cities acquire a unique identity that becomes richer with the passage in time. Everyday living, working and recreation in such buildings seem to become more timeless, but at the same time more meaningful. Historic buildings contribute an extra dimension to the society, creating added value for a neighbourhood and a city. This means that the built heritage is practically irreplaceable, and explains why its conservation is so important for a city's character and future. But the future brings with it all sorts of new challenges, such as the continuous aging of historic building materials and the increased stress associated with climate change. And, naturally, over the course of time buildings are perceived differently and are subjected to new demands. Society keeps on changing. The reason for owners and managers of historic buildings to keep a close view on that part of a building that is above ground.

But what about the situation underground? After all, that is where the building's foundation lies. It has in fact become increasingly clear that the foundations are in need of urgent attention. Knowledge about the subsurface plays a crucial role in the future-oriented management and conservation of heritage buildings. With this in mind, we have developed the URBAN HERITAGE CONSERVATION (URGENTO) tool, which maps out the subsurface influences on heritage buildings.

HOW DOES URGENTO WORK?

URGENTO provides insight in risks and opportunities offered by the subsurface characteristics with respect to your heritage building. This understanding assists you in reaching the right decisions at the strategic, tactical and operational levels. And it provides you with a customised action plan, focused specifically on the subsurface: the foundation, soil, groundwater and underground structures. If desired, URGENTO can also be implemented within the context of our Urban Water Planner

(UWP). This latter tool provides a digital platform in which the various dimensions of climate-related urban water issues can be jointly analysed.



WHY URGENTO?

URGENTO helps you take the right decisions and set a course of action to make your built heritage future-proof. This involves three levels:

- Strategic level: take informed decisions for instance regarding acquisition, sale, repurposing and renovation. Based on foundation and moisture research on the underground parts of the building, we assess the period the current condition of the property can be maintained, what extensions are possible on the existing foundation, and what the possibilities are for making and maintaining underground spaces moisture-free.
- Tactical level: gain insight into subsurface measures to make the building future-proof. These will be based principally on geohydrological research, which involves active groundwater level management, so as to protect the foundation and limit land subsidence.
- Operational level: understand the options for a targeted management effort for the subsurface environment, aimed at making and maintaining the building future-proof. This could for example involve high-frequency monitoring of groundwater levels, so that disasters leading to damages because of too high or too low groundwater levels can be avoided.

Practice has taught us that the ability to interpret the interaction between the subsurface environment and the building structure is the crux of a successful future-proof management of heritage buildings. We have developed this knowledge in leading projects over the course of many decades. With us, you will find civil engineering and geohydrological expertise under a single roof.

Meer weten over Dareius en wat we voor u kunnen betekenen?

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