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DIGITAL TWIN EXPLORATION

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DIGITAL TWIN EXPLORATION (DT-SCOPE)

The Digital Twin Exploration (DT-SCOPE) tool is part of our Digital Water programme, in which we have collected our different digital products and services. These can be applied jointly or separately so as to make the design, realisation, management and maintenance of water infrastructure more efficient and to save costs.

WHY DT-SCOPE

Water infrastructure is a valuable societal asset that requires high-quality and comprehensive attention. A Digital Twin (DT), with its abundance of data, brings order to this task. A DT integrates Artificial Intelligence and mathematical models with real-time data to create living digital copies of physical infrastructure. That is why it is referred to as a 'twin'. This means that a DT makes available all the digital data on infrastructure, and renders it suitable for optimal infrastructure design, realisation and maintenance. DTs therefore always change along with their physical twins, because all (validated) data are available in real time. The result is a real-time operational picture of your infrastructure.

The Digital Twin Exploration (DT-SCOPE) tool helps organisations make the DT approach operational. This means that we offer support in the formulation of the mission, vision and strategy underlying the approach. These elements form the foundation for the design of the central digital platform architecture, the data collection method and the security of the data traffic and storage. They also provide the basis for the use of modelling for scenario planning. With DT-SCOPE you will discover whether a Digital Twin approach can be applied to your water infrastructure. And, if so, what your own Digital Twin approach would look like in greater detail. The focus is of course directed at the type of system that you manage. This can result in an action plan for the design and the implementation of your own Digital Twin approach.

WHAT DT-SCOPE OFFERS

The tool helps organisations develop a DT strategy and implementation plan for the different infrastructural phases:

- Design phase: the DT can optimise designs by comparing different alternatives from a technical perspective, and conducting stress-tests under various scenarios.
- Realisation phase: the DT facilitates the monitoring and optimisation of new infrastructure, or the replacement process of existing infrastructure.
- Operational phase: the DT facilitates real-time control, short-term requirement forecasts, and action/response planning (for infrastructure operators).
- Performance optimisation phase: the DT facilitates what-if scenarios, the planning of upgrades and the conduct of proactive maintenance.

SETTING TO WORK WITH DT-SCOPE

We will set to work with your organisation in determining how we can make the Digital Twin approach work for it. Through a few information and working sessions we will develop the mission, vision and strategy, which will lead to an action plan. This will describe the steps to be taken over time, the required competences and the necessary associated team. DT-SCOPE will be implemented in close collaboration with diTTo, our international Digital Twin Company.

DO YOU HAVE A DT-SCOPE IDEA?

Do you have your own idea about how DT-SCOPE can be used in your specific situation? Are you wondering about how you can get your infrastructure's Big Data world to work for you optimally via a Digital Twin approach? We would be happy to share our experiences with you.

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

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