



FLOOD WATER DESIGN OPTIONEERING



DAREIUS

Innovation by Nature

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The Flood Water Design OpTioneering (FLOWDOT) tool is part of the REDO Toolbox, in which we have collected our design tools for complex, and particularly water safety problems. The combined implementation of these tools will make areas more resilient and thus more robust.

WHY FLOWDOT?

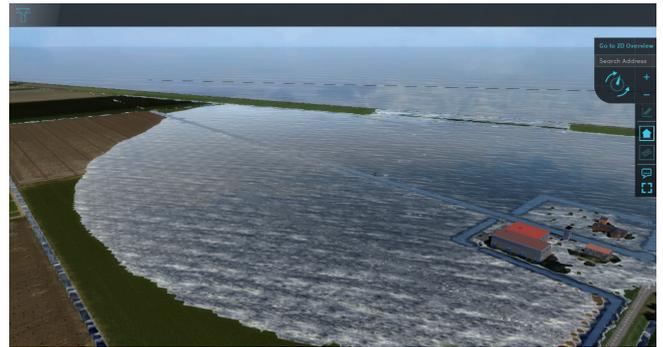
A changing climate will lead to rising sea levels and rivers will have to accommodate peak discharges more frequently. The Netherlands has directed a great deal of attention to water safety in its history. Through the centuries we have accordingly established our reputation as dike builders. Developments over the last few decades have further convinced us that rivers must be given more room and discharge water to the sea. The controlled provision of space for rivers and discharge has become the governing principle. A parallel question concerns how the water can be made to contribute to meeting the growing demand for freshwater in combating drought. The ultimate combined challenge therefore becomes to organise lowland deltas at an area level in a manner that applies the precautionary principle for both water safety and water security.



The purpose of FLOWDOT is to analyse and visualise regional water systems specifically from a water safety perspective. Solutions must contribute to the combined function of the water system. FLOWDOT does this by mapping out the organisational options using variable area features. In this approach, a dike is one of these area features that embed the water flow direction. On overtopping or other dike failure will be anticipated. An area has to be organised in such a way that the impact does not jeopardise the residents' freshwater supply, and that the socio-economic effects, including those caused by drought, are kept to a minimum. By means of a digital model, FLOWDOT presents information about the system's vulnerabilities under different scenarios. It also creates possibilities for the joint examination of appropriate measures with the aim of eliminating or minimising the resulting risks. This requires a strong joint focus on the planning process through the analysis of scenarios.

WHAT FLOWDOT OFFERS

- Within a few minutes, a digital and visualised model of your project area.
- Direct access to open source data (elevation map, road network, buildings, etc.).
- Effective optimisation on the basis of your own data.
- Testing of interactive measures and their impact on different scenarios.
- Comprehensible cost-benefit analysis per scenario
- Professional accompaniment and support in interactive multi-stakeholder sessions.



SETTING TO WORK WITH FLOWDOT

We use publicly available data to produce an initial digital model of your project area. The relevant scenarios for your organisation are jointly developed, taking into account the changing climate, rising sea levels and extremes in river flow. These 'what if' scenarios clarify the risks for potentially vulnerable locations, and are assessed on the basis of specific area knowledge. We identify realistic and effective measures for the project area, which can then be discussed with stakeholders. In this way decisions become comprehensible. We also give them a financial underpinning through a transparent cost-benefit analysis. The result is a broadly supported plan.

DO YOU HAVE A FLOWDOT IDEA?

Do you have your own idea about how FLOWDOT can be used in your specific situation? Are you wondering about the impact of precipitation in your project area? We would be happy to share our experiences with you.

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

NEEM CONTACT OP

+31 6 13 11 14 68
info@dareius.com
www.dareius.com

Podium 9
3826 PA Amersfoort
The Netherlands

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