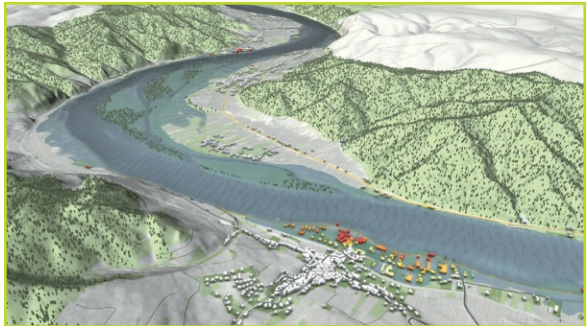
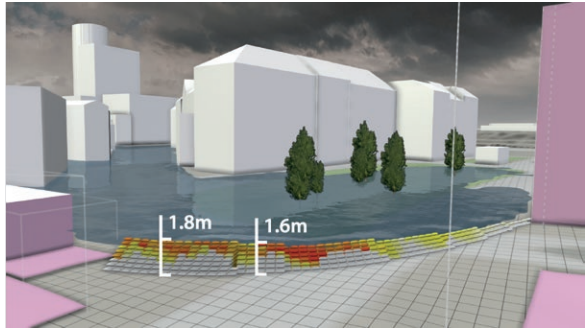


Visdom

Simulating and visualising scenarios.



v r vis

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forschungs-gmbh

Simulating and visualising scenarios

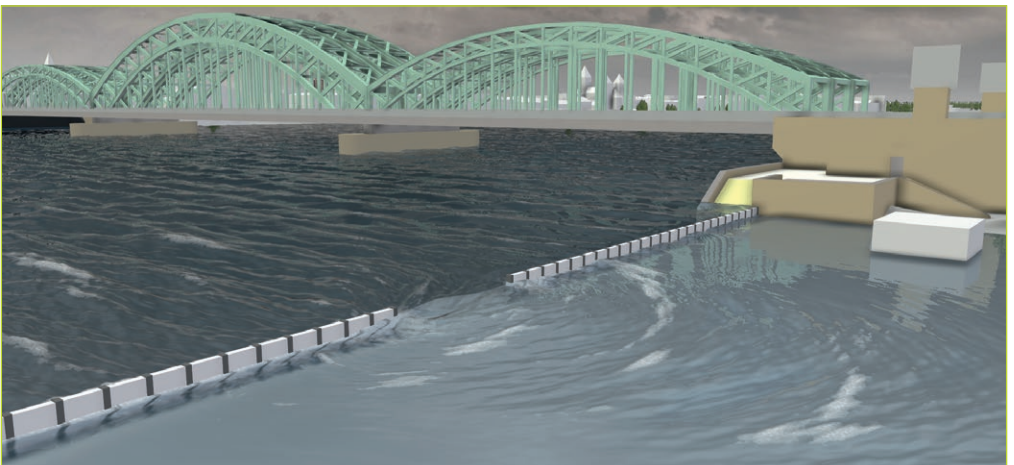
Visdom is a software solution which combines state-of-the-art simulation, analysis and visualisation methods to support decision making. In the modern world, making decisions faster is an important success factor. This is particularly crucial in time-critical situations such as dam breaks, catastrophic rainfalls or urban flooding. The challenge lies in the multitude of influencing factors to be accounted for. The large amounts of data both on the input and output sides can be overwhelming.

Visdom handles this data complexity and provides the possibility to quickly compare options in multiple scenarios. It allows the users to answer important „what if“ questions such as „Does it make sense to set up mobile protection barriers next to the hospital?“ or „Is thirty workers and two trucks enough to set up the barriers in time?“. This, in turn, is the key to efficient decision making and successful crisis resolution.

The software solution Visdom is developed in a series of research projects as a joint effort of the VRVis Research Center and the Institute of Hydraulic Engineering and Water Resource Management at Vienna University of Technology (Prof. Günter Blöschl).

The rapid decision-making procedures for flood management developed by way of example in Visdom cover the following areas:

- ❑ 2D simulations of river flooding, protection measures (robustness and failure)
- ❑ Surface run-off in heavy rain
- ❑ Sewer network simulations and coupling with surface run-off
- ❑ Logistics simulations for construction planning of protective measures
- ❑ Pedestrian simulations for evacuations



Breach in mobile protection barriers.

Benefits of Visdom

- ❑ Multiple scenario calculations
- ❑ Fast, coupled GPU simulations (for flooding, stormwater, sewer networks, evacuations, and logistics)
- ❑ On-the-fly analysis of simulation results
- ❑ Interactive 3D visualisation
- ❑ Support for all commonly used GIS formats

Application examples

- ❑ Planning of disaster mitigation measures
- ❑ Risk evaluation
- ❑ Training of emergency personnel
- ❑ Information campaigns and public relations work
- ❑ Generation of protection and action plans

Projects

- ❑ HORA: Flood risk zoning in Austria
- ❑ Cologne: Flood management
- ❑ Marchfeld: Dyke breaches
- ❑ Amstetten: Stormwater

Project partners & references



Stormwater simulation with sewer network coupling.

Visdom

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Videos about Visdom:
[Youtube.com/vrvis](https://www.youtube.com/vrvis)

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Competence Centers for
Excellent Technologies

The logo for VRVis, featuring the lowercase letters "v", "r", and "vis" in a bold, sans-serif font. The letters are white and are contained within a green rectangular border. A vertical line separates "vr" from "vis".

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