

UR Understanding Risk Balkans Conference

September 17-19, 2018 | Belgrade, Serbia



THE WORLD BANK
IBRD • IDA



www.riocom.at

Visual Decision Support – New Tools in Flood Emergency Planning for Municipalities

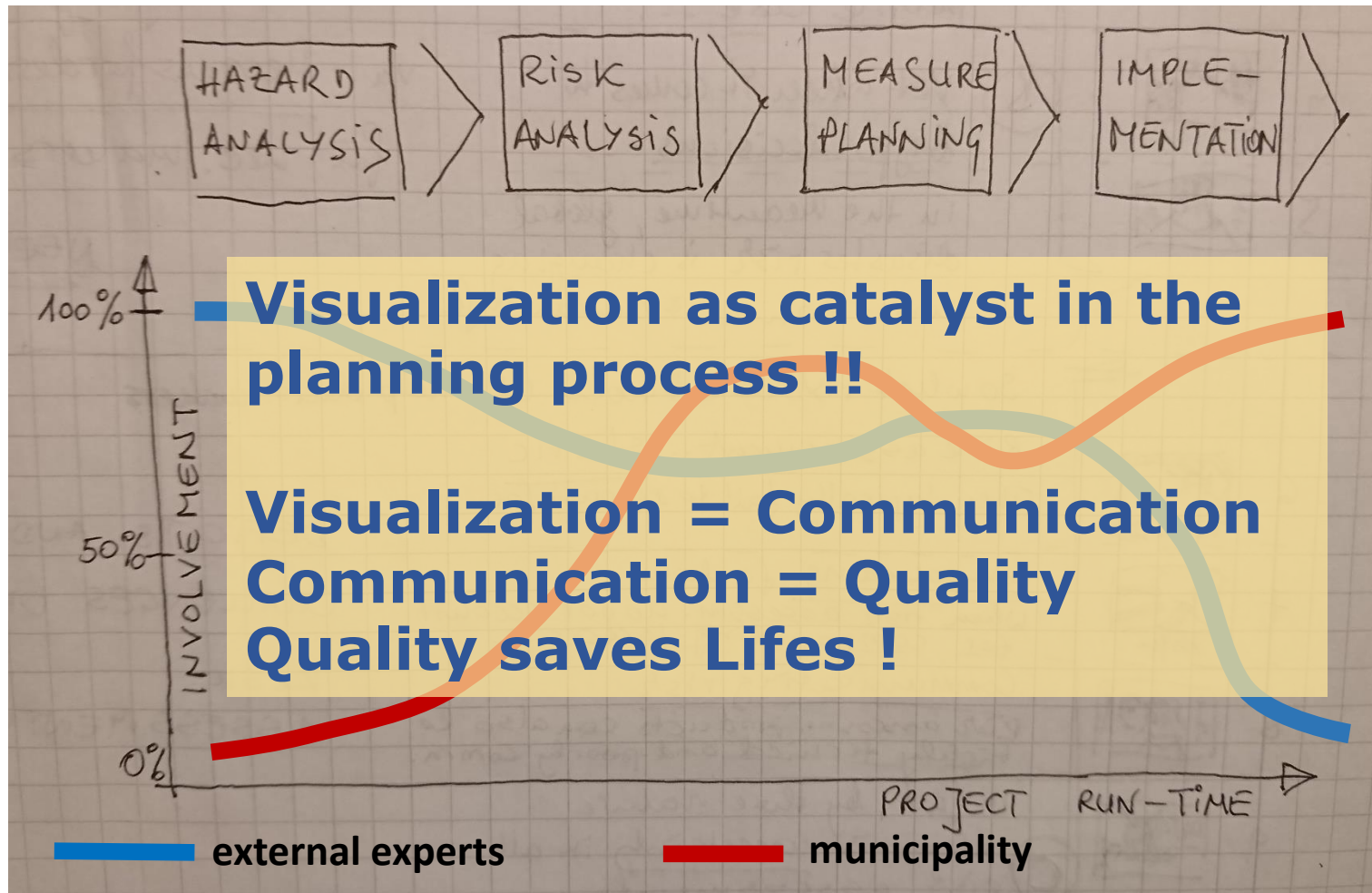
RIOCOM –

Engineering Office for Water Management & Environmental Engineering

Vienna, Austria / DI Albert Schwingshandl / albert.schwingshandl@riocom.at



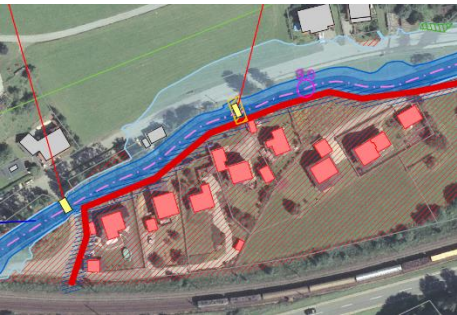
Flood Emergency Plan is a collaborative result of a planning process



4 crucial limitations of previous flood simulation and risk management tools



- A) Hazard analysis results are delivered as static products to the municipality (no dynamic temporal information e.g. arrival time)**
- B) Only few scenarios are elaborated due to modelling limitations**
- C) Hazard analysis products are difficult to be interpreted by the decision makers**
- D) Crack in the planning process: 3 diff. tools necessary for modelling, postprocessing & visualization**



Visdom = integrative

Info: <http://visdom.at>

- = 2D Hydrodynamic Simulation
- + Dynamic 3D Visualization
- + Risk Analysis
- + Measurement Planning and Optimization



Visdom Partners



*Centre for Virtual Reality and
Visualization*

Jürgen Waser / jwaser@vrvis.at

**Simulation and Visualization
Research, Software
Development**



*Technical University of Vienna,
Inst. WIH, Günter Blöschl /
bloeschl@hydro.tuwien.ac.at*

**Scientific Partner
Hydrodynamics and Hydrology**



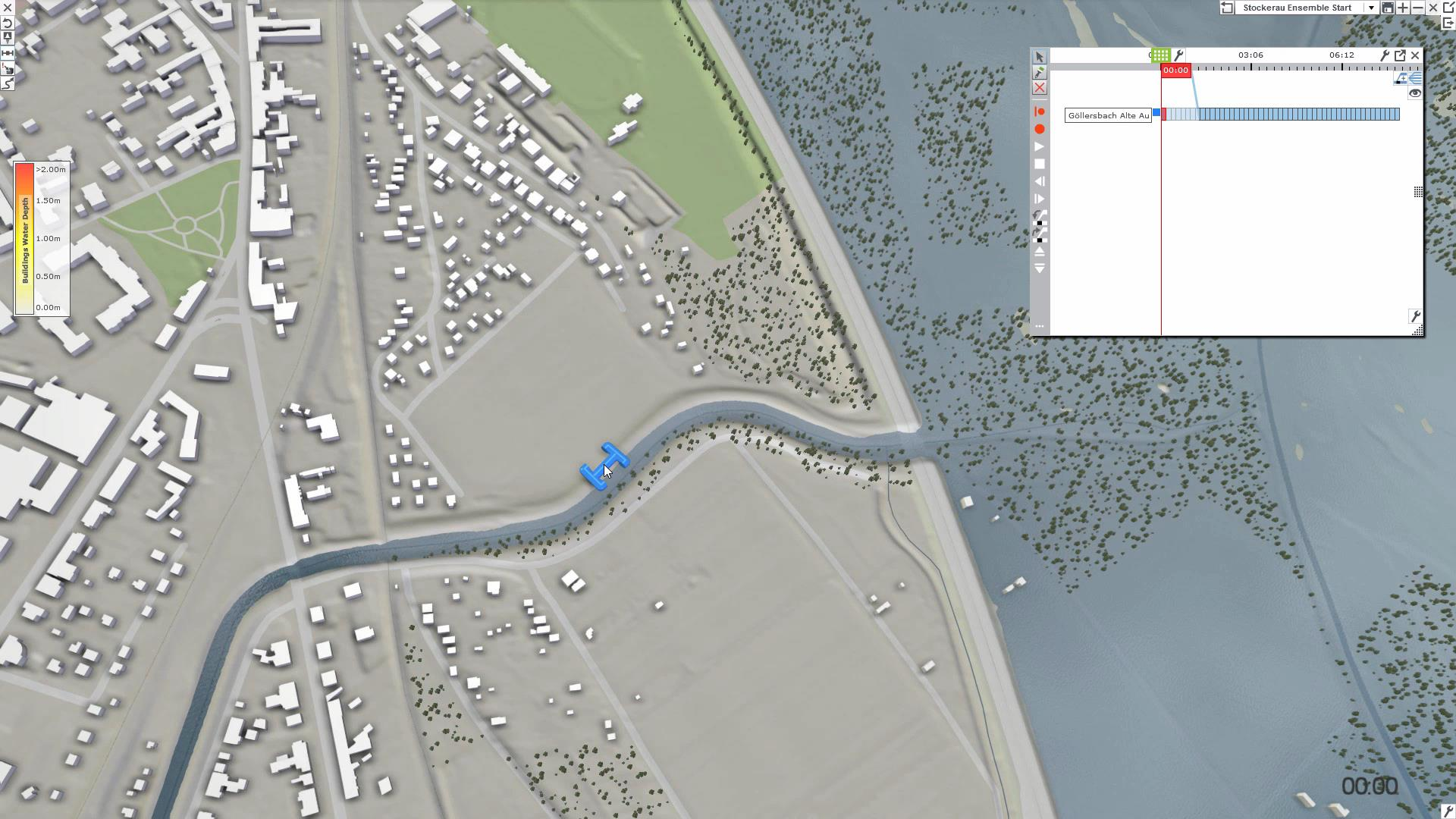
*RIOCOM Consulting Engineers
Albert Schwingshandl
albert.schwingshandl@riocom.at*

**Practical Application, User-driven
Optimization of Software**



Visdom – example 1: stormwater

[play video by klick on start image!]



Visdom – example 2: dyke break

Visdom – example 3: evaluation of response measures, Cologne

Visdom – example 4: evaluation of protection measures, Tyrol

How did it help, what where the outcomes?

Testimonial:
District fire brigade of
Gänserndorf, Lower
Austria

Projekt „Emergency
Management Planning
Danube Marchfeld“
(10 municipalities)

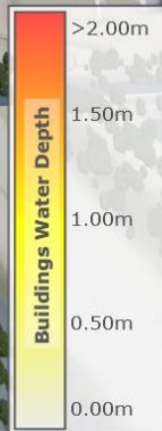
„In the frame of various workshops in the municipalities, the visualizations of the flood simulations by Visdom have substantially contributed to illustrate the hazard situation in a comprehensible way.

The possible course of the floodings were made viewable.

But also the options and limitations for defense measures could be identified.

The easily interpreted and clear 3D-visualizations were of great help particularly for the authorities and fire brigades of the municipalities.“

Thank You very much!!
МНОГО ХВАЛА !!



www.riocom.at