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Why the Competent Authorities are interested in the OpenMI

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Overview of the presentation



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- 1. Competent authorities for Integrated Water Policy**
- 2. Instruments for an Integrated Water Policy**
- 3. OpenMI: use cases PRB Scheldt**
- 4. Conclusions**
- 5. Expectations from the consortium**



Several competent authorities



Several authorities are competent for water policy in Flanders

- Administrations and entities of the Flemish Region
 - Environment, Nature and Energy (VMM)
 - Public Works and Mobility (FH) (NL : RIKZ)
 - Spatial Planning
 - Agriculture
 - Economy
- Local water managers (Provinces, Municipalities, Polder and Drainage Authorities)
- Co-operation Flemish Water (Drinking water companies)

VMM includes AWA ; Aquafin is a semi-public body for waste water treatment



Integrated Water Policy in the Flemish Region



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Co-ordination committee for Integrated Water Policy (CIW) with mission to

- prepare, plan, control and follow up integrated water policy on the level of the Flemish region**
- watch over a uniform approach for integrated water policy on local level**
- execute decisions from the Flemish government in relation to integrated water policy**



Interactions between water management domains



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According to the proposed use cases

- **Flood risks from sewer effluents on a river**
- **Interactions between downstreams and upstreams river flow regulations (e.g. the impact of dredging the river)**
- **Flow regulation on water quality and the impact of water quality at floodings**
- **Tides on upstreams flood risk**



Instruments for an Integrated Water Policy



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- **Need for decision support tools**
- **Use of the most appropriate model for each particular water management domain**
- **Very difficult and expensive to develop integrated models**
- **Possibility to link existing models being run in joined up government**



Different models for different water management domains



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- **Aquafin uses the Infoworks CS model on the sewer system of the city of Leuven (sewer flow)**
- **VMM-Div. Water uses the Infoworks RS model on the River Dijle (river flow)**
- **Flanders Hydraulics uses the MIKE11 model on the tidal rivers (river flow)**
- **VMM-Div. Quality management uses the PEGASE model on the Scheldt river basin (river quality)**
- **RIKZ uses the Waqua-model on the Scheldt estuary (river flow)**



OpenMI : use cases PRB Scheldt



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The Scheldt river basin as a PRB for the test case:

- **Pilot River Basin (Scaldit)**
- **International river basin district**
- **Availability of models**
 - about the different components of the water system
 - used in different countries and regions
 - internationally accepted



OpenMI : use case 1 PRB Scheldt



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OpenMI : use case 2 PRB Scheldt



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OpenMI : use case 3 PRB Scheldt



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OpenMI : use case3 PRB Scheldt



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OpenMI : use case 4 PRB Scheldt



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Conclusions



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The new technology OpenMI presents the opportunity and the incentive :

- to co-operate between various competent authorities for an Integrated Water Policy on regional level and on international level,**
- to take up common challenges,**
- to interlink existing models instead of developing integrated models**



Expectations from the consortium



The Scheldt partners expect from the consortium (CEH, Wallingford Software, DHI, WL Delft, NTUA, Aquafin) :

- to train the model developers and the end users to perform their respective tasks,**
- to assist the model developers and the end users when encountering problems in linking models,**
- to deliver upgrades of the OpenMI in reasonable time,**
- to guide the project organisation**