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# Waterway Monitoring System “WAMOS 2.0” – a joint endeavour towards harmonised Danube waterway data

## Preparing Fairway 2 works in the Rhine- Danube Corridor

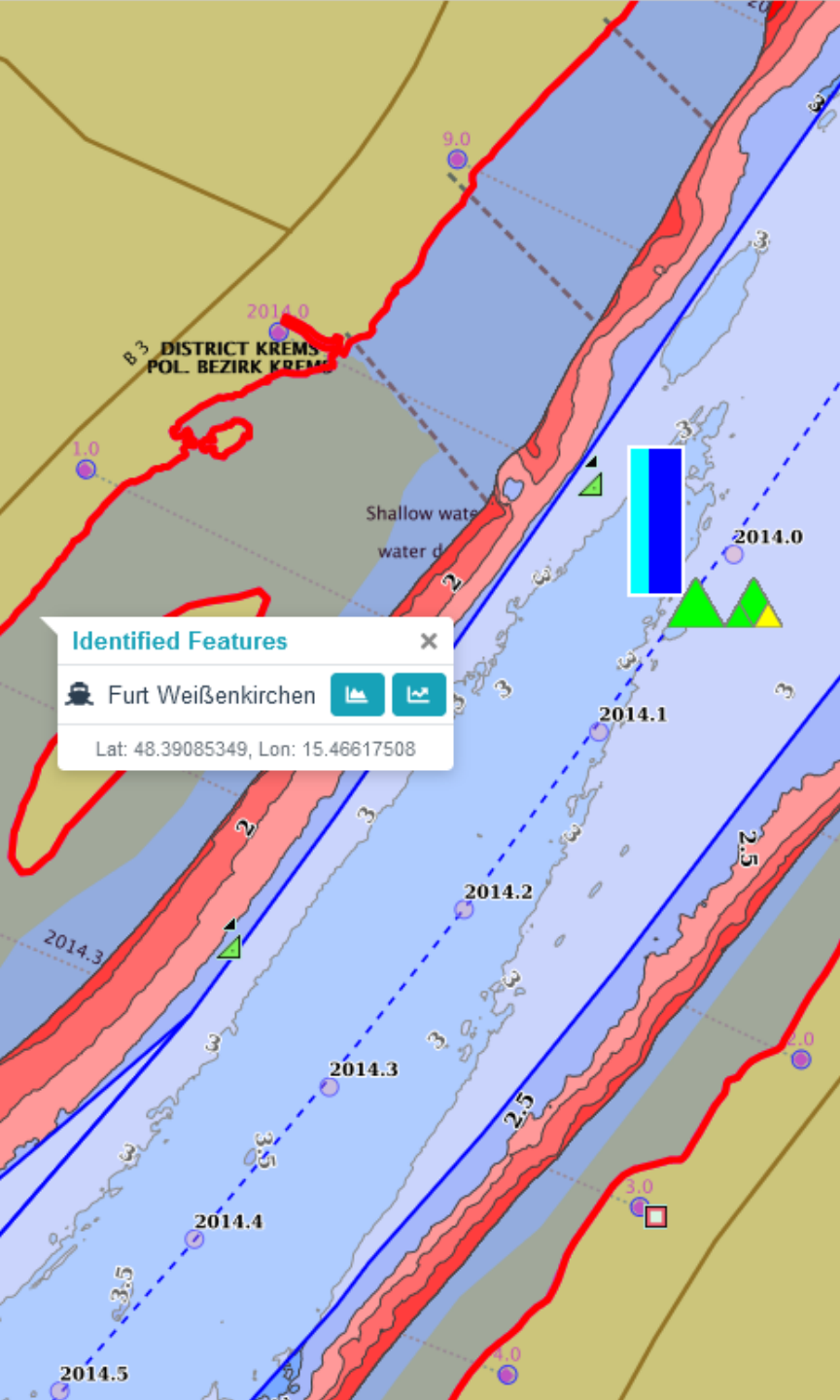
14.09.2022, Susanne Bachl (viadonau)

13th meeting of the Joint Declaration of the Danube Commission 14./15.09.2022, Budapest

# WAMOS

*Transnational  
Waterway Monitoring System*

- ▶ Collects hydrological and hydrographical data from the riparian Danube Waterway Administrations into one system
- ▶ Offers harmonized display and analysis of the data
- ▶ Web application
- ▶ Available for registered users only (Waterway Administrations)



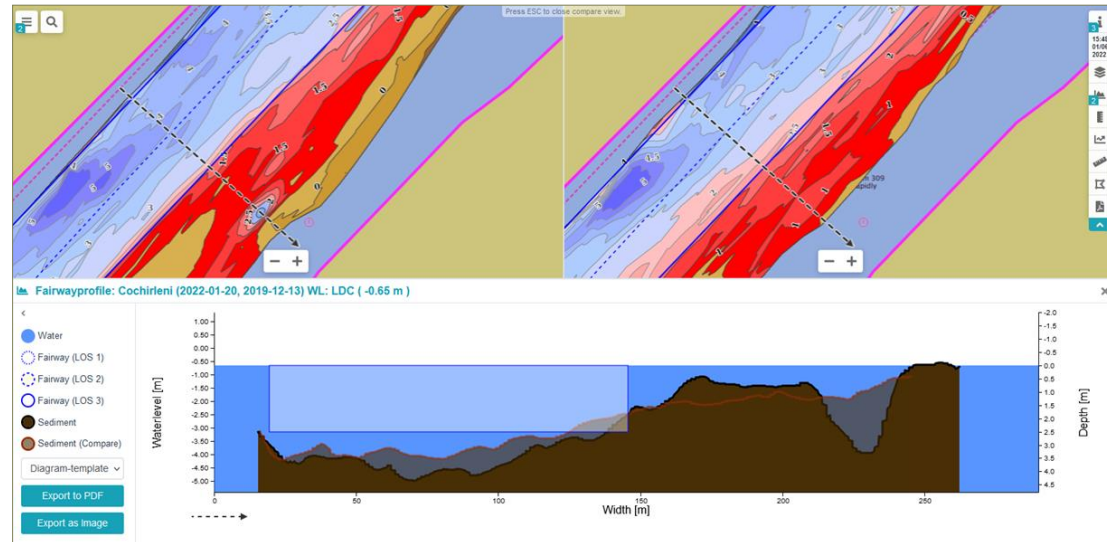
# WAMOS

## Current functions & analysis



### River Morphology in Bottlenecks

Bathymetric survey data & cross section profiles through the river bed (with compare function)



# WAMOS

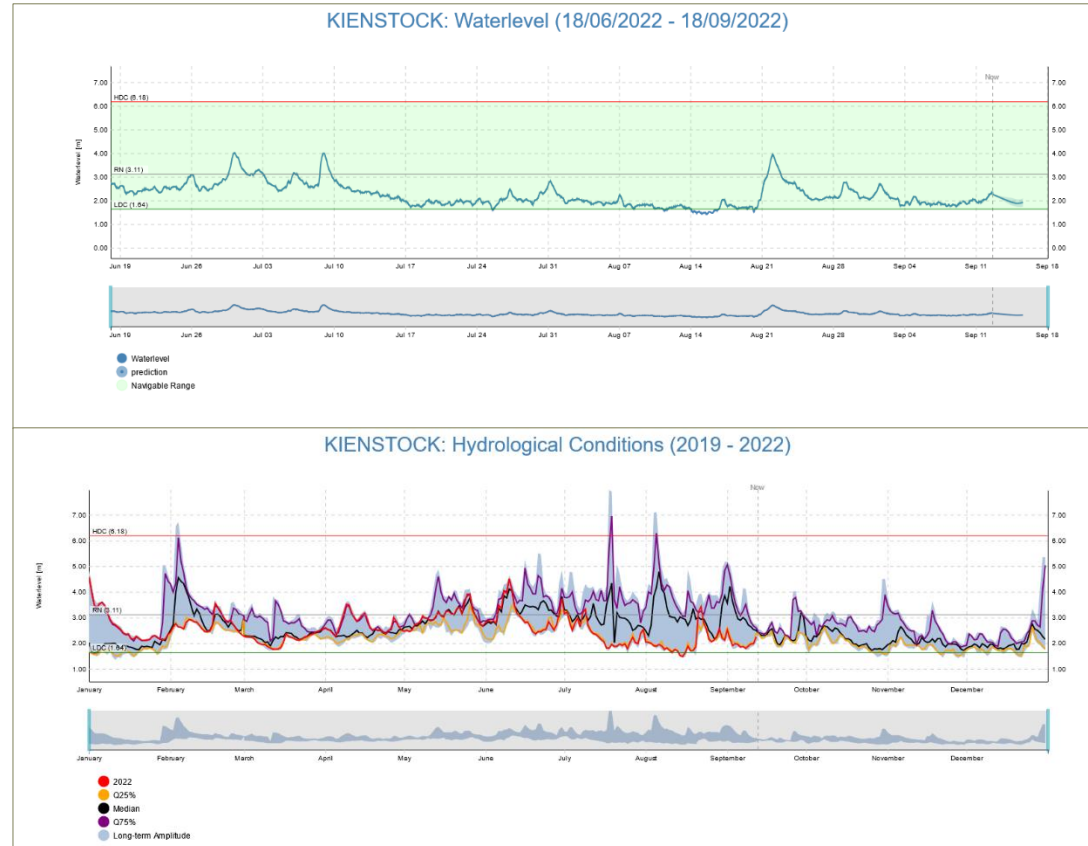
## Current functions & analysis

*River Morphology in Bottlenecks*

Bathymetric survey data & cross section profiles through the river bed (with compare function)

### Water-Levels & Hydrological Conditions

Current and historic water levels, inclusive forecasts and long-term evaluation



# WAMOS

## Current functions & analysis



### River Morphology in Bottlenecks

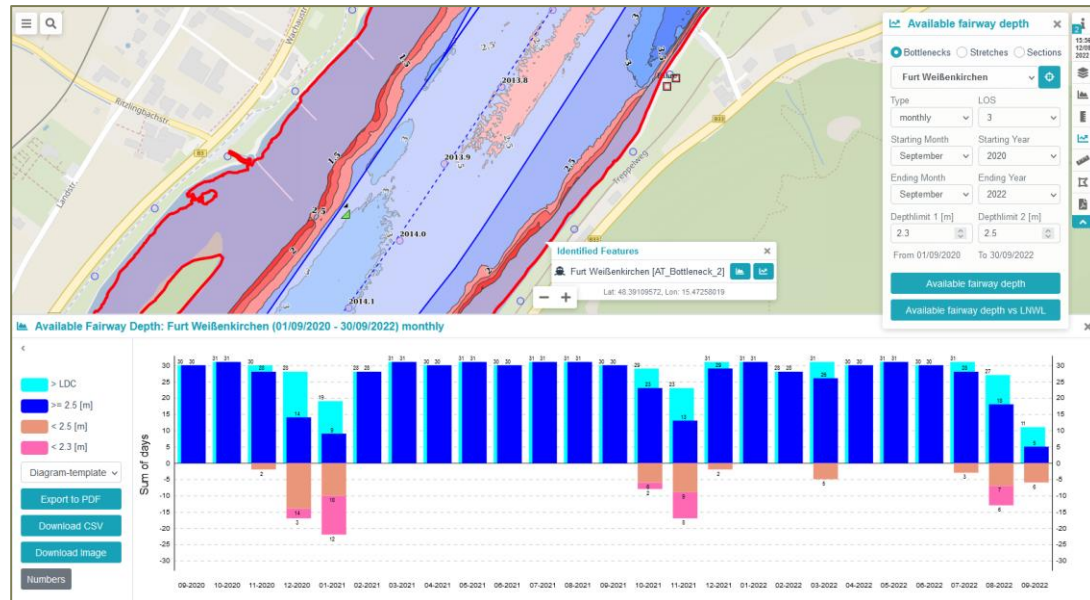
Bathymetric survey data & cross section profiles through the river bed (with compare function)

### Water-Levels & Hydrological Conditions

Current and historic water levels, inclusive forecasts and long-term evaluation

### Fairway Availability

For different Levels of Service



# WAMOS 2.0

## *Possible future functions (1)*

### ▶ Integration of new fairway related data

*To improve the data basis for the analytical functionalities and reporting*

- Bridge Clearance (historical/actual/forecasted information)
- Discharge (historical/actual/forecasted information)

### ▶ Waterway Assets related modules

*To assist waterway administrations*

- Rehabilitation and maintenance measures (RMM)
- Dredging module
- Inventory and status monitoring of hydraulic structures
- Inventory and utilisation monitoring of public mooring places/anchoring infrastructure
- Harmonised processing and provision of bottleneck related information

# WAMOS 2.0

## *Possible future functions (2)*

### ▶ Traffic data support for waterway management

*To analyse the fairway by comparison and collection of information*

- Integration of (AIS) Aids to Navigation (AIS AtoNs)
- Traffic Density Mapping Service – integration of vessel traffic information

### ▶ Environmental layers

*To combine environmental and navigational parameters display at a glance*

- Visualisation of Natura 2000 Sites
- Visualisation of environmental monitoring results

### ▶ Reporting

*To bring transparency and comparability into reporting of navigability status, maintenance efforts and possible gaps*

- Reporting on GNS process - TENtec GNS Key Performance Indicators
- Reporting within National Action Plans

# WAMOS 2.0

## *Possible future functions (3)*

### ▶ Additional improvements of current functionalities

*To improve the user experience and improve the systems acceptance*

- Review and proposals for improvements of GUI for existing and new functions
- Dashboard extension

### ▶ Export to External Systems

*To act as a data provider for harmonised riverbed morphology data*

- Retrieval of surveying results (map tile images and metadata) by external systems

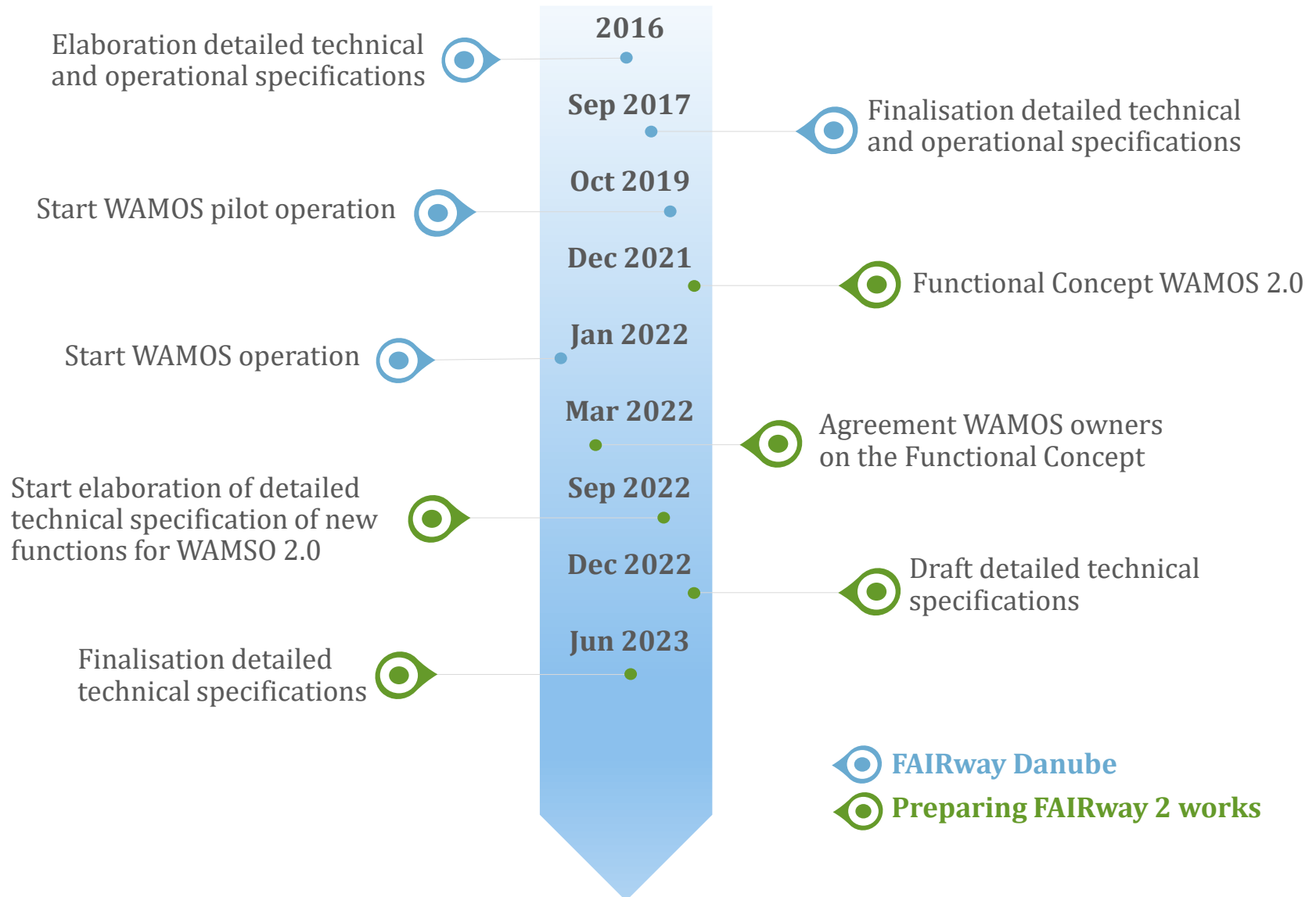
### ▶ Reporting tool

*To report problems observed on the fairway or on the assets alongside*

- for waterway-related maintenance issues and incidents



# WAMOS - *Timeline*



# Contact



Thank you for your attention!

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