Key project objective

Harmonized, innovative and pro-active waterway management along the Danube and its navigable tributaries
Key project objectives

Agreeing on common approaches for waterway management

– Danube STREAM will further contribute to the overall performance of the Danube waterway by raising the effectiveness of waterway management in the corridor.
– Establishing waterway management tools and by assuring environmentally sound waterway management, which will result in a better and more reliable infrastructure quality.
– Consequently, transport services on the river can be planned more accurately in terms of time reliability and available draught. The ecological footprint of the transport system in the Danube region will be reduced as an important side effect.

Project co-funded by European Union funds (ERDF, IPA)
Key project objectives

Making required information easily accessible along the entire Danube

- Faced with varying and dynamic fairway conditions, commercial users of the Danube waterway rely on up-to-date and topical information on the fairway for their logistics planning processes.
- Danube STREAM will provide improved user information services by means of transnational web portals and tools, including information on water levels, fairway depth and width, information on shallow water sections, etc.
- These improved information services will result in a better exploitation of the opportunities the Danube waterway offers.

Project co-funded by European Union funds (ERDF, IPA)
Danube STREAM

KEY PROJECT DATA

Project co-funded by European Union funds (ERDF, IPA)
## Project partners

<table>
<thead>
<tr>
<th>Partner no.</th>
<th>Partner name</th>
<th>Short name</th>
<th>Country</th>
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<tr>
<td>LP</td>
<td>via donau - Austrian Waterways Company</td>
<td>VIA</td>
<td>AT</td>
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<tr>
<td>ERDF PP1</td>
<td>Slovak Water Management Enterprise</td>
<td>SVP</td>
<td>SK</td>
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<td>General Directorate of Water Management</td>
<td>OVF</td>
<td>HU</td>
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<td>National Association of Radio Distress-Signalling and Infocommunication</td>
<td>RSOE</td>
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<td>AVP</td>
<td>HR</td>
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<td>EAEMDR</td>
<td>BG</td>
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<td>Ministry of Construction, Transport and Infrastructure - Directorate for Inland Waterways</td>
<td>Plovput</td>
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## Associated Strategic Partners

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<td>ASP 2</td>
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<td>ASP 3</td>
<td>International Sava River Basin Commission</td>
<td>ISRBC</td>
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<td>ASP 4</td>
<td>DANUBEPARKS - Danube River Network of Protected Areas</td>
<td>DANUBEPARKS</td>
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</tr>
</tbody>
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WP breakdown structure

VIA

WP1
Project Management
- Act. 1.1 Project start & closure
- Act. 1.2 Financial management
- Act. 1.3 Project coordination & controlling
- Act. 1.4 Project quality management

AFDJ

WP2
Project Communication
- Act. 2.1 Internal communication
- Act. 2.2 External communication

SVP

WP3
User Information Services
- Act. 3.1 D4D development
- Act. 3.2 Electronic Navigational Charts
- Act. 3.3 FIS Portal Development

VIA

WP4
Waterway Management
- Act. 4.1 Raising effectiveness of waterway management
- Act. 4.2 Waterway management tools
- Act. 4.3 Environmentally sound waterway management

Plovput

WP5
Strategic Perspectives
- Act. 5.1 Performance indicators & level of services
- Act. 5.2 Interconnections with relevant inland navigation -related int. initiatives
- Act. 5.3 Strategic communication

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PLANNED ACTIVITIES DURING PROJECT LIFETIME (SELECTION)
User Information Services

- D4D development
- Electronic Navigational Charts
- FIS portal development

WP Leader: SVP/Stefan Polhorsky
D4D development

- **D4D infrastructure** - improvements necessary
  - Updated and improved D4D infrastructure, improved D4D web portal, maintenance portal, new structure inside

D4D development

- **Paper charts** - NEWADA duo - tool developed and implemented
  - Updating and providing of the paper charts for entire Danube
  - Carte de pilotage of DC - in future

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Activity 3.1 D4D development

- Berth occupation
  - Updating of Atlas of berths for whole stretch
  - Atlas of berths - tool development and implementation
Activity 3.2 Electronic Navigational Charts

• **IENC** - latest valid IE standard (IE 2.3) - entry
  – IENC charts with depth information

• **Depth information**
  – for all critical sectors

• **Uploading of the IENC to the D4D web portal**
Activity 3.3 FIS portal development

- Fairway Information Service portal
  - www.danubeportal.com
Activity 3.3 FIS portal development

• Planned improvements
  – Backend
    • Implementation of NtS standard latest version
      – cooperation with national RIS providers
    • NtS interconnection with FIS portal
    • Harmonisation of content of NtS and minimum dataset for message
    • Automatic monitoring
  – Mobile App/version of FIS portal
    • Technical specification, design and development
Activity 3.3 FIS portal development

• Planned improvements
  – Frontend
    • Bottleneck information
      – automatization
      – harmonisation and improvement
    • Restructuring of the welcome map
      – IENC inclusion
Waterway Management

• Raising the effectiveness of waterway management
• Waterway management tools
• Environmentally sound waterway management

WP Leader: viadonau/Gert-Jan Muilerman
Raising the effectiveness of waterway management

1. What is the problem?
   - Different data sets and sources
   - Collecting data and keeping them up to date is time-consuming

2. Where do we stand today?
   - Basic set of Performance Indicators already developed in NEWADA duo
Raising the effectiveness of waterway management

3. What do we intend to improve in Danube STREAM?
   - Review and update of Levels of Service and waterway management related performance indicators (incl. RIS related indicators)
   - Specification of quality management device to automatically generate performance indicators
   - Best practices in
     - waterway maintenance procedures
     - contracting of maintenance services
     - environmental assessments

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Waterway management tools

1. What is the problem?
   - Vertical clearance measurements not up to date/accurate
   - Data on fairway marking available only in HR, RS, RO, BG
   - Status of river training works largely unknown

2. Where do we stand today?
   - Working marking database for Lower Danube (HR, RS, RO, BG)
   - Databases on river training works in their infancy
3. What do we intend to improve in Danube STREAM?

- Pilot on vertical clearance measurement (RS+RO)
- Enhance marking application (HU+SK)
- Specify GIS database for river training works (Danube)
- Establish interconnections with international waterway asset management system, as developed in FAIRway Danube project (RS)

Project co-funded by European Union funds (ERDF, IPA)
Environmentally sound waterway management

1. What is the problem?
   - Waterway projects have to be in line with Water Framework Directives and other relevant environmental law
   - Environmental requirements are sometimes inhibitive

2. Where do we stand today?
   - Joint Statement / planning guidelines for integrative approach
   - Several good practice documents available
   - Existing cooperation with Danube Parks


Project co-funded by European Union funds (ERDF, IPA)
Environmentally sound waterway management

3. What do we intend to improve in Danube STREAM?
– Continued meetings/exchanges between waterway administrations and protected areas on national level
– Learn from best practices in Western Europe
– Preparation of report on environmentally sound waterway management
– Intersectoral conferences (to be jointly organised with DANUBEparksCONNECTED)