AtoN Pilot Implementation on the River Danube

Damir Obad
iENC Harmonisation Group
New Jersy, October 15.-17. 2013.

Agenda:

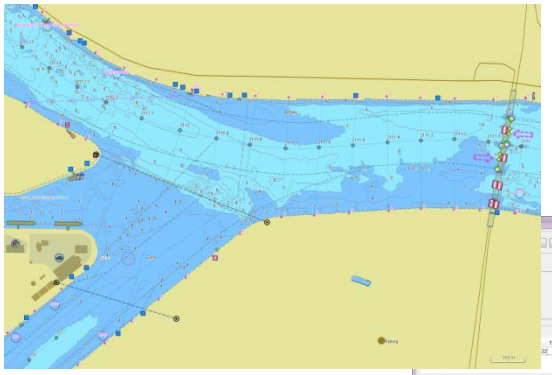
- RGO Communications Ltd. company profile
- NEWADA Duo Project
- Pilot Implementation
- Conclusion

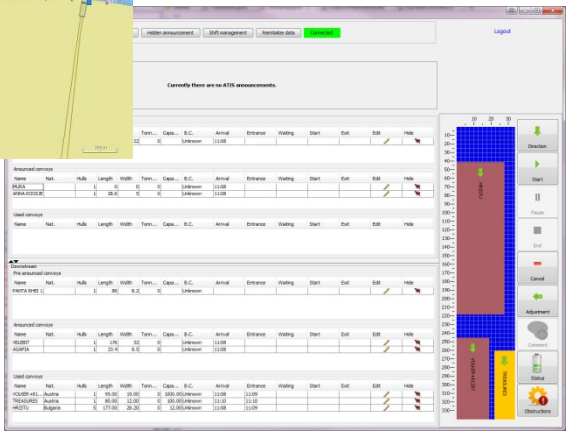
Company profile

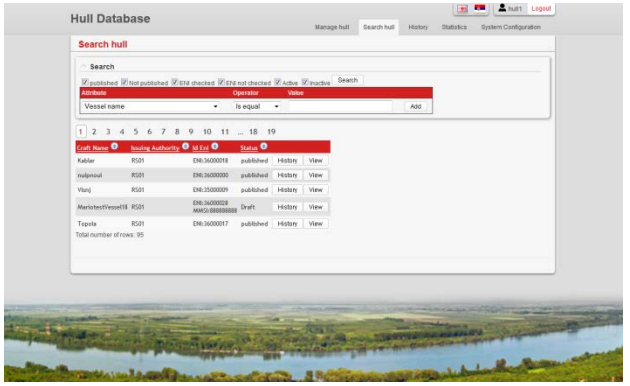
- Formed in 2008
- Key expertise:
  - RIS
  - System integration
  - Software development
  - System design
  - Project management
  - Consulting

Company profile

- Products:
  - VTMIS tools
  - dGPS
  - ERI
  - NtS
  - Hull DB
  - Lock Management System - LMS
  - Voice VHF
  - AtoN management system



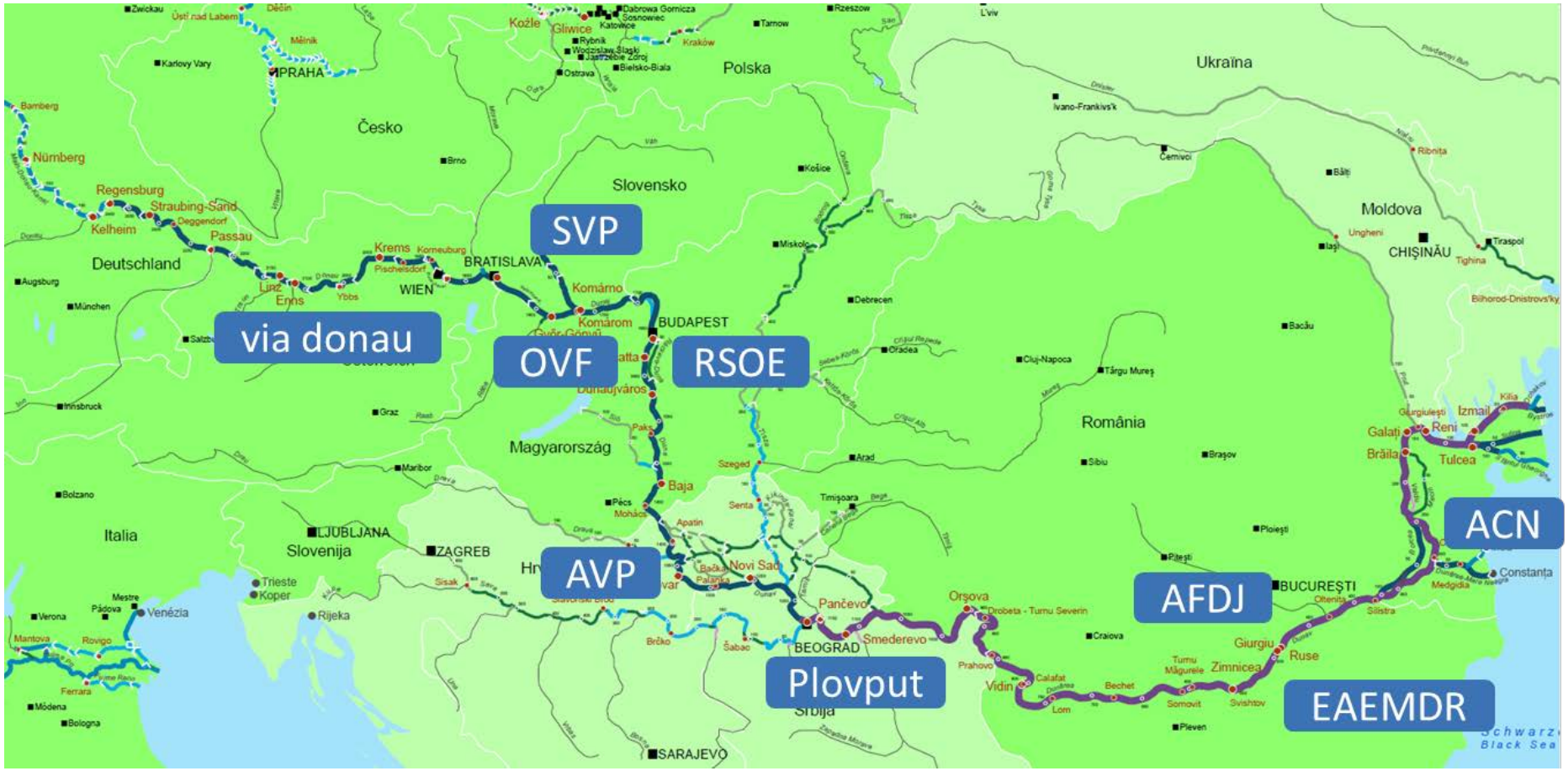




Agenda:

- RGO Communications Ltd. company profile
- NEWADA Duo Project
- Pilot Implementation
- Conclusion

Network of Danube Waterway Administrations

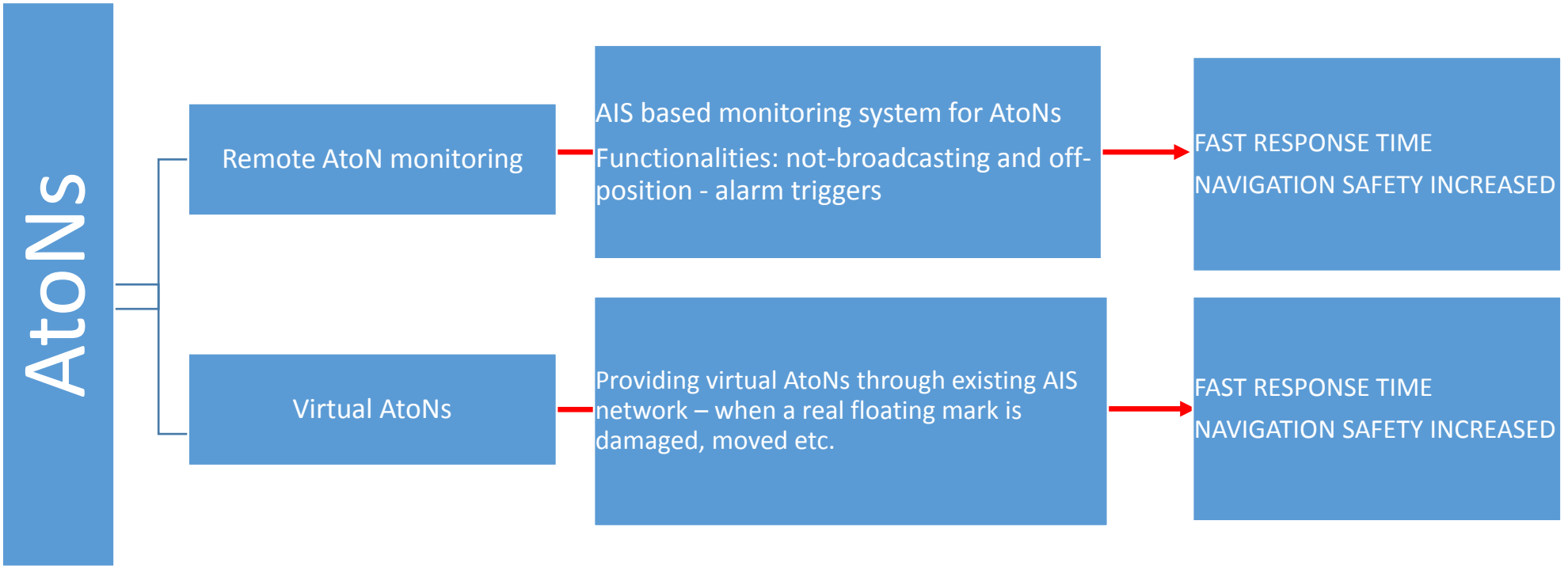


Project info

- Project duration — Oct 2012 - Sept 2014
- Project partners — 9 from 7 countries
- Total project budget — € 2,2 Mio.
- Objectives — Improve waterway management

  Facilitate ICT based services (FIS portal, bahimetric ENCs, AtoN)

WP 5.3.: AtoN


AtoNs
Remote AtoN monitoring
AIS based monitoring system for AtoNs
Functionalities: not-broadcasting and off-position - alarm triggers
FAST RESPONSE TIME
NAVIGATION SAFETY INCREASED
Virtual AtoNs
Providing virtual AtoNs through existing AIS network – when a real floating mark is damaged, moved etc.
FAST RESPONSE TIME
NAVIGATION SAFETY INCREASED

Agenda:

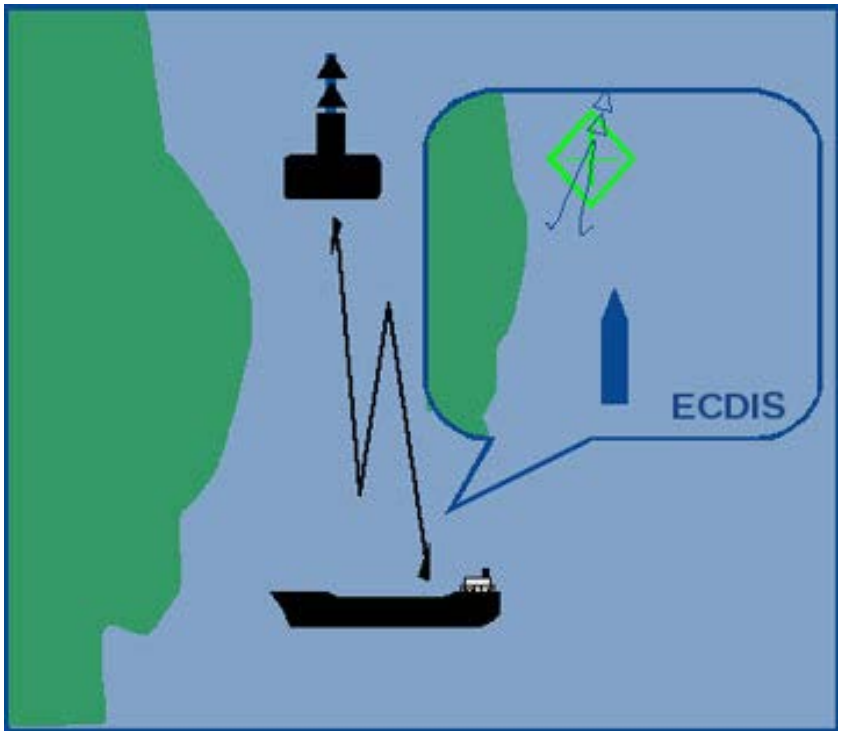
- RGO Communications Ltd. company profile
- NEWADA Duo Project
- Pilot Implementation
- Conclusion

AtoN – Aids to Navigation

- 3 Types:
  - AtoN AIS (types 1-3)
  - Synthetic AtoN
  - Virtual AtoN

AIS AtoNs

- AtoN AIS



AIS AtoNs

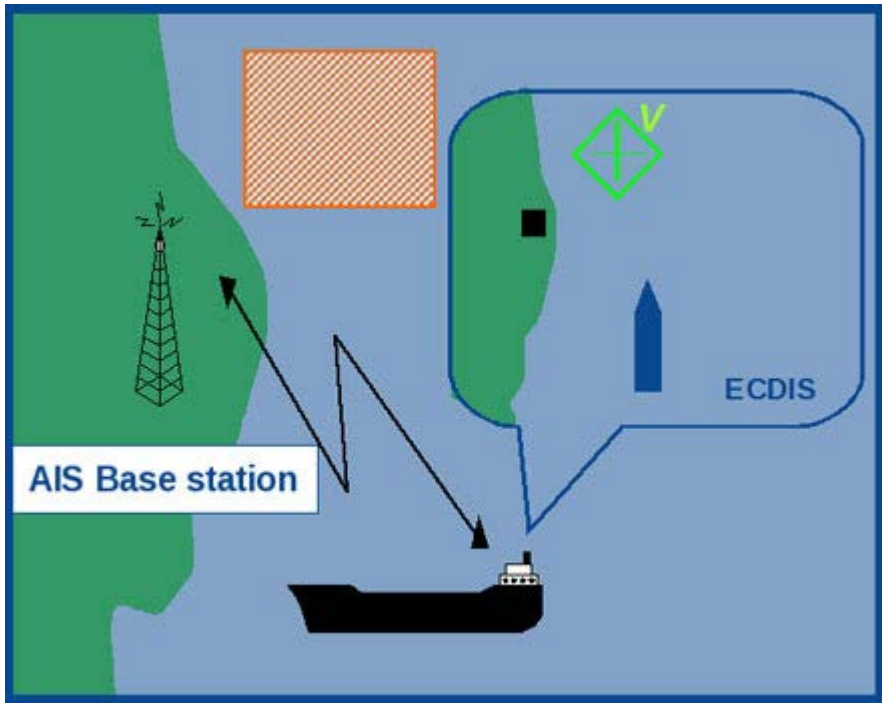
- Real Buoy
- AIS transponder attached
- Enables monitoring of the buoy’s position
- Better visualization on the ECDIS
- Better visibility in extreme situations
- Additional features possible
  - Water level info
  - Water temperature info
  - Other meteorological data

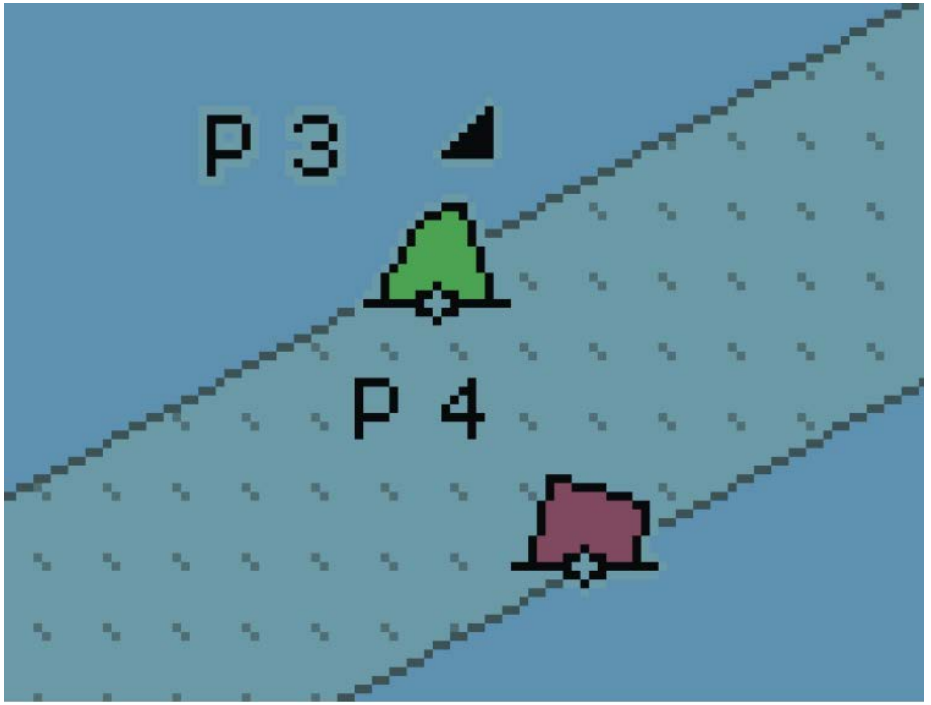
Implementation plan

- 11 Buoys in Croatia
- 18 Buoys in Serbia
- “Off position” and “NOT broadcasting” alarm
- Monitoring tool on ECDIS (vector) and table format (also in BG and RO)
- Statistical data
  - On/Off position ratio
  - Up/Down time
  - Definition of “On position” zone

Virtual AtoN

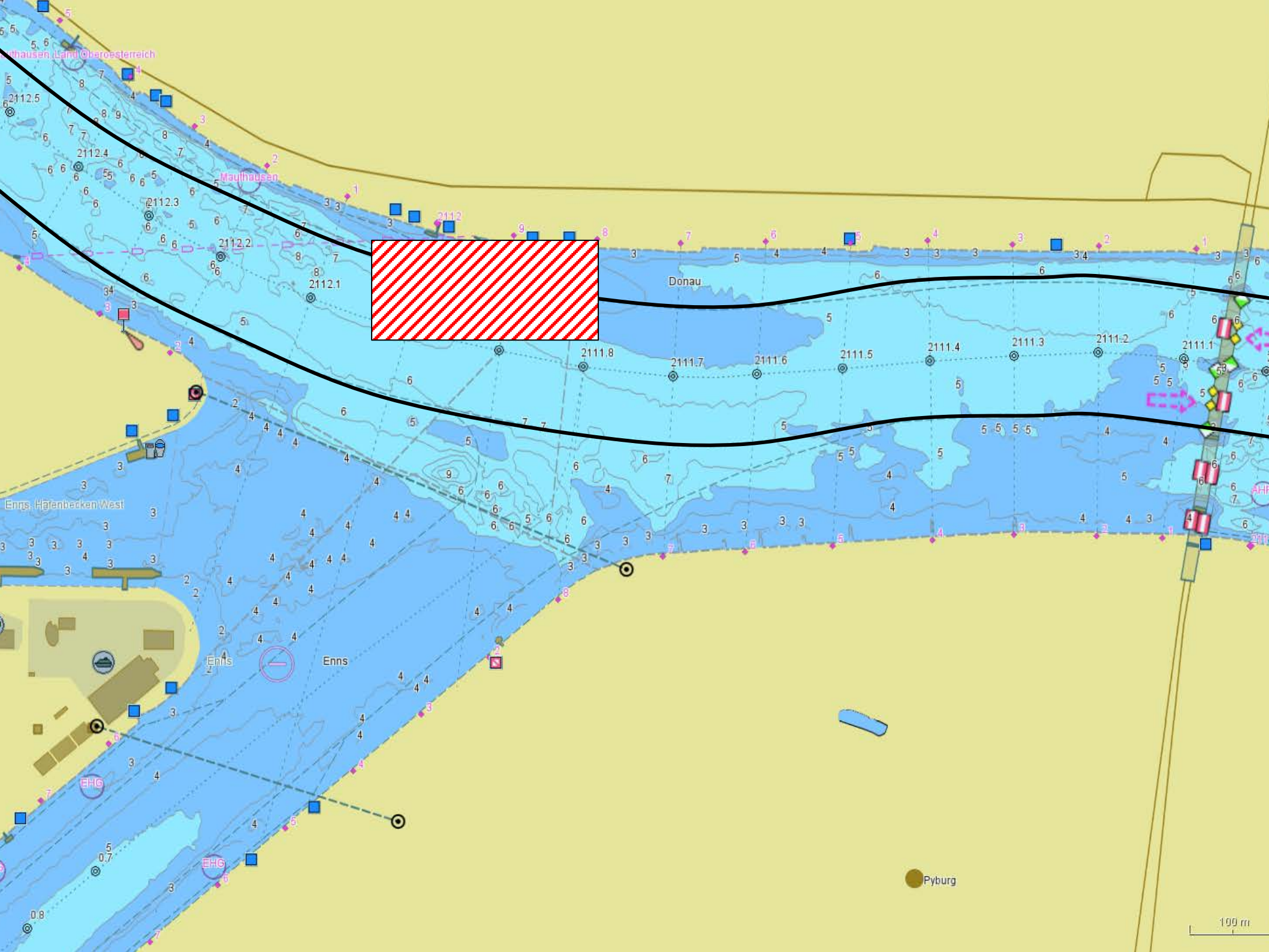
- Virtual AtoN

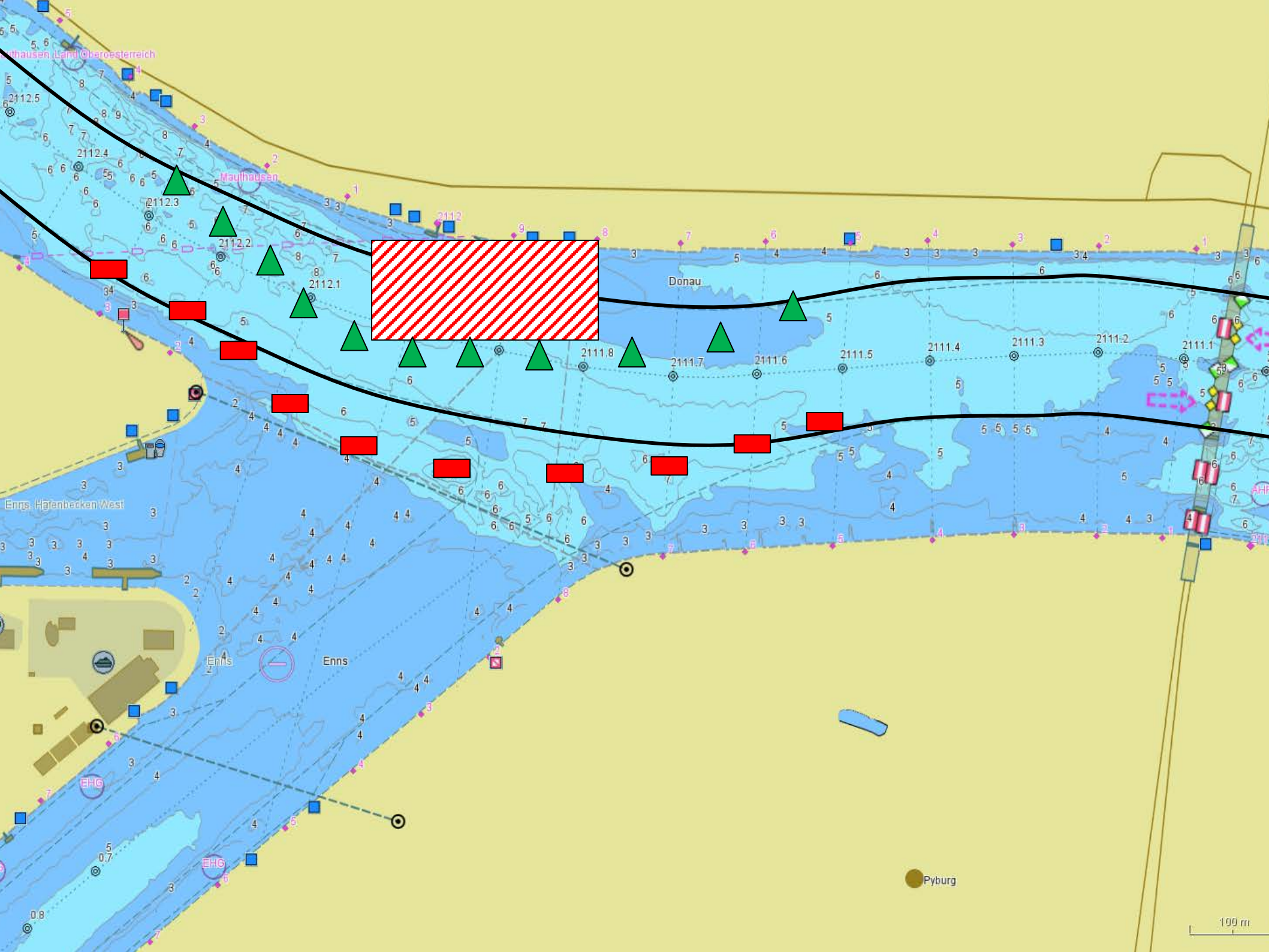


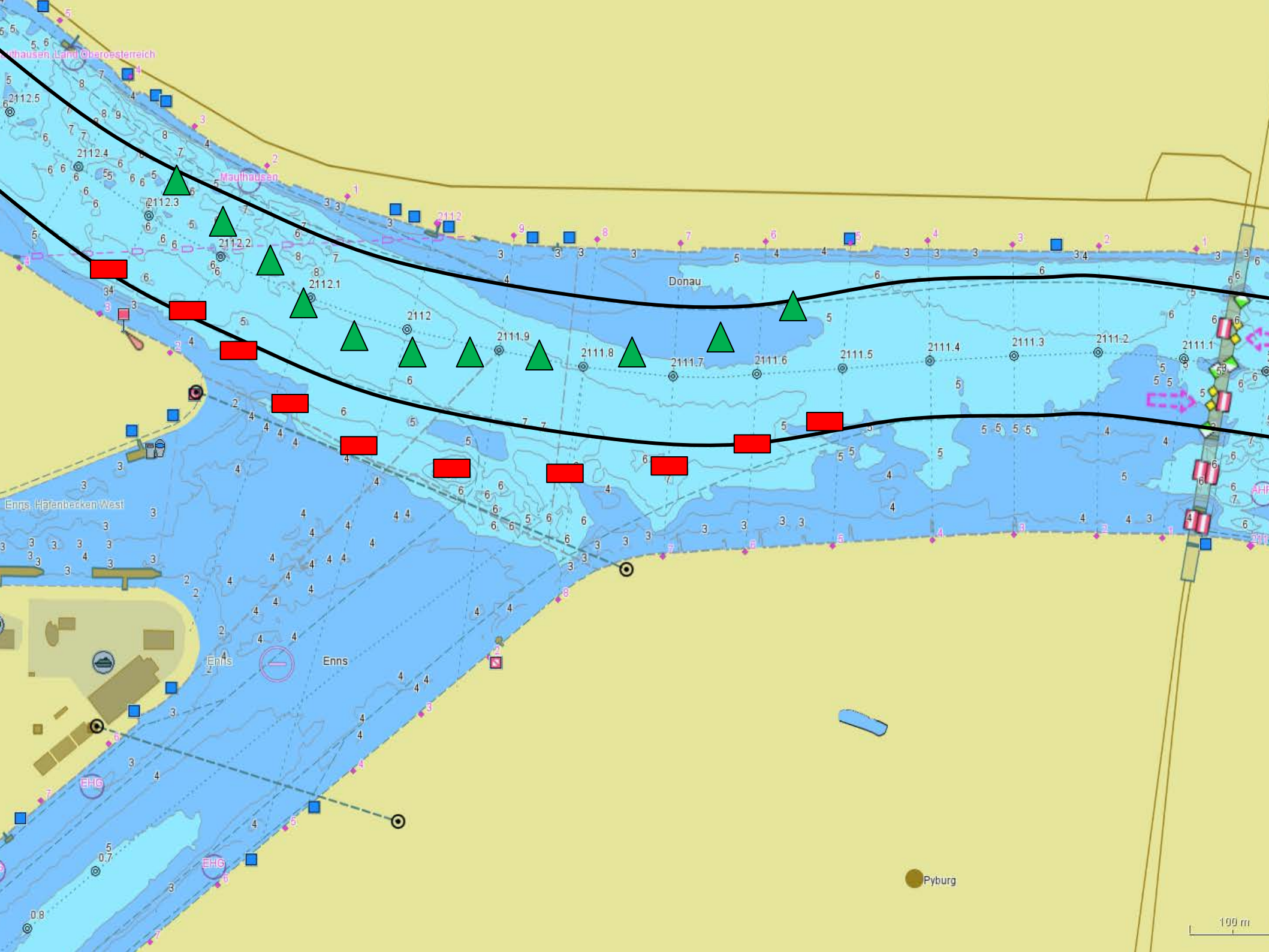


Virtual AtoN

- NO physical buoy
- Position data set by VTMIS center and broadcasted from AIS BS
- Visible only on the ECDIS (and as AIS target on the target list)
- No additional features possible


Donau
Maulhausen
Enns, Hafenbecken West
Enns
Enns
Pyburg
EHG
EHG
2112.5
2112.4
2112.3
2112.2
2112.1
2112
2111.8
2111.7
2111.6
2111.5
2111.4
2111.3
2111.2
2111.1
100 m


Donau
Enns
Enns
Pyburg
100 m


Mauthausen, Land Oberoesterreich
Mauthausen
Donau
Enns, Hafenbecken West
Enns
Enns
Pyburg
EHG
EHG
2112.5
2112.4
2112.3
2112.2
2112.1
2112
2111.9
2111.8
2111.7
2111.6
2111.5
2111.4
2111.3
2111.2
2111.1
100 m

Potential problems:

- No clear indication on the buoy type (left, right, crossroads…)
- Some skippers can see the AtoNs, some cannot
- Conflicts with the ECDIS chart (many issues)
- May confuse skippers not being aware why it has been published

Implementation plan

- Test platform in Croatia and Serbia
- Name encoding consisting of:
  - Buoy type “L”, “R”, “X”
  - NtS code
- Name encoding enables:
  - Clear definition of the buoy type
  - Eliminates confusion
  - Provides link to NtS thus enabling detailed info on reason of the buoy placement
  - Provides possibility to properly draw and color buoys

Agenda:

- RGO Communications Ltd. company profile
- NEWADA Duo Project
- Pilot Implementation
- Conclusion

Conclusion

- Virtual AtoNs already implemented in France
- Physical AtoNs project ongoing in Bulgaria
- Challenge of proper display
- Pilot projects necessary to gather experience
- Dissemination of results required
- Experts groups need to coordinate
- …
- AtoNs are coming and we need to standardize the usage as much as possible

Thank You!

RGO Communications Ltd.

Damir Obad

obad@rgo.hr

+385 91 5181 696