

ORCHESTRA Day, Stresa

12/12/2007

**ORCHESTRA: Developing a Unified Open
Architecture for Risk Management Applications**

WP 4.5

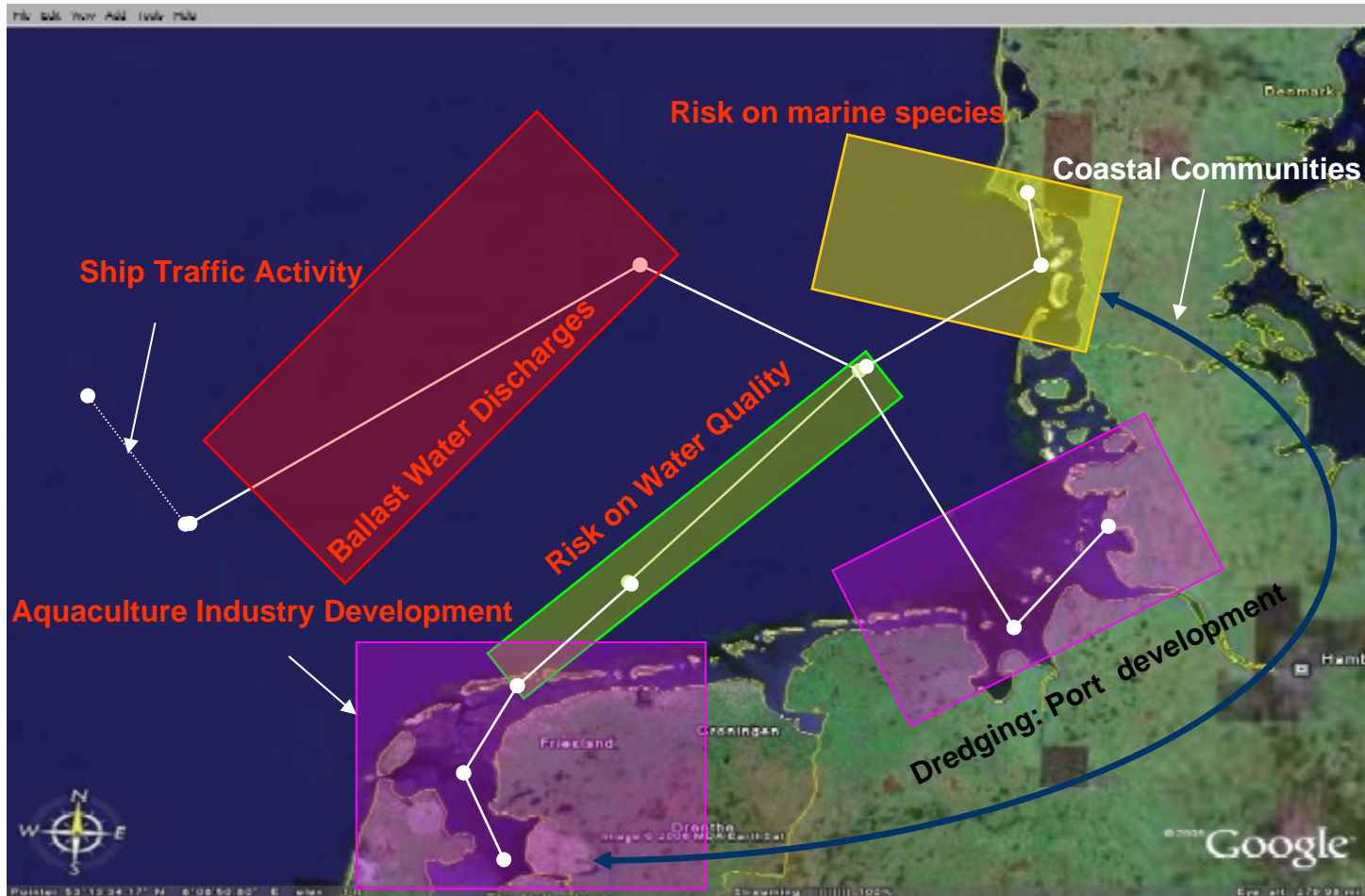
BMT German Bight Pilot

“ORCHESTRA for Integrated Coastal Zone Management”

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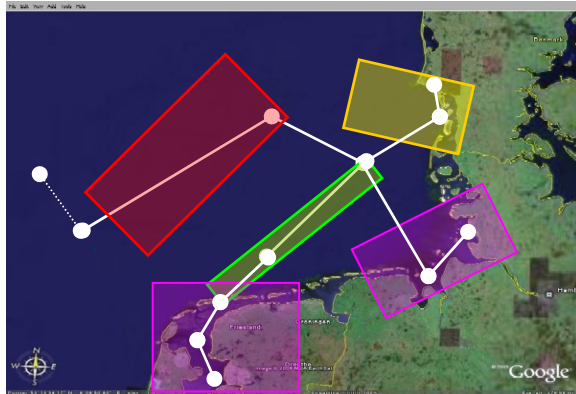
Orchestra For Integrated Coastal Zone Management



Environmental Risk Management at Coastal Zone: Ship Traffic Activity in the German Bight



Orchestra German Bight Pilot (WP4.5)



Definition of the Environmental Risks :

→ Ship Traffic Activity induces Multiple Environmental Risks

- ✓ In Orchestra we have addressed:
 - Anti-foulants leaching due to ship traffic activity (long-term risk of TBT etc..)
 - **But our work can be extended to the following risk assessments for new end-user communities**
 - **We will use the same pilot service architecture with a minimal additional development effort**
 - **These may include the following risks :**
- ✓ Ballast water discharges (Foreign marine species invasions..)
- ✓ Atmospheric emissions (NO_x, SO_x, CO₂ etc..)
- ✓ Oil spills..
- ✓ Chemical spills..
- ✓ Hazardous Cargo Material (Radioactive wastes etc..)
- ✓ Ship Collisions..
- ✓ ...etc..



Orchestra Pilot Team Development (WP4.5)



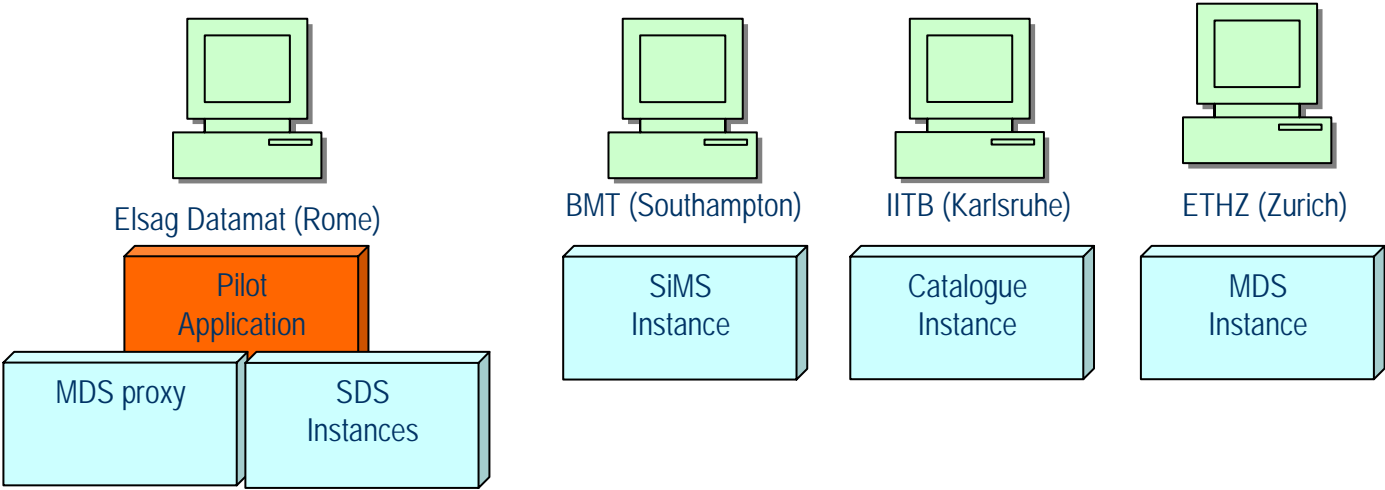
Orchestra Team for Environmental Risk Management on the German Bight Pilot

- ✓ BMT coordinating WP4.5
- ✓ Deployment of BMT STREAM simulator which is invoked by a Simulation Management Service
- ✓ Collective Deployment of Orchestra services with partners (ELSAG DATAMAT, IITB & BMT)
- ✓ End-users contacts and data access programmes performed by the team for access to data
- ✓ End-users/stakeholders community building performed during the project (AMRIE & BMT)





Software Architecture



Pilot End-Users Community

Trilateral Waden Sea Cooperation

Organisation Type: European

Umweltbundesamt (UBA)

Organisation Type: German federal administration

Bundesamt für Seeschifffahrt u. Hydrographie (BSH)

Organisation Type: Federal administration

Senckenberg Institut

Organisation Type: Research institute and museum

Schleswig-Holstein, Ministerium für Landwirtschaft, Umwelt und ländliche Räume

Organisation Type: German federal state administration

GKSS-Forschungszentrum Geesthacht GmbH

Organisation Type: Research organisation

Pilot Stakeholder Community

Dredging aggregate industries

Maritime transport industries

Government regulatory authorities

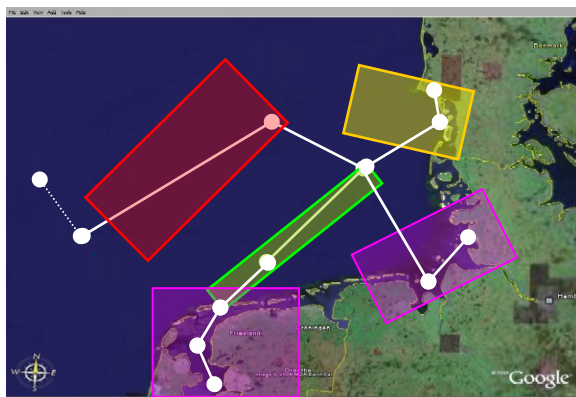
Research and educational organisations

Consultancy businesses





Orchestra German Bight Pilot (WP4.5)



The Driving Force and Motivation:

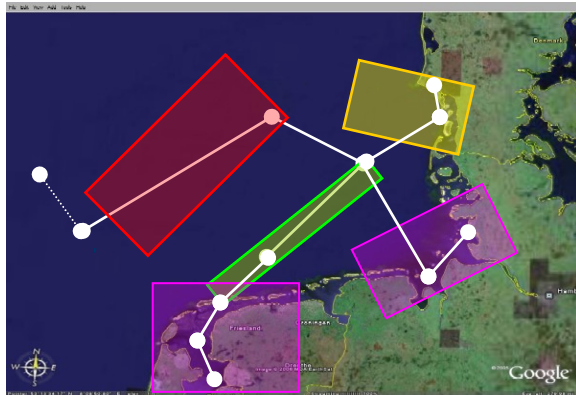
→ Increase demand for Geospatial Information to underpin 21st Century risk management practises and Regulations at Coastal Zone

- ✓ Add and integrate new geospatial data sources
- ✓ Add new modelling processes
- ✓ Improve and discover knowledge through data information interoperability
- ✓ Achieve open consensual decision-making status among Coastal Zone Communities
- ✓ Add new operators (new customers → business and market growth)



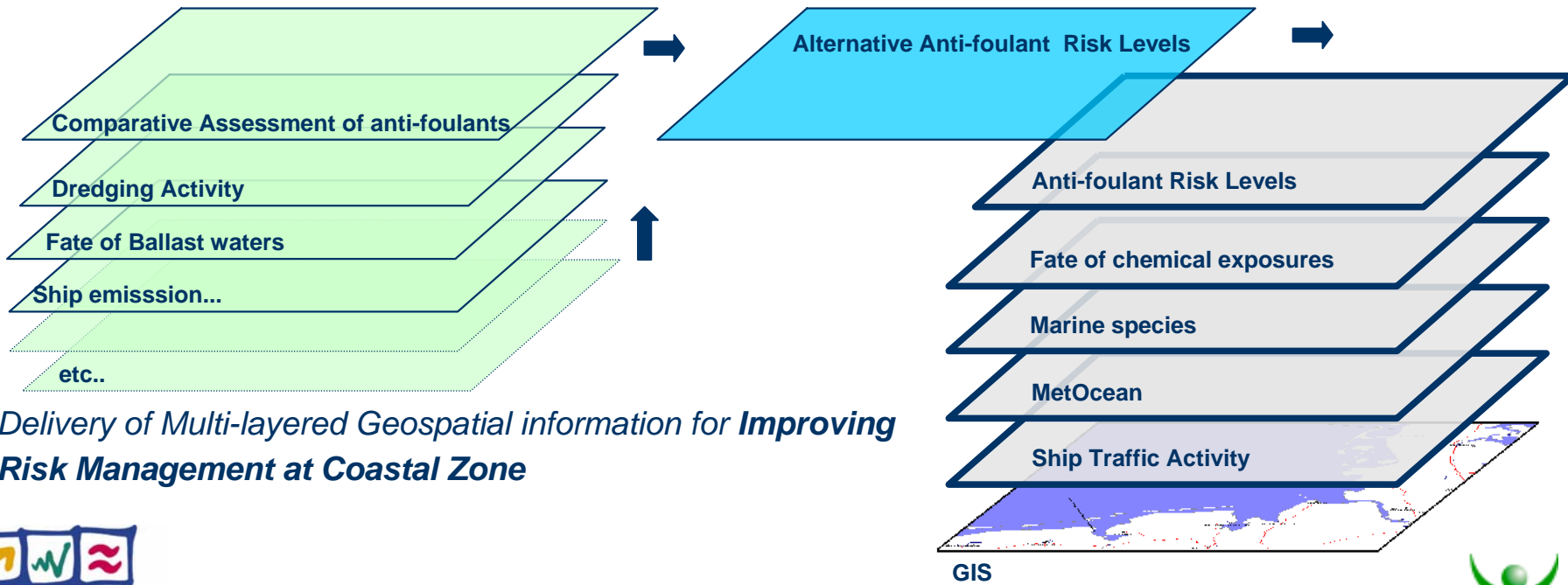


Orchestra German Bight Pilot (WP4.5)



The Driving Force and Motivation:

→ Increase demand for Geospatial Information in order to comply with modern integrated management requirements and Regulations at Coastal Zone



*Delivery of Multi-layered Geospatial information for **Improving Risk Management at Coastal Zone***

