

## Exploiting Oceans of Data for Maritime Applications



# BIG DATA OCEAN

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<http://www.bigdataocean.eu/>



NO SMOKING

# Data sharing challenges for maritime

- Undeveloped Blue Data sharing and linking between enterprises and entities of the maritime domain and other domains
- Lack of agreed standards and formats
- Huge potential from cross-sectorial blue data applications – still unexploited
- Out-of-the-box Big Data services, advanced queries and analytics

There is a need to build an open ecosystem of innovation and Maritime data sharing principles

# BigDataOcean Objective

Develop a Maritime Big Data Solution

that delivers out-of-the-box, value-added analytic services for maritime applications

by exploiting cross-sector data streams

# BigDataOcean Services



Find Maritime Data & Services



Create (real-time)  
dashboards / Reports



Query / Interlink Datasets



Service Composition



Visualise Datasets



Templated Service  
Parameterisation



Analyse Datasets



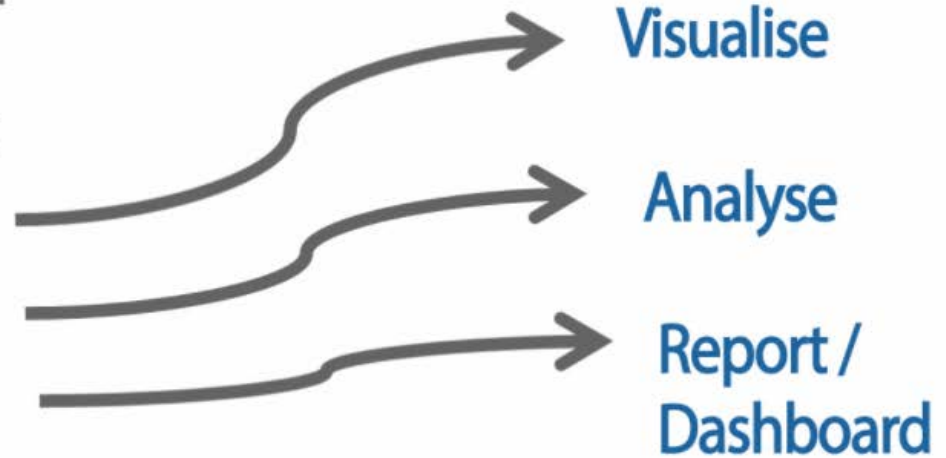
On - demand Services

# Data interlinking

Link on location, time, depth,...



Shipping company  
data



Data results

TIME	WAVE HEIGHT	LATITUDE	LONITUDE
2013-03-14	4	35.22	19.41
2013-03-16	4.2	32.51	27.18
2013-03-20	4.1	31.30	27.62
2013-03-21	3.2	33.20	22.56
2013-03-22	4	34.57	18.29
2013-03-23	5.1	36.48	13.42
2013-03-24	4.6	38.44	8.25
2013-03-25	4.4	42.22	5.37
2013-03-27	4.5	41.1	6.32

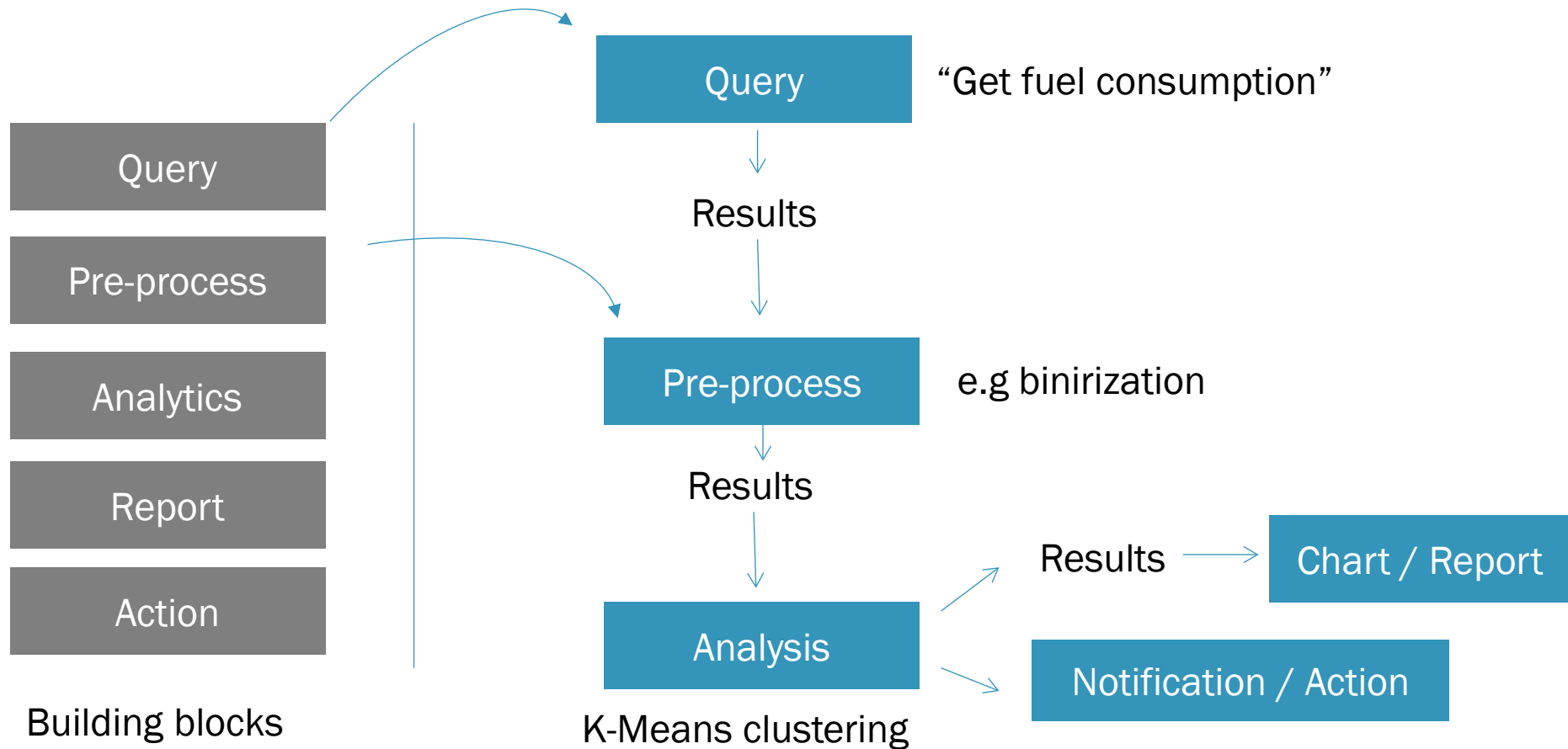


# BigDataOcean Services



## Service Composition

Synthesize service out of BigDataOcean Building blocks



# Case 1 - Fault Prediction & Proactive Maintenance

FOINIKAS SHIPPING  
COMPANYNE

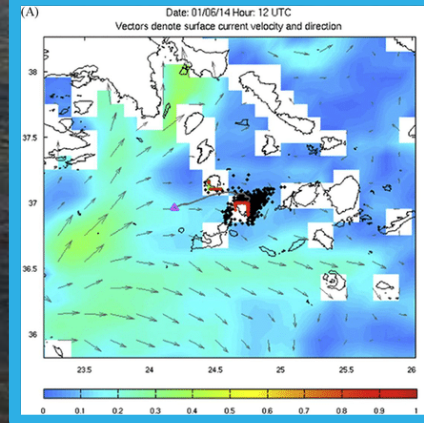


**ANEK LINES**





# Case 2 – Mare protection – Oil Spill dispersion forecast



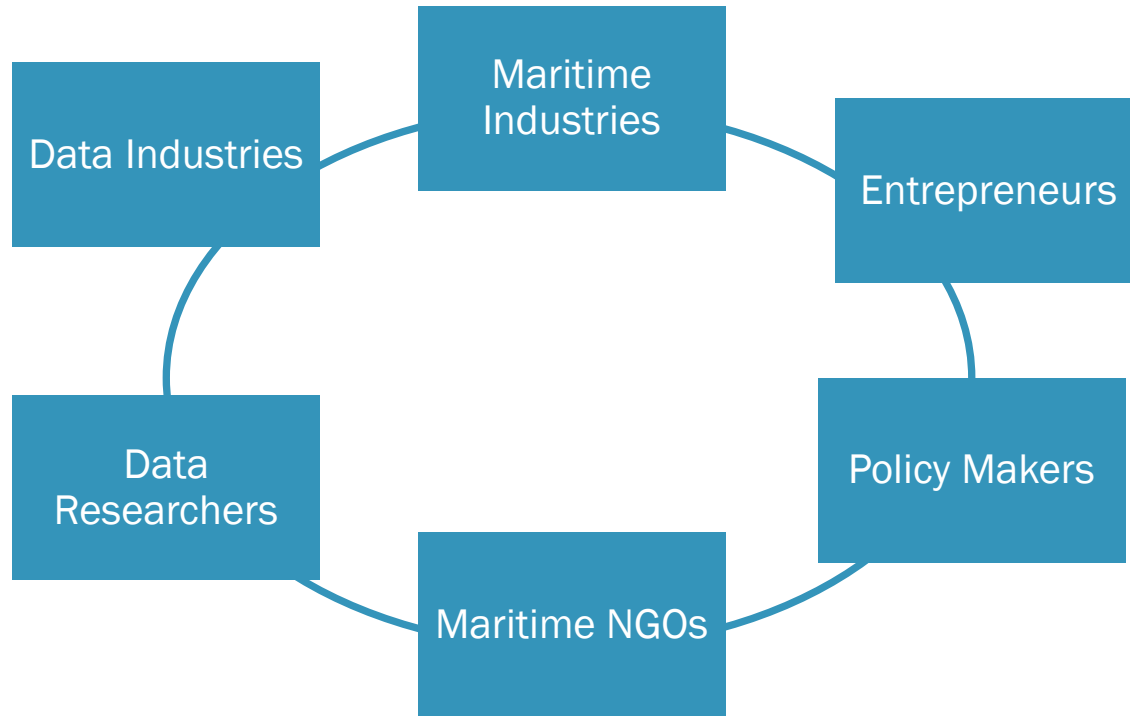
# Case 3 – Wave Power as Clean Energy Source



# Case 4 – Security and anomaly path detection



# Opportunities of data sharing



Data sharing enables the generation of more

- **factual and evidence-based analytics**
- **decision support models**, and
- **new business services** focused on real-time collaboration, knowledge sharing and notifications



# Come visit our booth to discuss some more!

- Pilots, services and use cases on maritime data
- Performing queries across multiple data sources
  - Different structure, metadata
  - Context of the data (e.g. data acquisition method and procedure)
  - Units , spatial and temporal properties of the data
  - Different granularity
- Big data performance and benchmarking
  - Pre-process, storage and analytics benchmarking
  - Balance between query flexibility and performance

**BIG DATA**  
**OCEAN** Exploiting Oceans of Data  
for Maritime Applications



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