

Towards a smart port: A Digital Ecosystem Creation

by

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**THESSALONIKI
PORT
AUTHORITY S.A.**



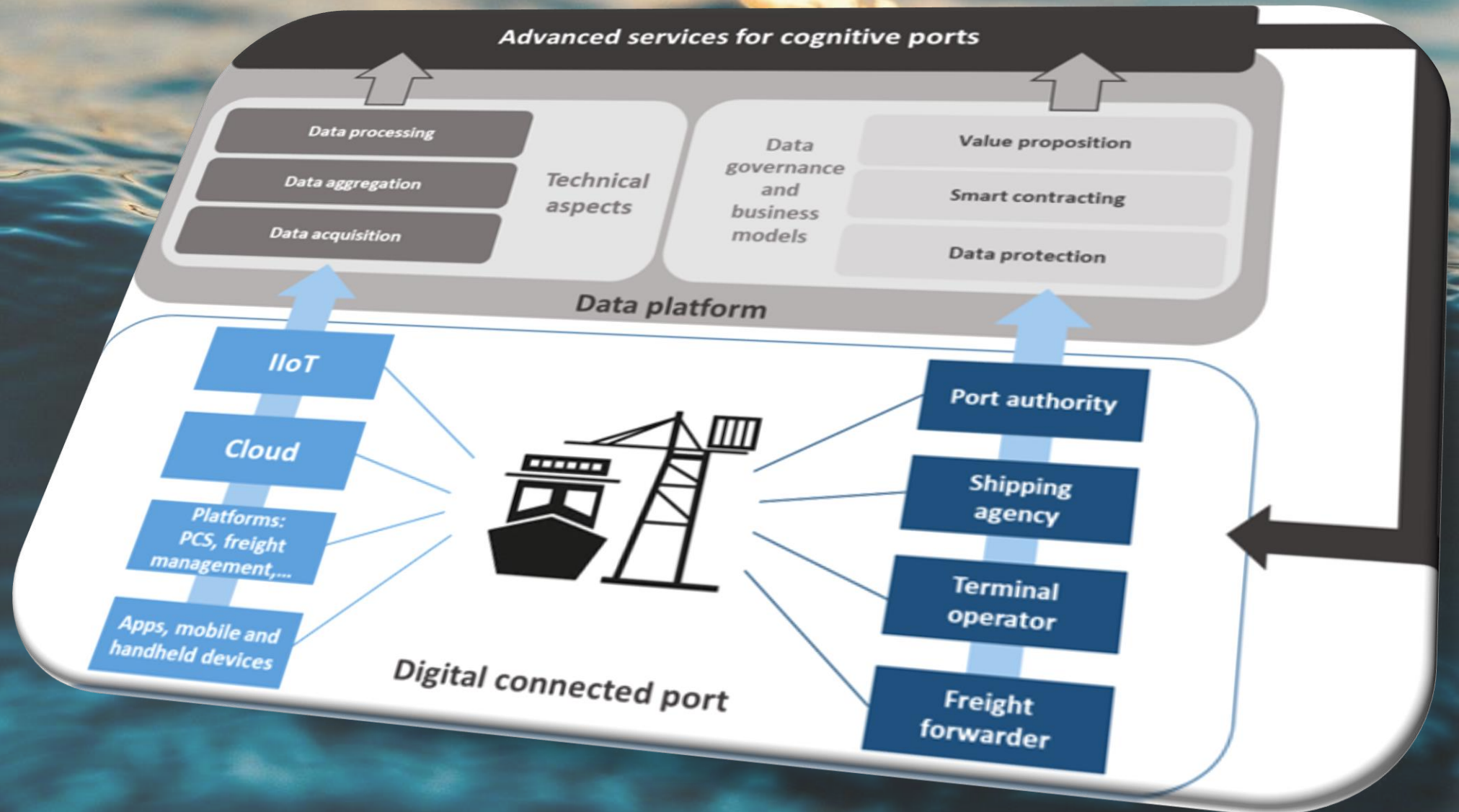
Seaports of the Future

*Transform European seaports from **connected**
and digital to smart and cognitive*

*by providing a **secure environment for the
aggregation and integration of data** coming
from the different sources*

*so that the whole port community could
benefit from this data in order to improve
their processes, **offer new AI based and
data driven business models.***

How to achieve this ?



DataPorts Conceptualization

✓ analytics services for supporting the development of descriptive, predictive and prescriptive models to enhance decision making

Data Analytics and AI services

✓ data governance rules for...

Data Abstraction and Virtualization

✓ data as a service paradigm for properly delivering data to potential consumers, hiding the complexity of the underlying infrastructure

Blockchain

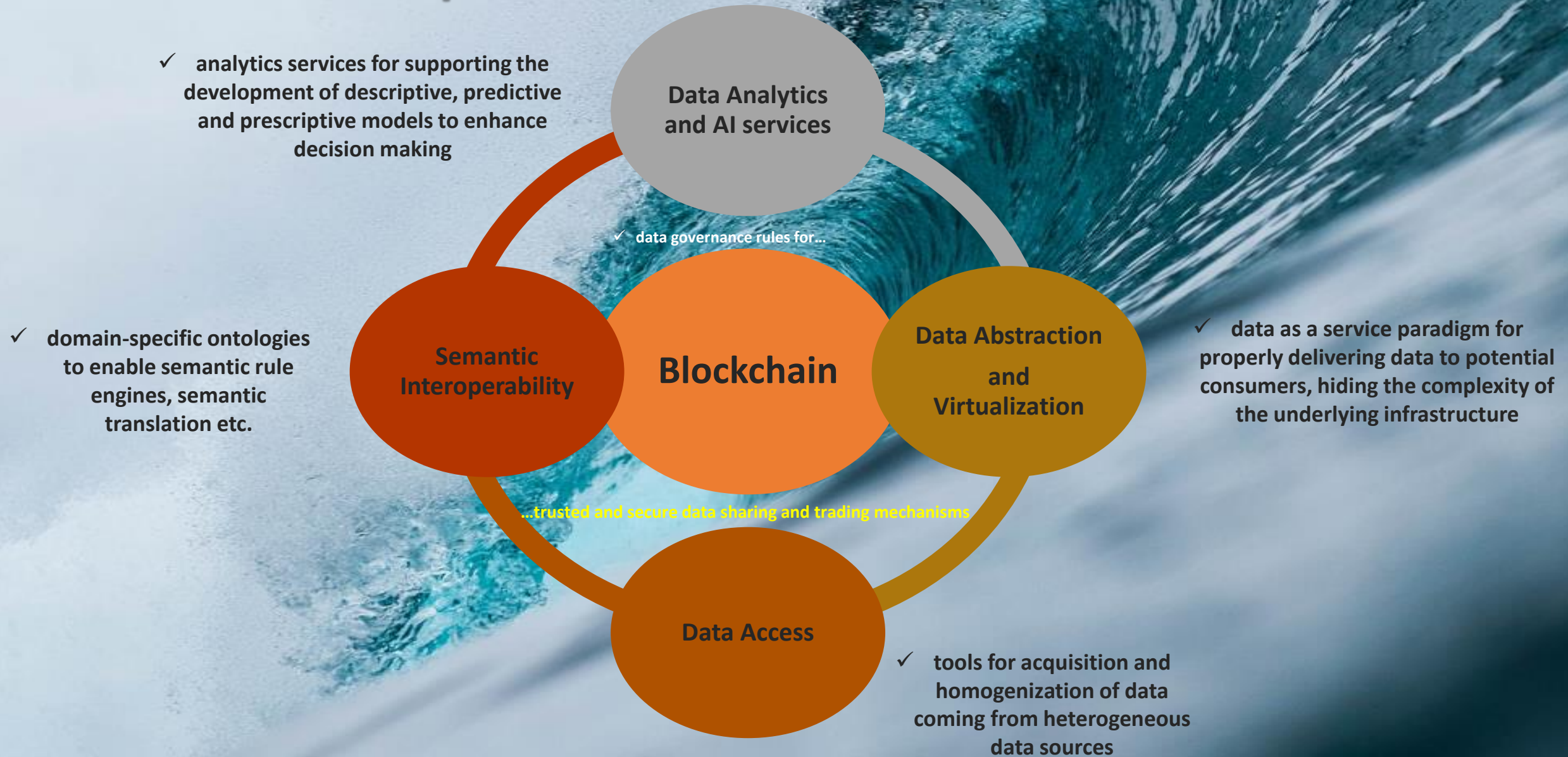
...trusted and secure data sharing and trading mechanisms

Data Access

✓ tools for acquisition and homogenization of data coming from heterogeneous data sources

Semantic Interoperability

✓ domain-specific ontologies to enable semantic rule engines, semantic translation etc.



“Data Privacy vs Data Utility”

Scope

To motivate more people share and benefit from their personal utility and behavioral data through a trusted data platform

Goal

Keep data subjects fully informed, including them as actual stakeholders and co-owners of the data archive

Challenge

How to quantify and retain the leakage of sensitive information within an agreed threshold in order to give people full control of the risk that they take

A dramatic, low-key photograph of an industrial construction site at dusk or dawn. The sky is filled with heavy, textured clouds, with a soft light source creating a glow on the horizon. In the foreground and midground, the silhouettes of large industrial structures are prominent. On the left, a tall, cylindrical tower rises, with a worker visible on a platform. A large crane arm extends from the left towards the center, holding a heavy, rectangular object. To the right, another tall crane structure is visible. In the background, a cooling tower and other industrial buildings are silhouetted against the sky. The overall mood is one of intense industrial activity and scale.

What are the Benefits ?

Create a Seaport Ecosystem of the Future

Data Platforms
in
Maritime and Shipping

Public Authorities
/
Policy Makers

Freight Forwarders
/
Goods Tracking

Trade Associations

Culture / Museums

Coast Guard

Customs Authorities

Transportation

Technology and
Service Providers
SMEs / Startups

Shipping Companies

Tour Operators

Researchers



Opportunities

Business

- Open data marketplaces
- Increased availability of vast and heterogeneous data ecosystems for AI.
- Innovative data-driven business models.
- 'safe' personal data.

Citizens

- Full control over personal data.
- Access to services.
- Personal data monetization.

Science

- Increasing socio-economic impact of research data across domains and borders.
- Open innovation through data availability.
- Monetization opportunities

Government & Public Bodies

- Better government services.
- AI-enhanced digital services.
- Real-time European statistics
- Access to government services.

For Data Providers...

Large volumes of Data (own / handle)

Strengths

Opportunities

Analytics as a
Service

Infrastructure
planning /
operations

New Services
or Products
improvement

New revenue
streams

Better
customer
insights

For Data Consumer...

Access to Information / Answers

**Access to
Data
Marketplaces**

**Better
Customer
insights**

**New forms of
Collaboration**

**Improved
Decision
Making**

**Expand
customer
base**

Challenges

- ❖ **IP protection, regulatory complexity, the development of data agreements and privacy concerns.**
- ❖ **Risks and potential harms of sharing corporate data**
 - ✓ collecting **inaccurate**, old or “dirty” data affecting data quality
 - ✓ collecting **unauthorized data** or intrusive collection from individuals and organizations
 - ✓ **incomplete** or non-representative sampling
 - ✓ **insufficient**, outdated , **incompatible** data sets
 - ✓ **lack of interoperable cultural** and institutional norms and expectations
 - ✓ **loss of regulatory licenses**, standards and certifications
 - ✓ **industrial damages**

Concluding ...

**Opportunities
from entering
such a rapidly
evolving market**

**Data
Providers**

**Data
Consumers**

**Data
Prosumers**

A dramatic industrial scene at dusk or dawn. In the foreground, a large crane's bucket is suspended in mid-air by cables. To the left, a tall, complex industrial structure, possibly a cooling tower or chimney, rises into the sky. In the background, a city skyline is visible, including a prominent cooling tower and several smokestacks emitting plumes of smoke. The sky is filled with dark, textured clouds, with a soft glow of light from the setting or rising sun. A large, dark speech bubble with the text "Thank you!" is positioned in the center-right of the image.

Thank
you!