

# KNOWLEDGE TRANSFER

## The key to creating societal and economic benefits from marine observations

An effective **marine observation and data-sharing system**, delivering societal and economic benefits requires the coordination of efforts between multiple actors in the marine knowledge value chain. These include the scientific community, oceanographic data centres, federated data infrastructures, national and regional agencies and authorities with competency for marine environment and maritime economy, actors from civil society and the private sector.

Key to this change is effective knowledge transfer at all stages of the marine observations to user application value chain, from the development and deployment of innovative new sensing technologies to the application of marine data and products by stakeholders from the public and private sectors and by civil society.

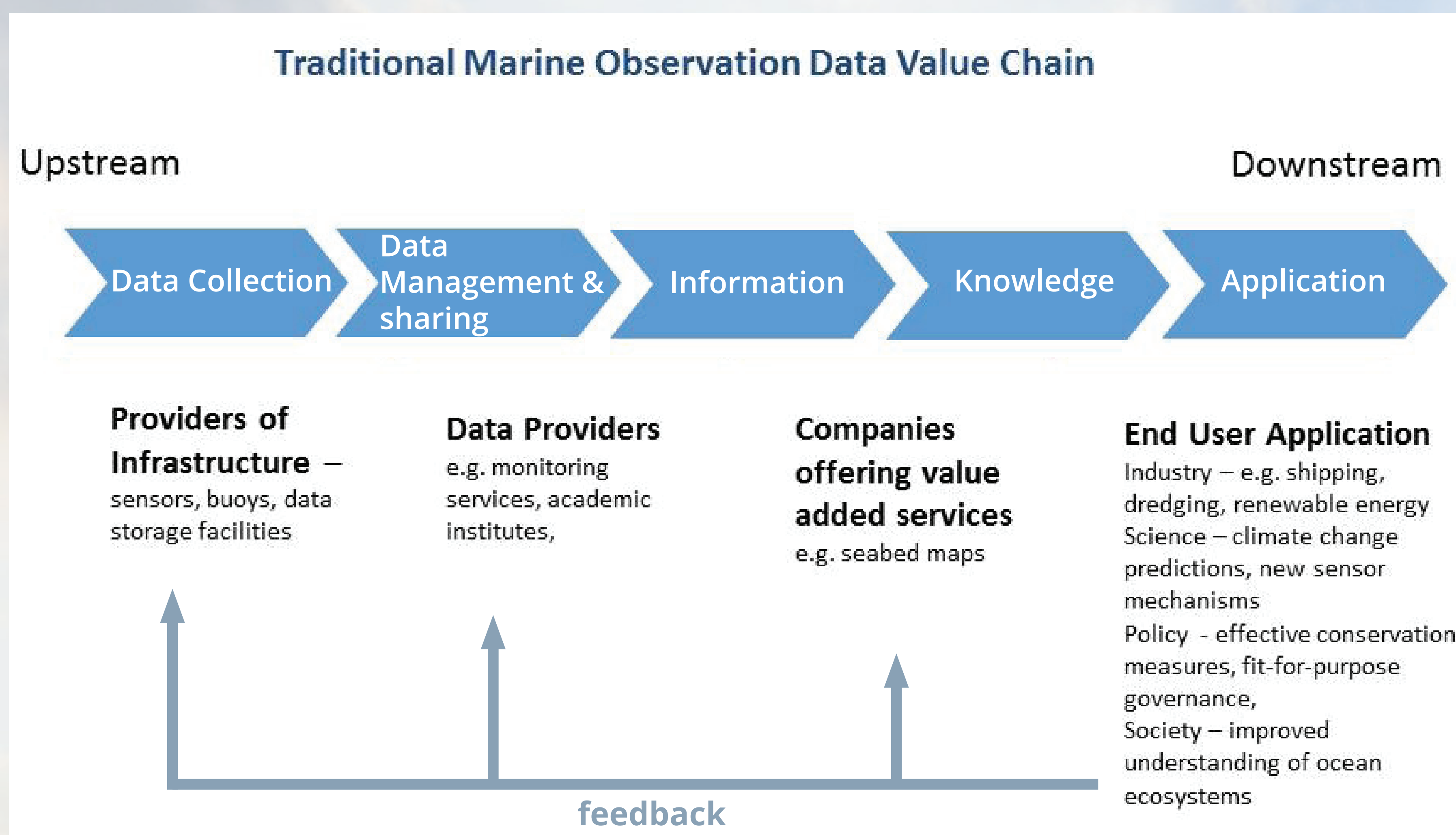


Figure: The marine knowledge value chain

### Capturing the Data: Innovative Marine Sensing Technologies

There is a need for a concerted effort to create a supportive environment to stimulate progress of maritime sensing technology from identification of requirements, research and development up to full market uptake and application by end-users from public sector, research, business and society as whole.

This is important because there are significant opportunities for Europe to develop a dynamic and thriving market for maritime sensing technologies. Advances in sensor technology will allow us to do more and do it more cheaply.

### Marine data sharing and utilisation

The mere collection, safeguarding and sharing of marine observation and monitoring data provides huge societal benefits. Data and information on the state and variability of the marine environment is crucial for understanding changes that may result from human activity, including the effects of human-induced climate change and ocean acidification. Long-term times series are particularly valuable to support both scientific research to elucidate the causes, drivers and impacts of environmental change and, in turn, evidence based policy making.

### Changing the status quo: Challenges, solutions and ways forward

- more effective and targeted stakeholder engagement is needed to move beyond the traditional players in the marine observations landscape;
- mapping potential users and ensuring that products meet their needs by involving them in product development;
- understanding the policy landscape and ensuring that product development is fit-for-purpose in this context and;
- ensuring that marketing and brokerage is considered as an important aspect of bringing products to market.

For this potential to be realized, it is important to ensure that the significant investment (both at EU and national level) in sensor technology development, monitoring programmes and data-sharing initiatives is targeted at the right areas, is focused on addressing real-life marine monitoring challenges and opportunities, and that new intellectual property (IP) generated is taken up to drive towards competitive and marketable sensor technologies and state-of-the art data-sharing initiatives to realise Europe's full potential as global leader in marine observations and data sharing.

### EMODnet data resources at the basis of marine knowledge generation and transfer

The **European Marine Observation and Data Network (EMODnet)** aims to unlock fragmented and hidden marine data resources, making these available to individuals, organisations and businesses without restrictions.

EMODnet is a network of more than 150 organisations, supported by the European Commission, who work together to observe the sea, process the data according to international standards and make that information freely available as interoperable data layers and data products.

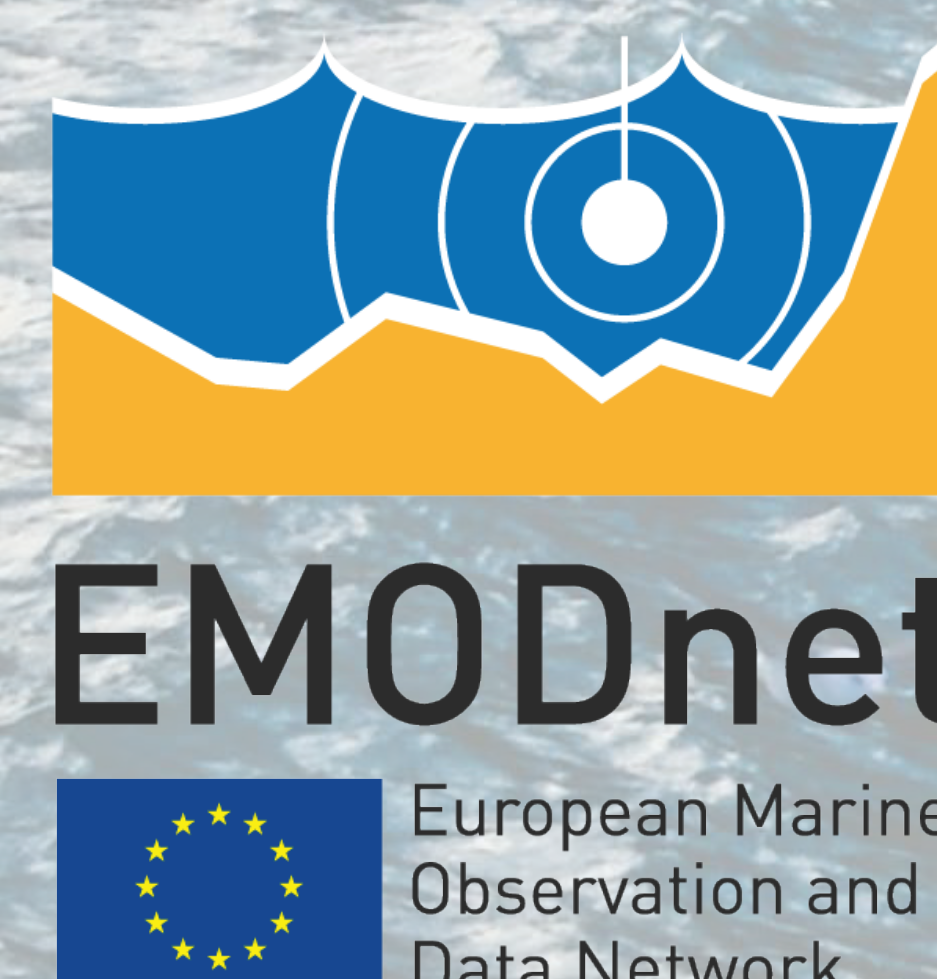
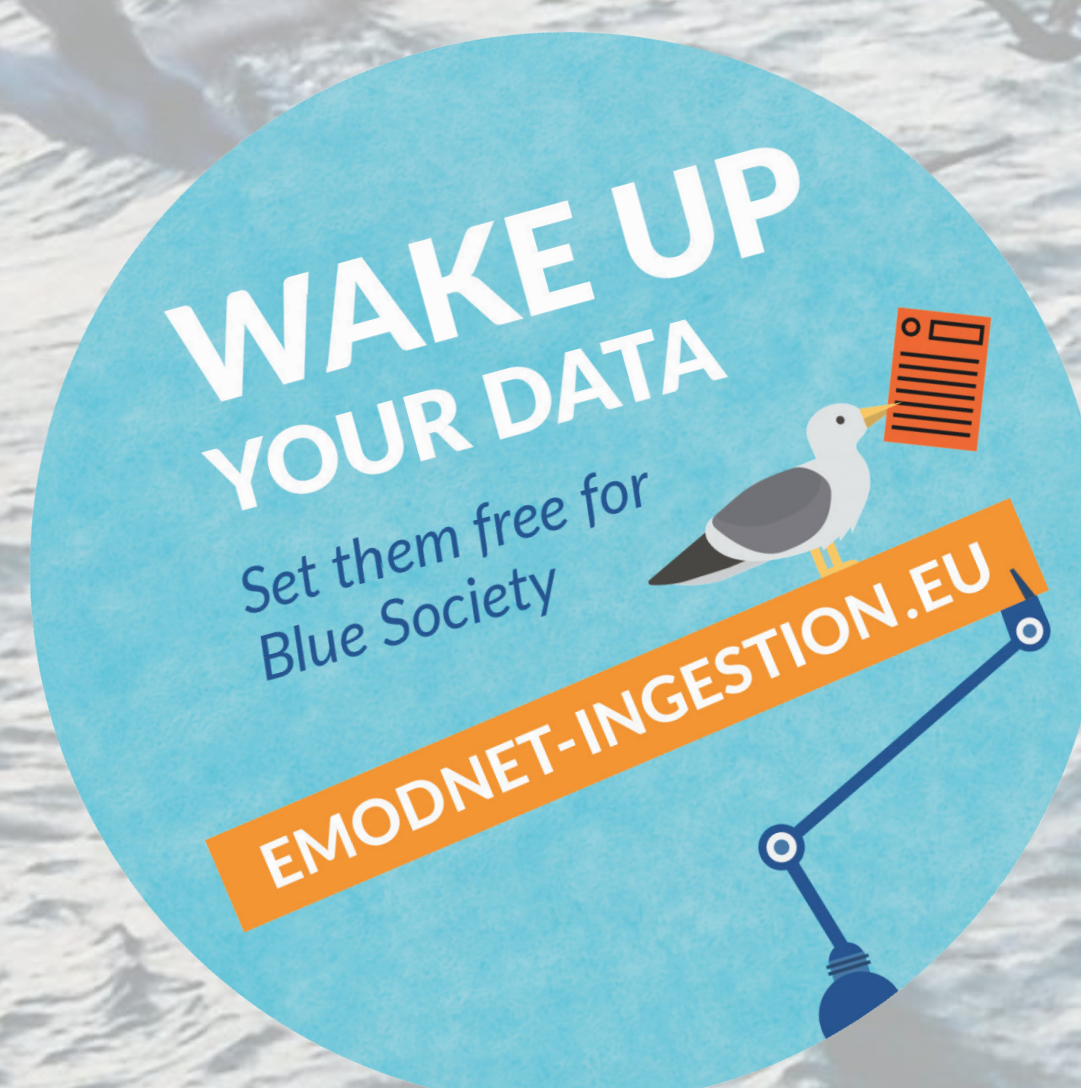
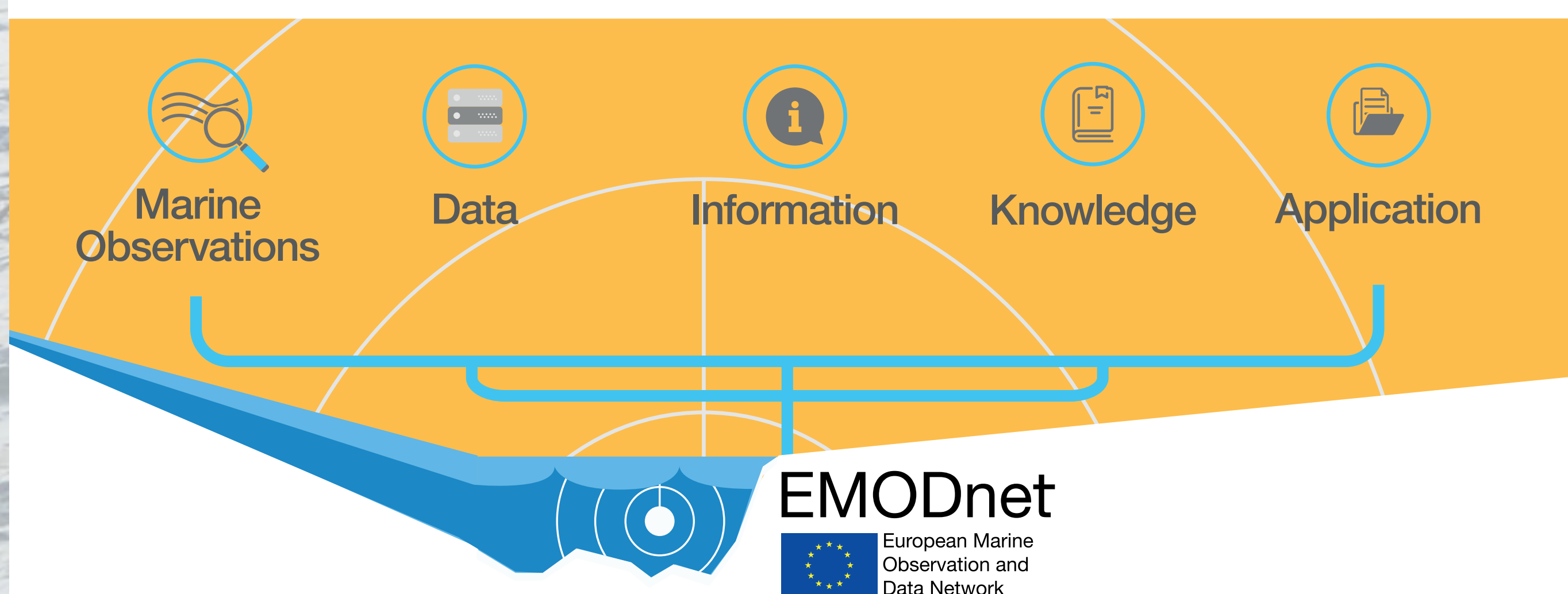
This **'collect data once and use many times'** philosophy benefits marine data users, including policy makers, scientists, private industry and the general public.

Our European marine data sharing policy already saves costs to offshore and coastal businesses and offers a range of new opportunities for innovation and blue growth.

EMODnet provides many advantages for professionals from the public and private sector, the research community and civil society.

- **Save costs and increase productivity:** You can avoid the costs of repeated data collection by an improved access to already existing data in compatible formats.
- **Improve knowledge and reduce risks:** Better access to data improves forecasts of the behaviour of the seas, reducing costs of protecting life and property in coastal areas and offshore.
- **Develop new products and services:** Anyone (including SMEs) can build value-added services using data from different sources.
- **Add value to your own data:** Sharing data with EMODnet allows your own data to be combined with data from others to generate better value-added product and information.

#### From raw data to real-life applications



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