iDEFINE

Interconnected Digital Fairway Navigation Experiment

31.5.2018

This project is to be included to D4V programme

Safe last mile navigation channel.

iDEFINE

interoperable Digital Fairway Navigation Experiment

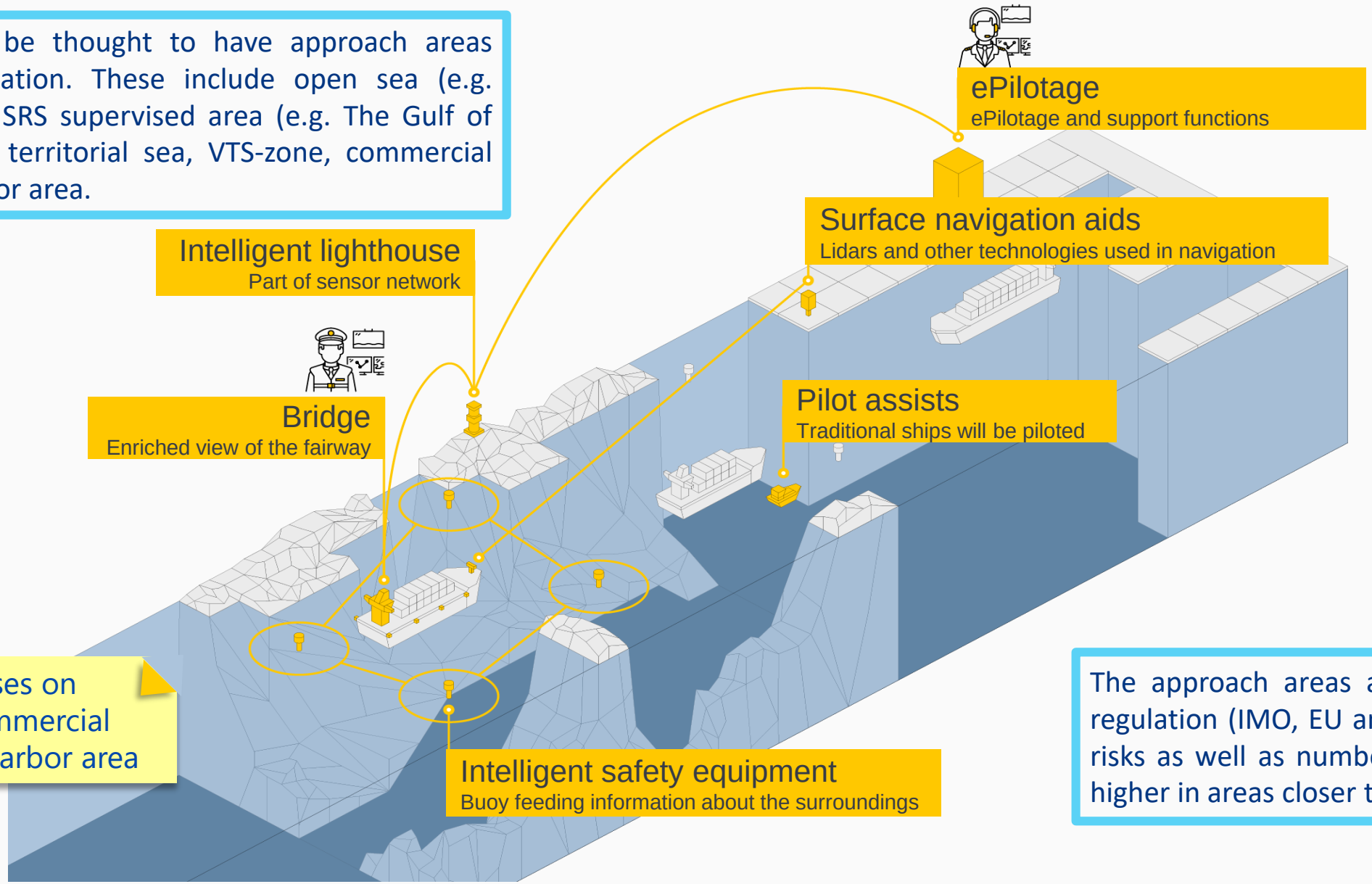
- The mission of iDEFINE is to create a model for safe, sustainable and customer-centric next level fairway navigation and decision-making environment that benefits existing fleets and lays the foundation for future autonomous vessels.

- Target is to disrupt the global maritime business by creating a safe last-mile navigation channel using new knowledge in Human-Machine interaction.

- The program utilizes multidisciplinary innovation and research for multipurpose maritime business and society.

One Sea

Shipping can be thought to have approach areas similar to aviation. These include open sea (e.g. North Baltic), SRS supervised area (e.g. The Gulf of Finland), EEZ, territorial sea, VTS-zone, commercial fairways, harbor area.



iDEFINE focuses on VTS-area, commercial fairway and harbor area

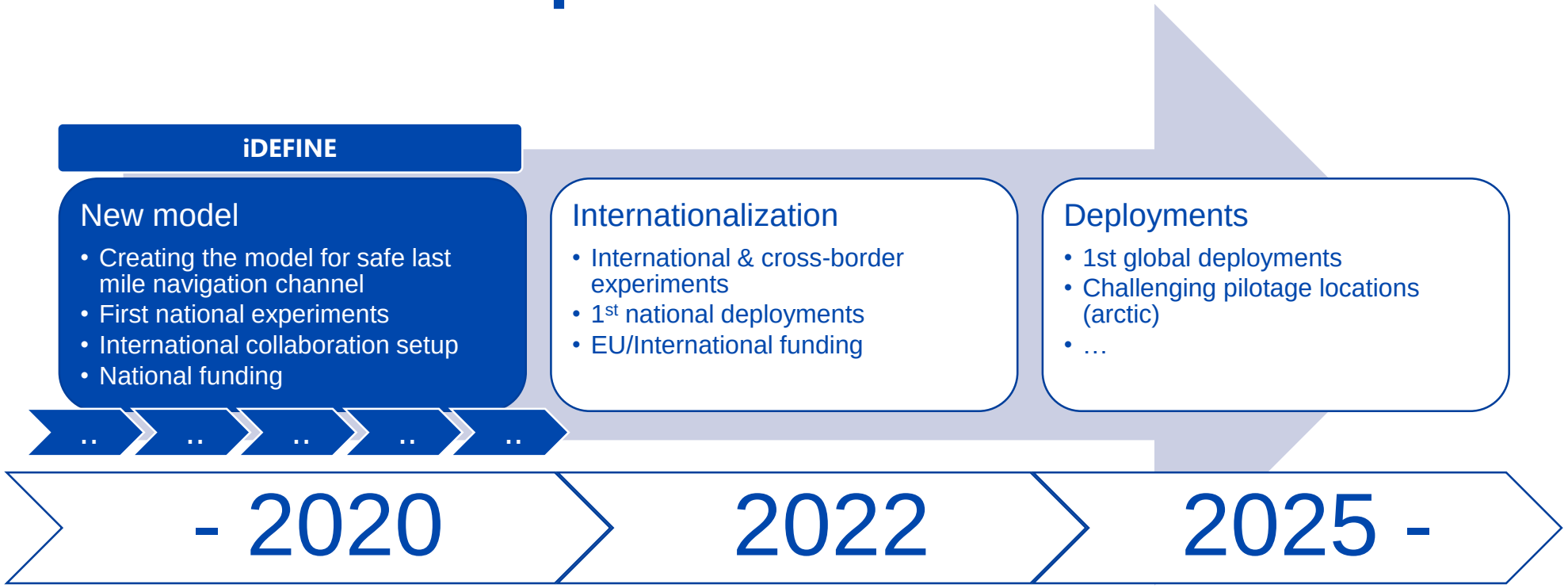
The approach areas are governed by regulation (IMO, EU and national). The risks as well as number of players are higher in areas closer to the coast line.

DIMECC One Sea

"iDEFINE project relies on applied research to find solutions for next level navigation"

		Ships	Fairways	Ports
		A holistic look on the existing and future ships' capabilities is of vital importance in ensuring safe and sustainable navigation.	*Fairway is the navigation channel by which the existing and future autonomous ships use to travel safely in the transfer of goods.*	*Entering and leaving the port is the first and final step in ship's voyage. Effectively operating ports are a key in connecting the logistics chain between road and sea transports.*
00	**PROJECT MANAGEMENT**			
01	**DISSEMINATION**			
02	**FUTURE DIGITAL MARITIME SERVICE CONCEPT**	Benchmark	Business model	Service concept, Use cases
03	**RISK ASSESSMENT AND FEASABILITY**	FSA, cost & benefits	Safety & Security	Cyber security
04	**OPERATIONAL ENVIRONMENT**	Fairway navigation use cases	Human factor & ethics	Regulatory input & standardization
05	**TECHNICAL ENVIRONMENT**	Ship motion and status	Fairway status	Situational awareness, Data & connectivity
06	**EXPERIMENTS AND TEST DRIVES**	Test practices	Test areas & fairways	Concept verification & validation

High Level Roadmap



iDEFINE Ecosystem model