

# Ship of the Future

## Towards autonomous navigation in port water

### The GSAB project

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# GSAB Grimaldi Satellite Assisted Berthing



## • GSAB CONSORTIUM:

- GRIMALDI GROUP (Prime)
- RADIOLABS (Co-Prime and Partner)
- KONGSBERG SEATEX (Partner)
- KONGSBERG MARITIME (Partner)



# GSAB: Grimaldi Satellite Assisted Berthing



PORT OF ANTWERP



GRANDE ANVERSA



DEVELOPMENT AND DEMONSTRATION OF A NAVIGATION SUPPORT SYSTEM IN PORT WATER FOR THE ASSISTED BERTHING OF A CAR-CARRIER SHIP (180 M) THAT ALLOWS TO PERFORM AUTOMATICALLY HIGH PRECISION OPERATIONS USING ADVANCED TECHNOLOGIES FOR AUTONOMOUS SHIPS.



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- PROVIDE THE CAPTAIN AND ALL THE CREW WITH A COMPLETE OVERVIEW OF THE STATE OF THE ART AND THE SHIP CONDITIONS IN REAL TIME IN THE PORT CONTEXT PROVIDING INDICATIONS ON THE MANEUVERING OPERATIONS TO BE PERFORMED.
- ENSURE AN ADEQUATE LEVEL OF SAFETY BY REDUCING RISK SITUATIONS CAUSED BY HUMAN ERROR.
- INCREASE SHIP EFFICIENCY BY REDUCING THE TIME REQUIRED FOR CARRY OUT THE MANOEUVERS.
- REDUCTION OF FUEL COSTS WITH CONSEQUENT REDUCTION OF CO<sub>2</sub> IN THE PORT AREA.

# GSAB : Expectation of End User

I can check the current positioning of the vessel

Maneuvering will be easier and faster with GSAB digital systems

I can access a complete dataset containing real-time meteo-marine observations

I can reduce CO2 emission during manouvreing phase

I can manage Naval Traffic in a safer and more efficient manner (even in difficult meteo-marine conditions)



# GSAB : Reference Ground Truth

