
LIVING PORTS
PROJECT
Reducing the ecological footprint of ports
with ECOncrete® bio-enhancing concrete technologies
DTU
Technical
University of
Denmark
Cardama
Shipyard
ECONCRETE
Puerto de Vigo
Autoridad Portuaria de Vigo
www.livingports.eu


## Transforming the Future

The Port of Vigo is specialized in the movement of high value goods and it is one of the biggest fishing ports in Europe

The LIVING PORTS project aims to transform maritime construction best practices for ecological port infrastructure.

LIVING PORTS serves as a showcase for new technologies and new strategies for more ecologically sustainable ports. Monitoring reports by the Technical University of Denmark will publicize benefits and gains for future adaptation in ports around the world.

Living Ports is a project by the Port of Vigo and a consortium led by ECOncrete.

DTU Technical University of Denmark

Cardama Shipyard

ECONCRETE

Puerto de Vigo
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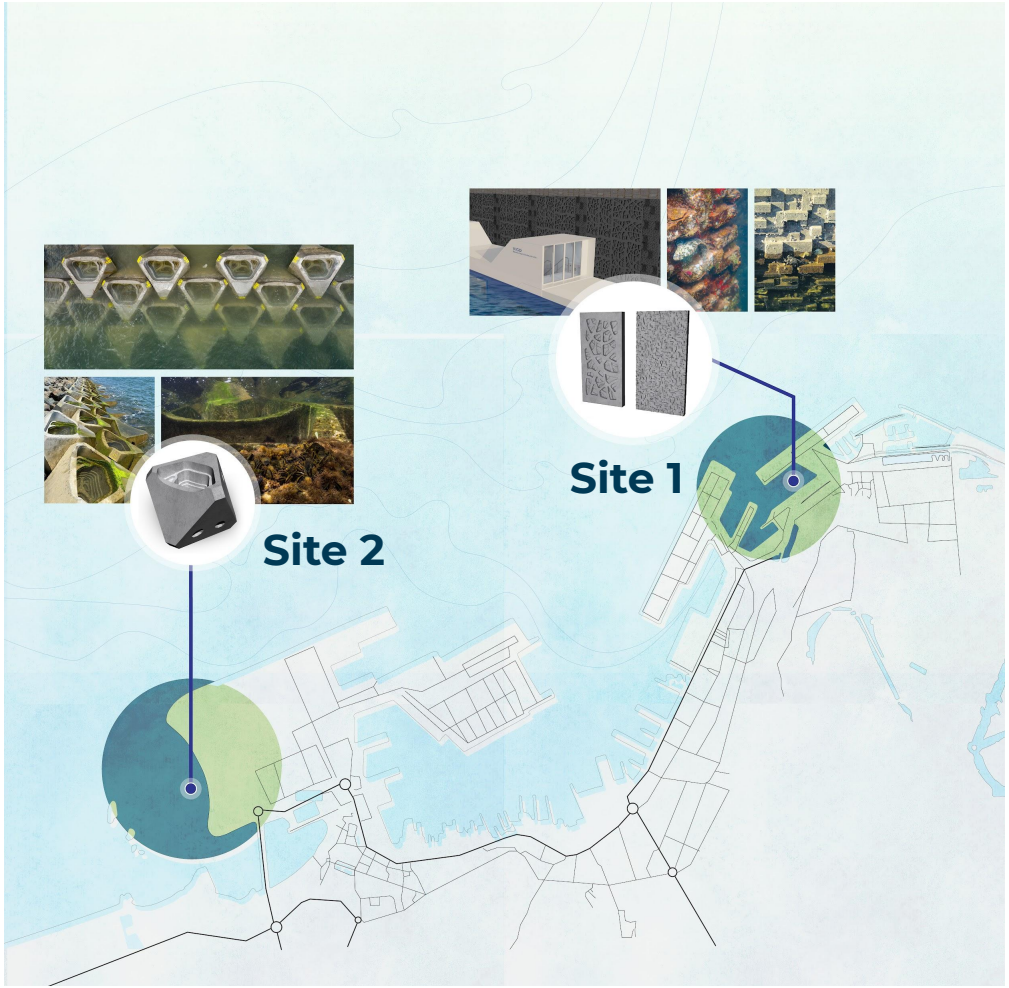
A European Commission Horizon 2020 Project

European Commission

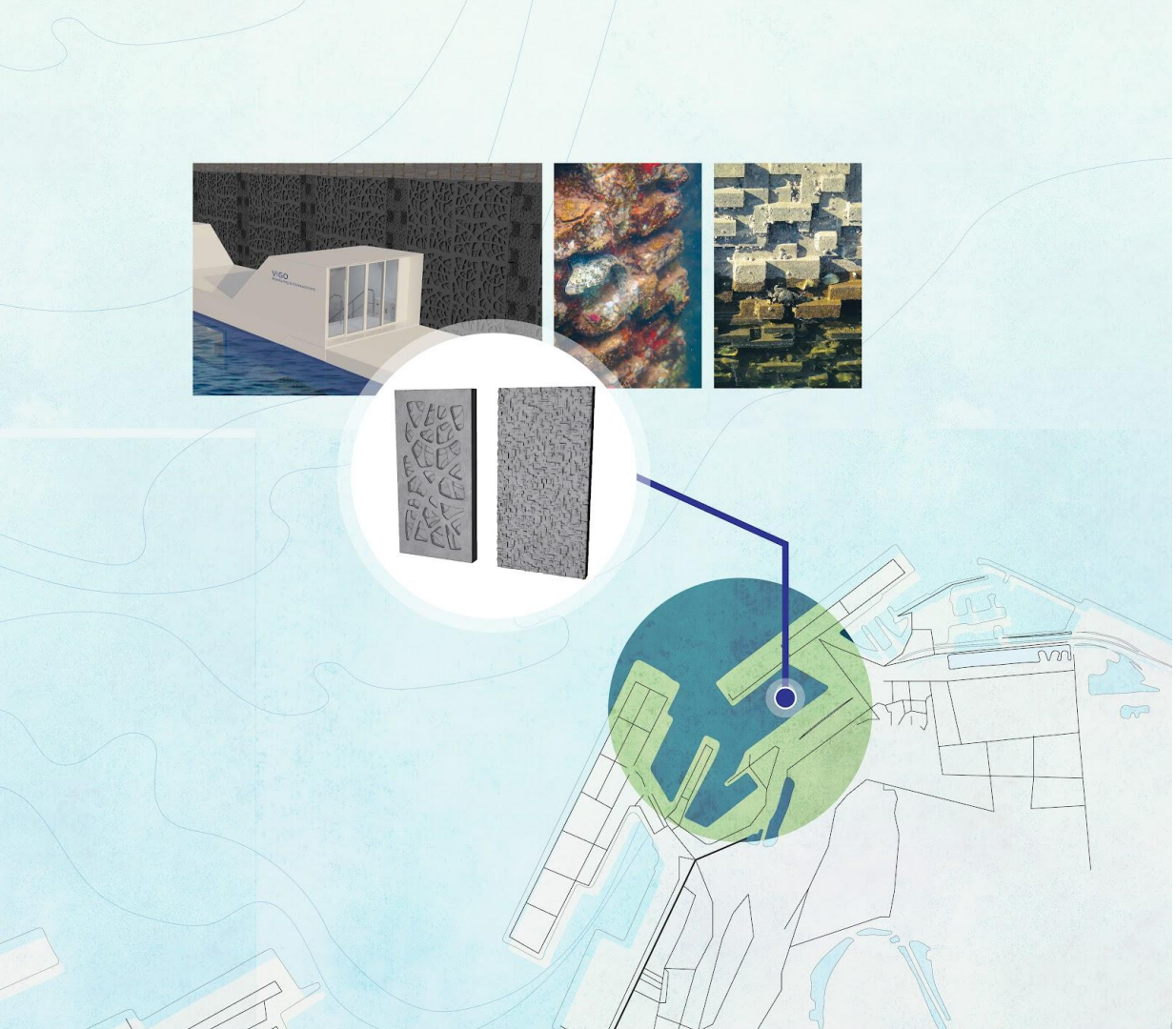



## Living Ports in the Port of Vigo (Spain) includes infrastructure in two large-scale sites:

1) 330m² ECOncrete seawall, biological and sound monitoring, and a visitor observation platform.

2) 100 ECOncrete COASTALOCK™ units provide coastal stabilization as well as marine habitat creation and ecological uplift.

ECONCRETE



# Site 1:

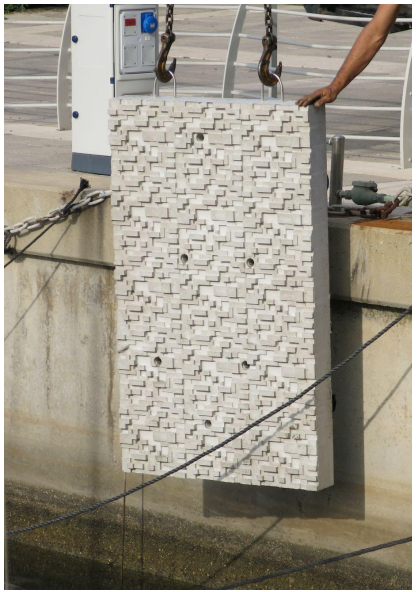
## Sea Wall Panels Underwater Viewing Platform

## SITE 1: Seawalls Benefitting The Ecosystem

On Site 1, 330m² of ECOncrete sea walls will be installed. 2 designs are being used to enable a healthy ecosystem.

Seawall type 1 and integrated wall pocket tile

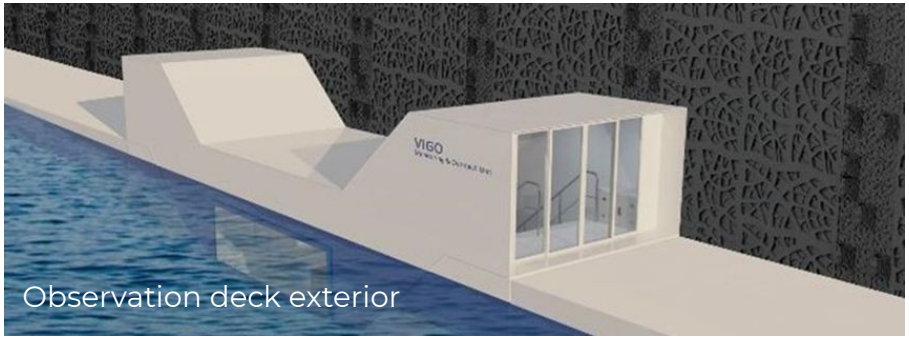
Complex surface textures mimic natural marine surfaces, providing niches for diverse ecosystems, algae, sessile and mobile organisms.



Seawall type 2 and integrated wall pocket tile

## SITE 1: Observatory & Community Access

Underwater monitoring and visitor observation platform, developed by Cardama Shipyard to invite citizens to discover with their own eyes that “blue change” is possible.

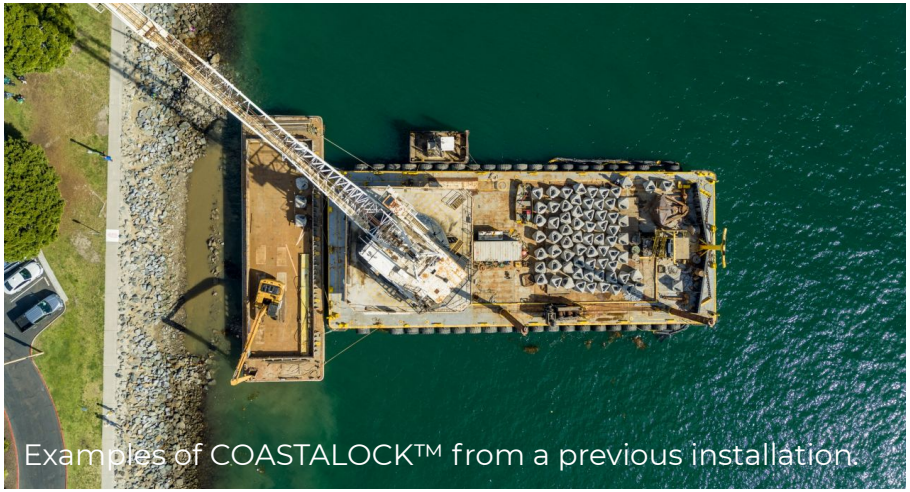


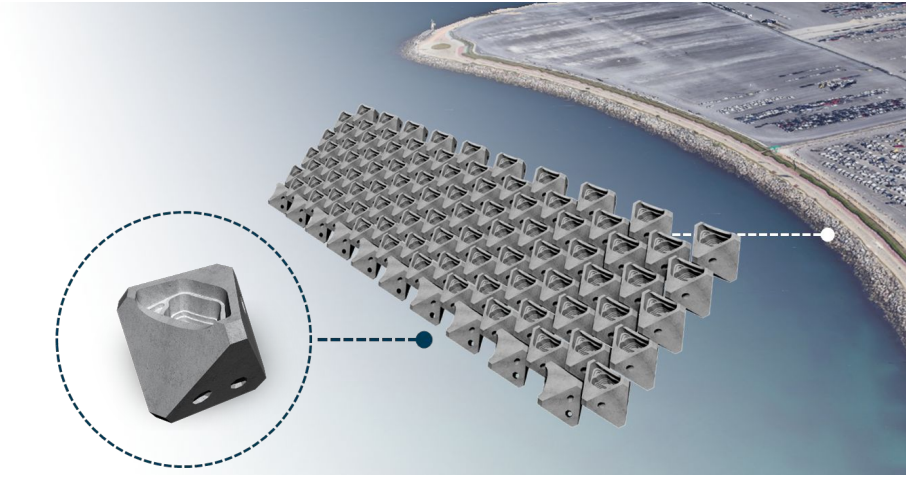
# Site 2:

## Coastal armor

## SITE 2

100 ECOncrete COASTALOCK™ units will provide coastal stabilization as well as habitat creation and ecological uplift. During the three-year project (2021- 2024), biological, structural and first of its kind noise pollution reduction monitoring activities will be conducted between DTU and ECOncrete.


Examples of COASTALOCK™ from a previous installation.



## DTU MONITORING IMPACT

The Technical University of Denmark (DTU) is our scientific partner to monitor the impact of new ECOncrete infrastructure on the biology and port ecosystem.

Living Ports Impact Reports will be issued on topics such as:

- Impact on Ecosystem
- Underwater noise pollution reduction
- Structural monitoring of new installations
- Biological monitoring

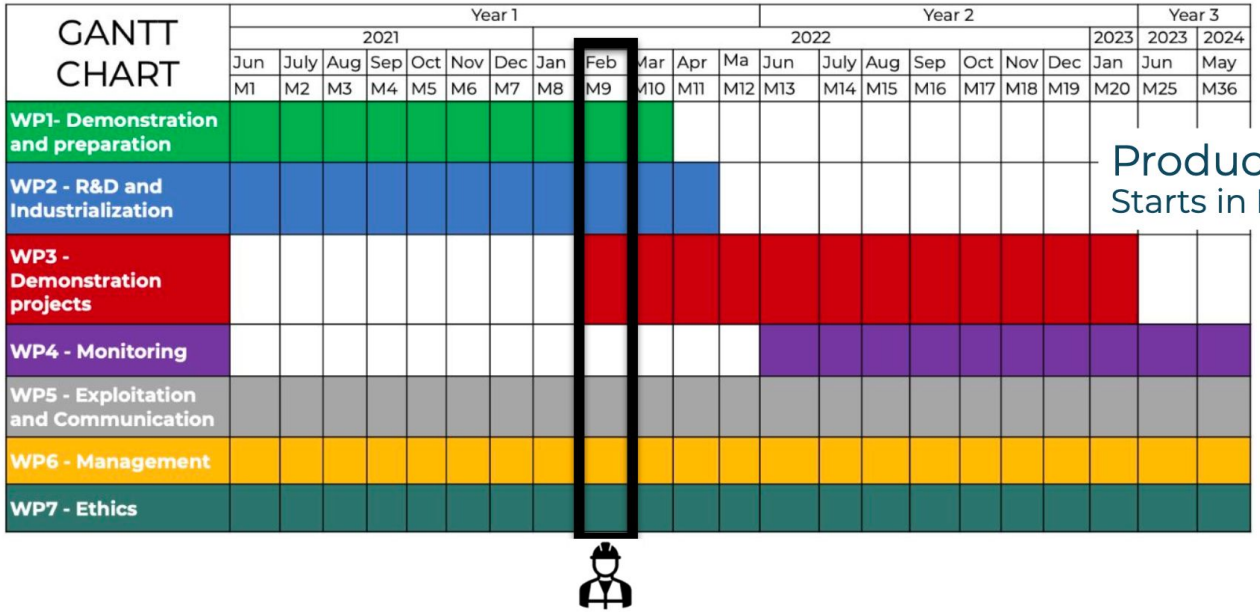
### Criteria for Success:

✔ 50% increase in biodiversity, 30% reduction of dominance of invasive species, 50% reduction in noise pollution, 5% increase in compressive strength and 10% increase in chloride resistance

# The Team

| | | |
|---|---|---|
| ECONCRETE | Jorge Gutiérrez Martínez | Head of Engineering |
| | Àlvar Trabazos Claveria | Project Manager |
| Puerto de Vigo<br>Autoridad Portuaria de Vigo | Carlos Botana Lagarón | Sustainability Dept. Manager |
| | Gerardo González Álvarez | Head of Civil Works and Projects Dept. |
| | Francisco Barreiro Romano | Environmental Officer |
| | Elisa Romero González | Environmental Officer |
| DTU Technical University of Denmark | Wolfgang Kunther | DTU Associate Professor - Civil Engineering Responsible |
| | Jon Christian Svendsen | DTU Associate Professor - Marine Biology Responsible |
| Cardama Shipyard | M. Borja Cardama Aldecoa | R&D&I Dept. Manager |

# Project Schedule




Production on-site
Starts in Feb'22

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