

PULSE

The Port-clUster LandScapE:
Developing a Spatial and Design Approach
to Port Clusters

Festival of Sustainable Development 2023
Italian Port Days "Italian ports and the
relationship with communities"
Organized by Assoporti - Italian Ports
Association together with the Italian Port
System Authorities

Parlamentino of the Ministry
of Infrastructure and Transport - MIT
Rome (Italy), 18/05/2023



UniGe
DAD

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WIP DOCUMENT



DISCLAIMER

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CONTEXT



CONTEXT



FAIR Principles

Findability, Accessibility, Interoperability, Reuse

('FAIR Guiding Principles for scientific data management and stewardship', 2016)

CONTEXT

CALL

Postdoctoral Fellowships

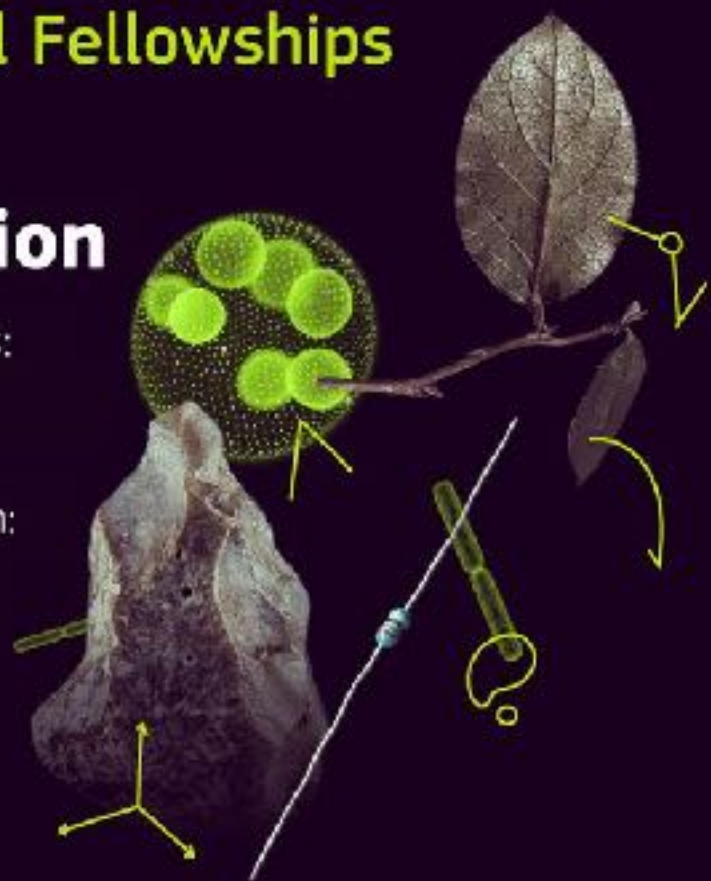
Budget:

€242 million

Submitted proposals:

8356

Host organisations in:

46 countries**MSCA**Marie Skłodowska-Curie **Actions**
Developing talents, advancing research

Postdoctoral Fellowships

2022 CALL

1,607high-quality
Postdoctoral Fellowships**MSCA****SEAL OF
EXCELLENCE****MSCA**Marie Skłodowska-Curie **Actions**
Developing talents, advancing research

CONTEXT



Il **Seal of Excellence** è un marchio di qualità introdotto per la prima volta durante Horizon 2020, il programma quadro di ricerca e innovazione dell'UE (2014-2020).

Viene assegnato alle proposte di progetto presentate nell'ambito di un **bando Horizon Europe** e classificate al di sopra di una soglia di qualità predefinita, ma che non sono state finanziate a causa di **vincoli di bilancio**.

Con questo marchio la UE riconosce il valore delle proposte di progetto e incoraggia altre organizzazioni a finanziare i progetti **traendo vantaggio dal processo di valutazione** di alta qualità di Horizon Europe.

CONTEXT



BIO**PROJECT FULL TITLE**

The Port-clUster LandScapE: Developing a Spatial and Design Approach to Port Clusters

PROJECT ACRONYM

PULSE

HOST INSTITUTION (HI)

UNIVERSITY OF GENOA – UniGe (IT)

DEPARTMENT ARCHITECTURE AND DESIGN – dAD

DISCIPLINARY SCIENTIFIC SECTOR

ICAR/14 – ARCHITECTURAL AND URBAN DESIGN

PRINCIPAL INVESTIGATOR & SCIENTIFIC DIRECTOR (PO&SC)

PhD Architect, RTDA Researcher, UniGe – dAD

Beatrice Moretti

PROJECT CODE / CUP

100027-2022-BM-PNRR-YR_SOE_0000001

D33C22001650001

IN COLLABORATION WITH

Assoporti - Italian Ports Association

<https://www.assoporti.it/it/home>



PortCityFutures (Leiden-Delft-Erasmus Universities - NL)

<https://www.portcityfutures.nl/home>



CIELI - Centro Italiano di Eccellenza sulla Logistica e i trasporti e le Infrastrutture
University of Genoa, UniGe

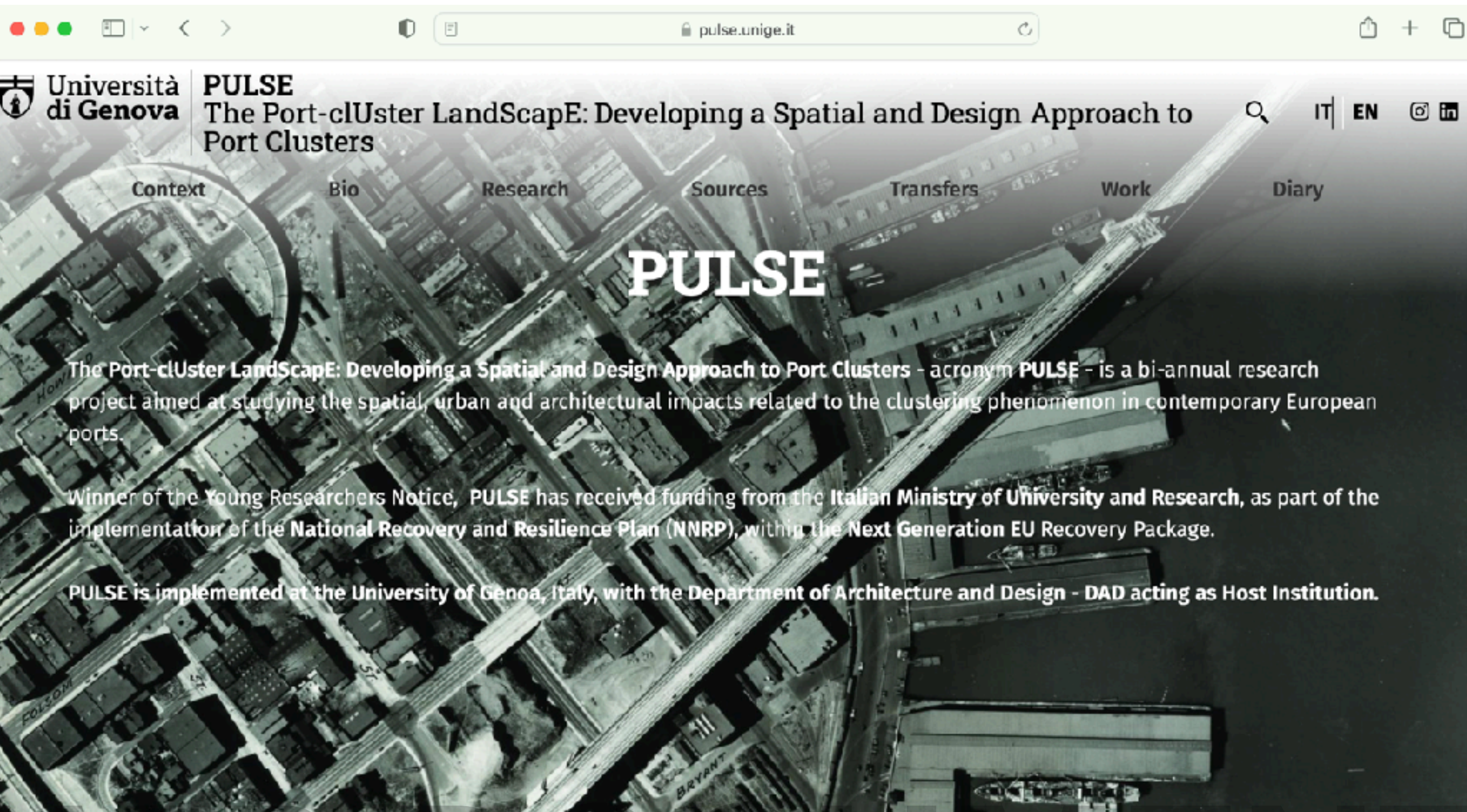
<https://cieli.unige.it/>



COASTAL DESIGN LAB

Integrated Architecture and Urban Design Studio, DAD, University of Genoa, UniGe

<https://costaldesignlab.wordpress.com>



BIO



pulse_nextgeneu

Seguigli

Messaggio



Post: 21 67 follower 138 profili seguiti

PULSE

The Port-Cluster Landscaps

-

Beatrice Morrell

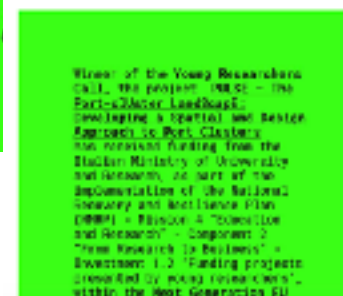
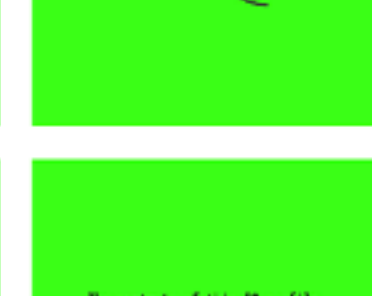
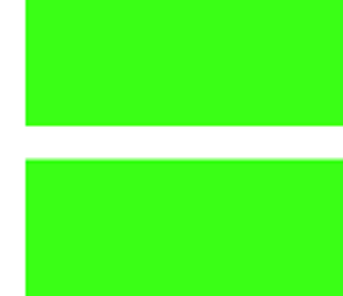
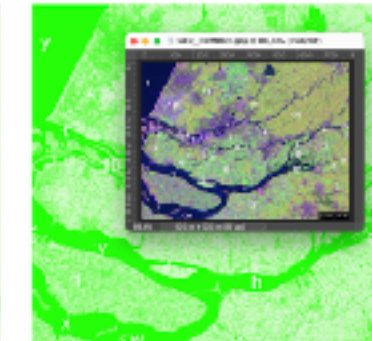
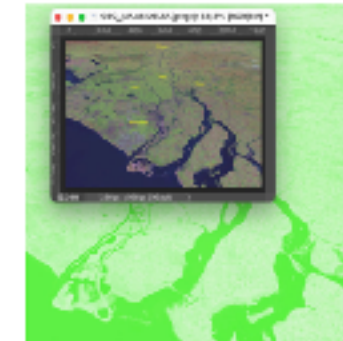
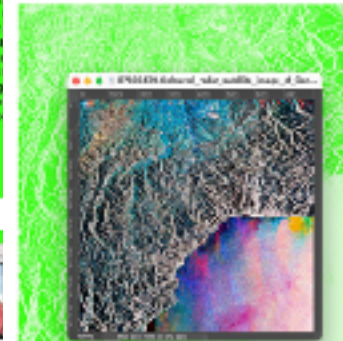
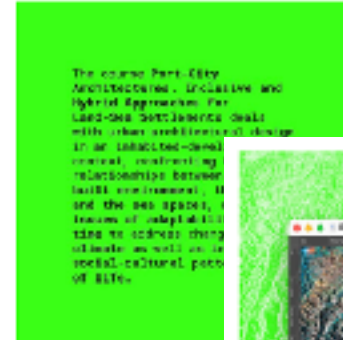
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aNextGenEU Young Researchers Call 2022

-

University of Genoa Dep. Architecture and Design @unige_dad
pulse.unige.it

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DIARY



Cerca



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Rete



Lavoro



Messaggistica



Notifiche



Tu



Lavoro

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Genova

109.124 follower

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4 giorni ·

Next Generation EU: 5 Young Researchers UniGe

Il Ministero dell'Università e della Ricerca, nel quadro dell'attuazione del Piano Nazionale di Ripresa e Resilienza (PNRR), finanzia i progetti di 5 giovani ricercatori e ricercatrici UniGe: [Jacopo Emmenegger](#), [Andrea Lira Loarca](#), [Ervis Martani](#), [Beatrice Moretti](#), [Federica Pompejano](#), PhD.

👉 (ITA) https://lnkd.in/dbN67W_u👉 (ENG) <https://lnkd.in/dSv-Kczi>

#UniGe #UniGenova #NextGenEU #NextGenerationEU

Next
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Pagine simili

JENOVA - Junior Enterprise
Genova

Formazione professionale

2-10 dipendenti

+ Segui



Messaggistica



DIARY



RAINEWS, aprile 2023

“La deindustrializzazione e i cluster portuali al centro della ricerca ligure. Finanziati dal Ministero due studi dell'**Università di Genova** che esploreranno questi particolari aspetti del nostro paesaggio”

<https://www.rainews.it/tgr/liguria>

DIARY

ADAPTIVE STRATEGIES

Designing Scenarios for Port C

MSc_Architecture



Course Coordinator
Prof. Dr. ing. Carola Hein (TUD)

Teaching Staff
Paolo De Martino (TUD)
John Hanna (TUD)

Code	[AR0110]
Credits	[5 ECTS]
Location	[TU Delft]
Excursion	[Yes]
Semester	[2 - Q3]

*Only for MSc2 projects

Project type	(Multidisciplinary / Practice related / Other)
--------------	--

Approved Master 2 [Yes/No]
Architecture design project



History matters, especially when it comes the future of port cities. Looking at the past evolutionary history of spaces and instituting the permanencies as well as the porosity territories is a fundamental step to understand to better transform it. This course supports practice underlying the design. It trains students undertake multi-disciplinary research to address the challenges and prospects the developing adaptive strategies for creating just and livable communities. Students will to synthesize relevant information about the present into knowledge that can inform the elaborating adaptive strategies with which development. The focus is placed on experience with innovative methods for spatializing an historically informed analyses, thus allowing knowledge to be uncovered.

The course at TU Delft, in collaboration with University of Venice (An Introduction to Maritime Planning - course code G79089) and Leid Morocco (NIMAR) will organize a trip to Morocco (bringing students to the port cities of Rabat and Casablanca) as a unique opportunity to experience the territorial specificities and verify the transferability of approaches and design process. The course will combine the Maritime Space approach with Scenario Thinking framework to Understand, Reconceptualize and Redesign ecosystem.

ADAPTIVE STRATEGIES

[AR0110] Designing Scenarios for Port Cities

MSc_Architecture



Course Coordinator
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Approved Master 2 [Yes/No]
Architecture design project



MARCH 22, 2023 - 14:45 - 16:45
REIMAGINING PORT CITIES
Room: B | RK | TU Delft
Zoom link: <http://tudelft.zoom.us/j/9459551689?pwd=R2ZYQ0x2YjU0UjVhZkM0TVo0UjUyZz05>

14:45 - 15:30
Land-Sea & Port-City Researches. Backgrounds, Foundations, new Routes
Beatrice Moretti, Unige

15:30 - 16:30
Working session: discuss challenges and opportunities of your port city

16:30 - 16:45
Discussion

Spring semester 2023



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K-WORDS

STATE OF THE ART

#type of business cooperation
#cluster environment
#economies of agglomeration
#set of interdependent&interconnected firms
#networks of producers
#close-proximity members
#intensive flow of information and know-how

K-WORDS

STATE OF THE ART

#type of business cooperation
#cluster environment
#economies of agglomeration
#set of interdependent&interconnected firms
#networks of producers
#close-proximity members
#intensive flow of information and know-how

but..

«**The cluster creates a physical area** in which information and know-how flows more freely among members, where the capacity for innovation is high, and where it attracts and “produces” a pool of skilled labour.

[..]

Many times in port cities fewer port activities are found than in **cities close to the actual ports.** So, according to De Langen (2004) **a port region can be identified.**»

Kocsis, A. (2011). “The role of port clusters in theory and practice”, in Regional and Business Studies, 3(2 Suppl.), pp. 51-60.

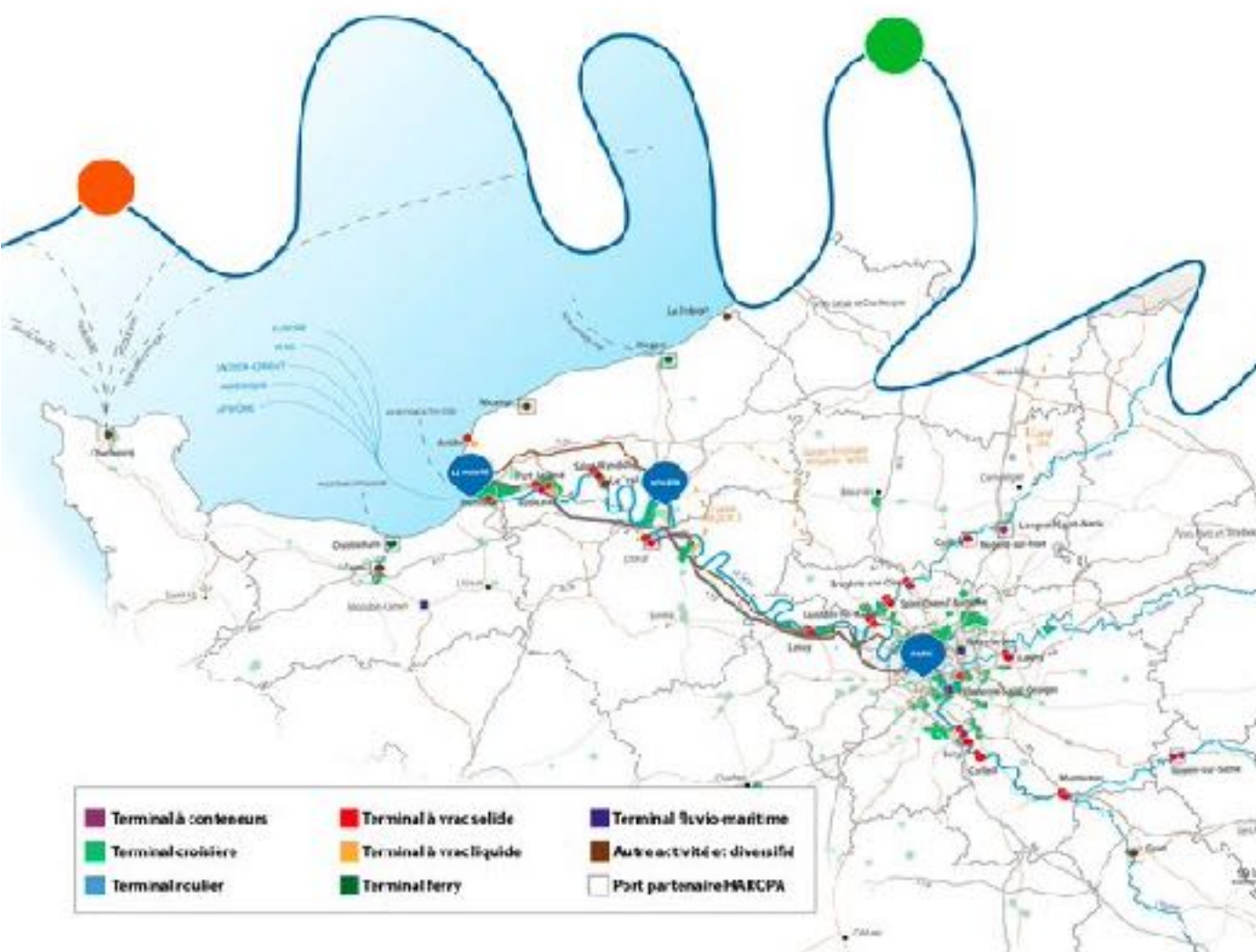
K-WORDS

PULSE

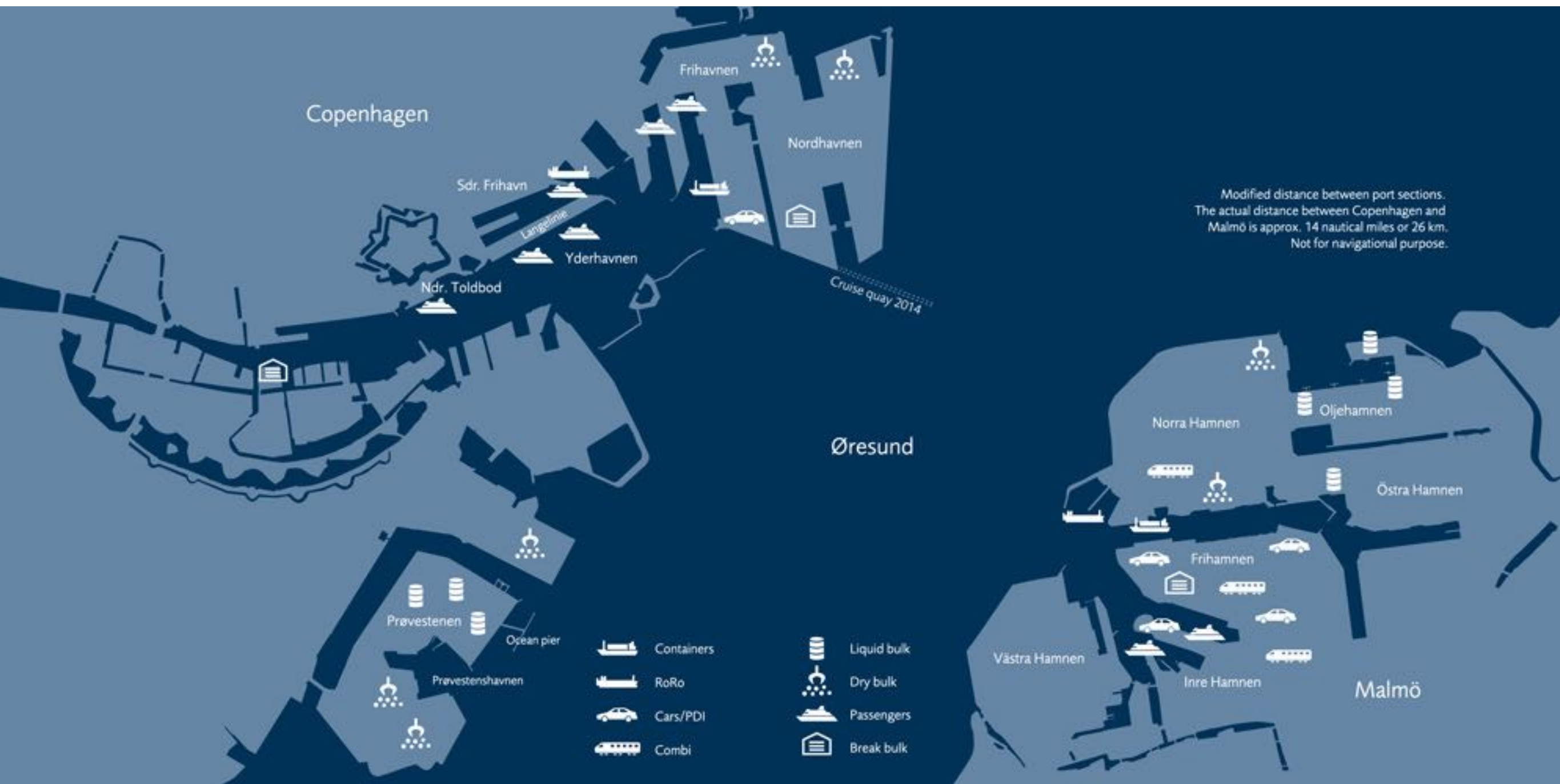
#port clusters
#drivers of agglomeration in ports and cities
#technical landscapes
#coastal and marine environments
#spatial stretching
#port-city regions and architectures
#logistics & morphological indicators
#space-based methodology

TOPICS

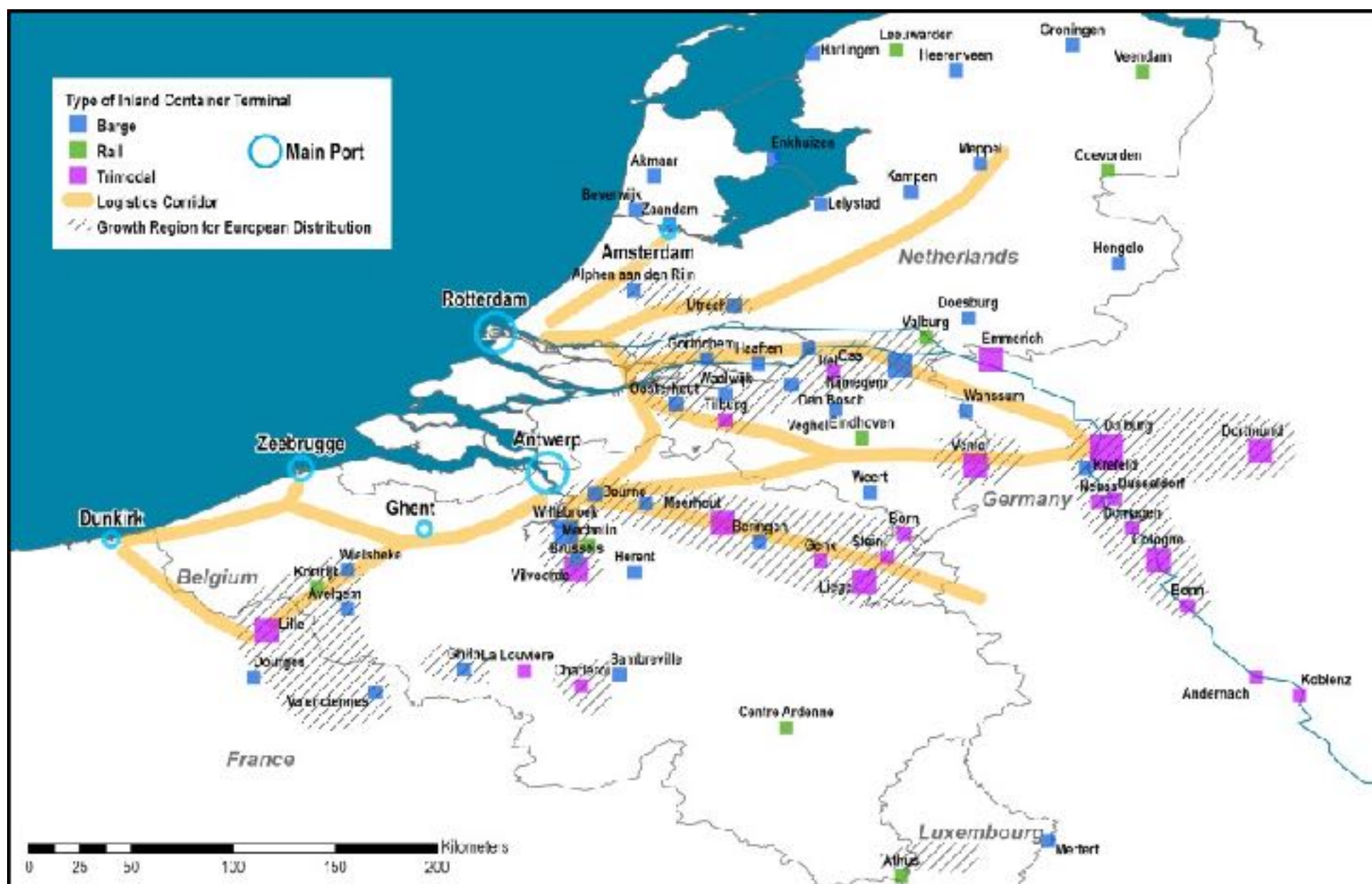
HAROPA | Le HAvre ROuen PAris



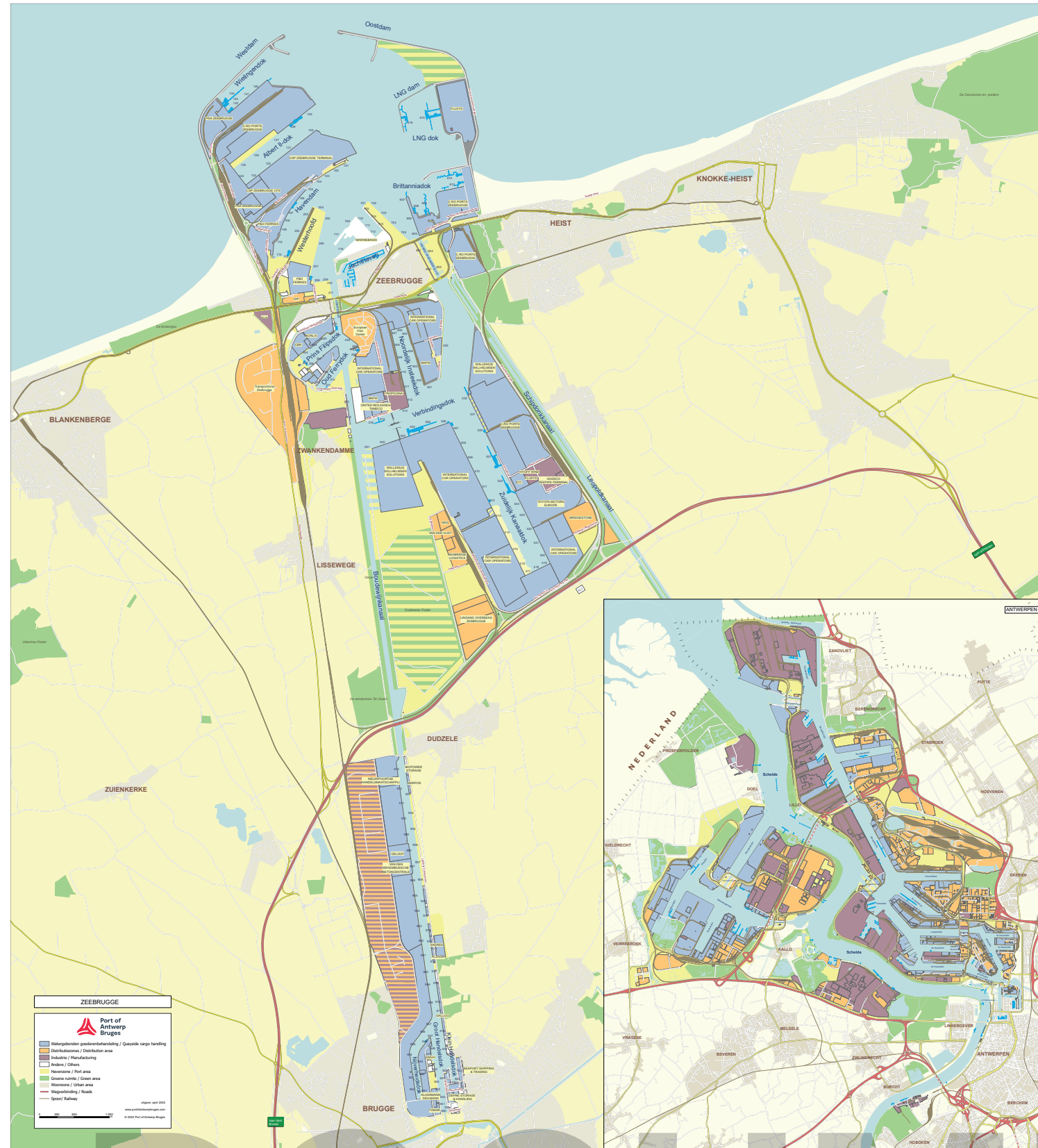
TOPICS



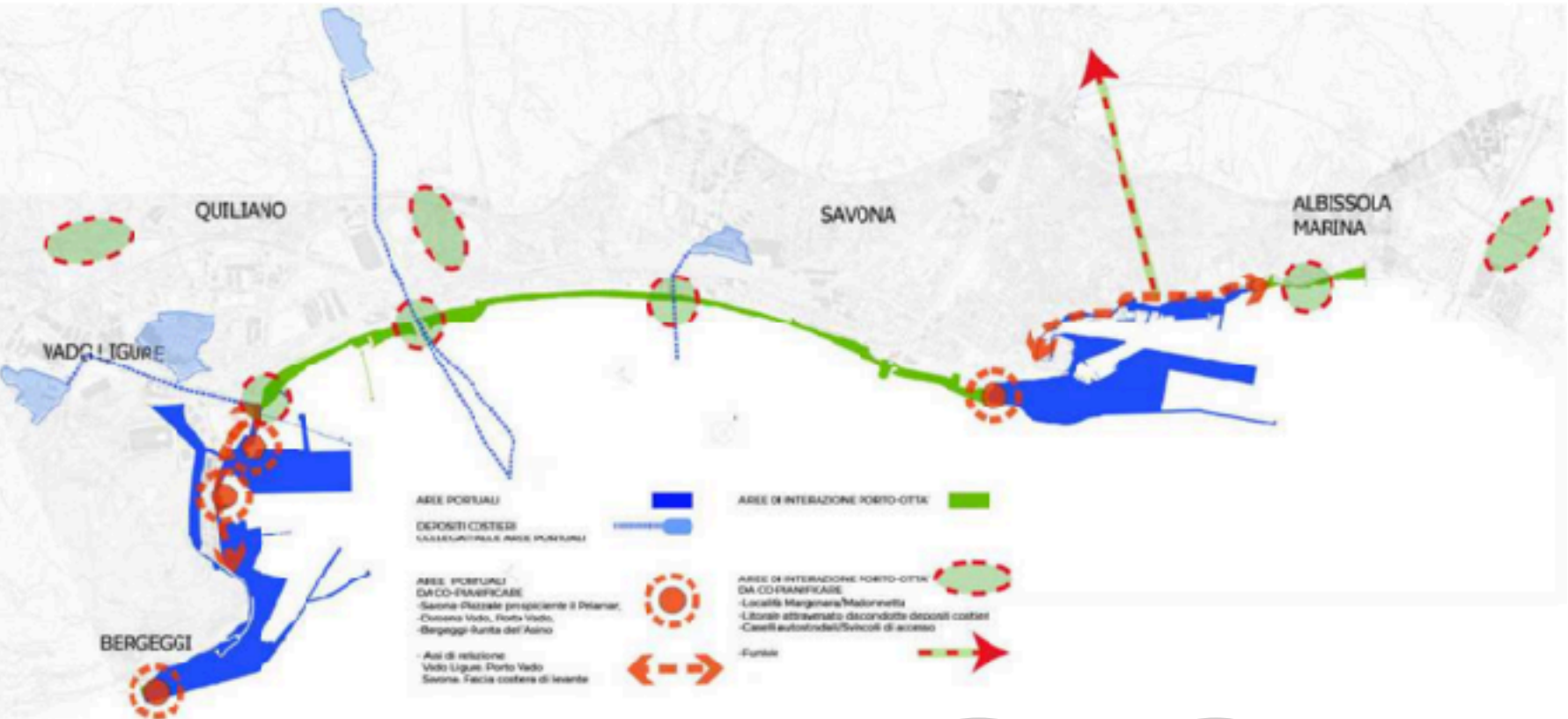
TOPICS



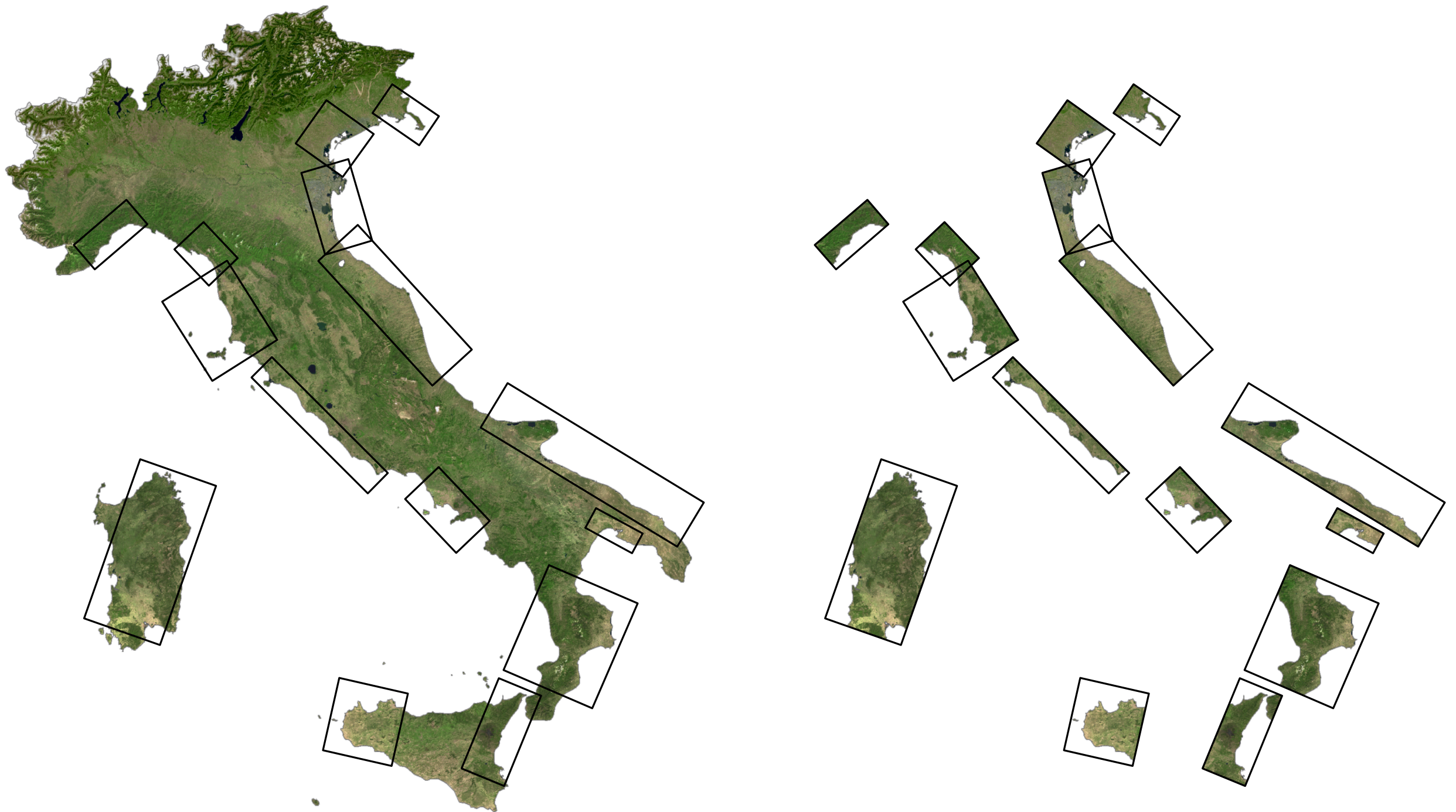
TOPICS



TOPICS



TOPICS



Sistemi Portuali in Italia (d.lgs 169/2016):
da 62 porti singoli a 16 Autorità di Sistema Portuale

ABSTRACT

Globalization, port expansion projects and extensive energy transition needs have led port institutions to demand more land, to engage with hinterland logistics platforms and to restructure forms of port governance. In this competitive context, the phenomenon of **Port Clusterisation**, i.e. the administrative aggregation whereby two or more ports are merged to form port clusters, is heavily impacting the institutional sphere. Yet, not only does **this phenomenon have no control over cities**, but **its spatial component is being overlooked**.

As a result, port and city institutions lack design tools to tackle urgent challenges, as **coastal consumption**, the **harmful perception of the port in relation to the city**, the need for **resilient port-city infrastructures** and the **renewal of the port-city architectural heritage**. In line with the *New European Bauhaus Initiative* and the UN's SDGs, and in synergy with the *NextGenerationEU* programs, PULSE aims to study the Port-Cluster Landscape, i.e. the spatial product of Port Clusterisation, to **provide a spatial framework** for the phenomenon and **develop a design approach to port clusters**.

To activate the Port-Cluster Landscape's spatial component, I will develop a **toolkit** thanks to the study of an evolving port cluster, the Ligurian Range (ports of Genoa, Savona, Vado Ligure) which represents an *early stage* of clustering. Using a scenario-based approach and a space-based methodology, I will record the **spatial impacts** of this case and cross-reference them with those of port clusters in which is possible to detect an *advanced stage* (e.g. the Rhine/Meuse Delta). This approach will formulate new *design strategies*, *lexical categories* and *maps* replicable across several European port clusters.

By engaging experts and civil society in **outreach activities** and sharing the toolkit through a **Policy Brief**, PULSE will allow transfers of knowledge and enable port and city institutions to recognize **port clusters as a new, challenging field for architecture and urban design**.

OVERALL METHODOLOGY

PULSE's methodology consists of a **scenario-based approach** articulated in three entangled phases: **01 – INVESTIGATION**, **02 – CROSSING**, **03 – FORMULATION**.

The 01 investigates the state of the art of the Italian port clusters by providing an evolutionary outline seven years after their establishment. It records the spatial impacts introduced by the clusters to construct an *indicator system*; it also develops a *new language* to describe the cluster dimension.

The 02 cross-references the recorded impacts with those of European port clusters seen as advanced and reference cases. Performed using *maps*, this crossing stresses the role of mapping as a tool for deciphering spaces.

The 03 employs the maps to develop *future scenarios* from which *design strategies* will be formulated. The results of each of the phases form the **toolkit**, which is the basis for the construction of the Policy Brief.

WORK PLAN

PULSE's two-year work plan consists of three equal periods (8 month each). The Work Packages (WPs) are: WP1 INVESTIGATION, WP2 CROSSING, WP3 FORMULATION, WP4 TRAINING, WP5 PROJECT MANAGEMENT, OPEN SCIENCE PRACTICES and RESEARCH DATA MANAGEMENT, WP7 DISSEMINATION, EXPLOITATION and COMMUNICATION.

The Deliverables are: D1.1 Interim Report *HReLRev*; D1.2 Interim Report *Field Visits, FV*; D1.3 Interim Report *GLOSS*, Glossary draft; D2.1 Interim Report *DISMaps*; D2.2 Interim Report *CROSSMaps*, Maps draft; D3.1 Interim Report *SCEdev*; D3.2 Interim Report *STRAs*, Strategies draft; D4.1/D4.2 Draft/final Report on Training.

Work Package	WP1 INVESTIGATION
Description of work	<i>Historical Research & Literature Review (HReLRev)</i> and <i>Glossary Survey (GLOSS)</i> ; <i>Interviews & Field Visits (InFV)</i> .
Starting Date – Ending Date	months from 1 to 8; D1.1 (month 4); D1.2 (month 6); D1.3 (months 7-8)

Work Package	WP2 CROSSING
Description of work	<i>Display Maps (DISMaps)</i> and <i>Cross-referenced Maps (CROSSMaps)</i>
Starting Date – Ending Date	months from 9 to 17; D2.1 (month 12-13); D2.2 (months 16-17)

Work Package	WP3 FORMULATION
Description of work	<i>Scenarios Development (SCEdev)</i> and <i>Strategies Setting (STRAs)</i>
Starting Date – Ending Date	months from 18 to 24; D3.1 (month 21); D3.2 (months 23-24)

Work Package	WP4 TRAINING
Description of work	Planned activities (see <i>Table 1</i>)
Starting Date – Ending Date	months 3-4; then from 9 to 13 and from 19 to 21; D4.1 (month 13); D4.2 (month 21)

Work Package	WP5 PROJECT MANAGEMENT, OPEN SCIENCE PRACTICES, RESEARCH DATA MANAGEMENT
Description of work	Project Management&Budget (PMB); Open Science practices (OSp), Research Data Managment (RDM), Ethics&Security (ES), Host Institution-Researcher Meetings (HRM)
Starting Date – Ending Date	Throughout entire course with various timeframes: PMB , ES (months 1-2; 12; 24); OSp , RDM (months 1-2-3; 12-13; 23-24); HRM (every two months)

Work Package	WP6 DISSEMINATION, EXPLOITATION and COMMUNICATION
Description of work	Planned activities (see <i>Table 2</i>)
Starting Date – Ending Date	Throughout entire course with various timeframes: CO r (month 23); CP a (month 9); ScP (months 12, 24); Le (months 3, 6, 9, 15, 18, 21); PB (month 24); Co-DesCr (CforW months 8-9, WsM months 15-16, StrBr months 22-23), OA (months 1-24; FdS months 10 and 22) (see <i>Table 2</i> for acronyms)

Table 4. GANTT CHART																										
WPs	Year 1												Year 2													
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24		
WP1	HReLRev / GLOSS / InFV																									
D				1.1		1.2		1.3																		
WP2									DISMaps / CROSSMaps																	
D												2.1				2.2										
WP3																		SCEdev / STRAs								
D																			3.1				3.2			
WP4																										
D													4.1						4.2							
WP5	PROJECT MANAGEMENT, OPEN SCIENCE PRACTICES, RESEARCH DATA MANAGEMENT																									
PMB																										
OSp	Kick-Off												Mid											Final		
RDM	Kick-Off												Mid											Final		
ES																										
HRM																										
WP6	DISSEMINATION, EXPLOITATION and COMMUNICATION																									
COr																							GE			
CPa									AVP																	
ScP												01												02		
Le			01			02		03							04			05			06					
PB																								PB		
CforW								CforW																		
WsM																WsM										
StrBr																							StrBr			
FdS										23												24				
OA	WEB Pg/ Soc Media (set)								WEB Pg / Soc Media (mng)								WEB Pg / Soc Media (proc/del)									

Table 4. Gantt Chart's Legend (for some acronyms see METHODOLOGY, PROJECT MANAGEMENT and Table 2): **Host Institution** (HI), **HReLRev** (Historical Research & Literature Review), **GLOSS** (Glossary Survey), **InFV** (Interviews & Field Visits), **DISMaps** (Display Maps), **CROSSMaps** (Cross-referenced Maps), **SCEdev** (Scenarios Development), **STRAs** (Strategies Setting), **PMB** (Project Management&Budget), **OSp** (Open Science practices), **RDM** (Research Data Management), **ES** (Ethics and Security), **HRM** (Host Institution-Researcher Meetings (kick-off; mid; final), **Cfw** (Call for Words), **WsM** (Workshop Maps), **StrBr** (Strategies Brainstorming), **CPa** (Conference Participation), **COr** (Conference Organization), **GE** (COr at UniGe), **AVP** (CPa in AIVP World Conference), **ScP** (Scientific Publications), **Le** (Lectures), **PB** (Policy Brief), **Outreach Activities** (OA), **FdS** (participation in Festival della Scienza, Genoa) **WEB Pg / Social Media** (Web Page on UniGe website / Social Media; set: setting; mng: management; proc: processing; del: delivery).

WP1**INVESTIGATION**

[year 1 - months 1/8]

ACTIVITIES

Historical Research & Literature Review (HReLRev)

Interviews & Field Visits (InFV)

Glossary Survey (GLOSS)

TOOLS

BIBLIOGRAPHIC RESEARCH

to build an up-to-date picture of the publications and disciplines dealing with the notion of clusters, with a focus on spatial disciplines, applied in the port context;

QUESTIONNAIRE

to collect and record data on spatial impacts
(preliminary state of clustering)

> to the 16 Port System Authorities (IT)

> via Association of Italian Ports – Assoporti

RESULTS - WP1

INDICATOR SYSTEM

aimed to recording the cluster's *spatial impacts*
for example:

- *degree of sea-land connectivity*
 - *infrastructure sharing/rationalization*
 - *services pooling/optimization*
 - *amount/size of functional and operational linkages*
 - *linear/areal occupation of the coast*
 - *proximity/inclusiveness of firms/industries*
 - *co-ordinated planning and project tools between ports in the cluster*
 - *port-to-city or land-to-sea hinge and grafts points*
 - *port-city-territory-interfaces extension/heterogeneity*
- [...]

GLOSSARY

new lexical categories to recognize the Port-Cluster Landscape

- describing the port cluster spatial configurations;
- developing a new language to describe the cluster dimension;
- enabling the system indicator cross-referencing in the CROSSING phase (WP2).

WP1

INVESTIGATION

[year 1 - months 1/8]

THE QUESTIONNAIRE

Goals

- to form a **picture of the state of the art** of Italian ports 7 years after the introduction of port systems, or rather *clusters*;
- to understand, directly from the authorities, the **criticalities** faced and the **latent potentialities** of the cluster dimension and regime introduced in the Italian port world, from the point of view of the disciplines of space and design of contemporary ports;
- to define an **Indicator System** of the cluster dimension to study the spatial and morphological impacts introduced by port clusters;
- to make the **PULSE's results measurable**, allowing other specialists, coming both from the world of scientific research and from that of institutions, to assess them in other research activities.

Target Group / Network

- addressed to the **16 Italian Port System Authorities (AdSPs)** currently involved in the management and planning of national port systems.
- disseminated thanks to the operational collaboration established between **University of Genoa, Department Architecture and Design** and the **Association of Italian Ports – Assoporti**.

The Questionnaire is intended as a **data collection tool**, while the Indicator System is employed as an **evaluation tool** (in WP02).

WP1

INVESTIGATION

[year 1 - months 1/8]

THE QUESTIONNAIRE

Structure

The Questionnaire is divided into **6 sections**.

Sections

Section 1: Personal Data and Authorizations

Section 2: Governance

[Governance and formalization of port clusters]

Section 3: Plans and Projects

[Planning and project tools, spatial and morphological impacts of clustering, definition of the layout of the ports constituting the system/cluster, physical configuration of the port clusters]

Section 4: Future Perspectives

[Criticalities and potentials of the port cluster structure, ongoing system projects, initiatives in other sectors of the AdSPs (economic development, logistics, promotion and communication, etc.)]

Section 5: Glossary

[min 3 / max 5 words or short expressions to define the Port-Cluster Landscape configurations]

Section 6: Final Comments

The Questionnaire, which consist of a total of **10 open questions plus optional final note**, has an **interdisciplinary slant**: it targets subjects and groups belonging to different sectors of the governing bodies of port systems, from **planning, economic development and governance to promotion and communication** towards the city and the community.

WP1

INVESTIGATION

[year 1 - months 1/8]

THE QUESTIONNAIRE

Spatial Parameters

As a new spatial and institutional entity and reality, the Port-Cluster Landscape can expand the knowledge on port clusters planning by emphasizing how the **cluster's relational strength and pervasiveness** are leaving deep imprints on spaces.

To do so, PULSE identifies a set of **parameters** to be used as input for the construction of the Questionnaire and the resulting, Indicator System.

(A VERY FIRST SELECTION)

* **OPTIMISATION**

Pooled use of spaces and resources

No duplication of large infrastructures along the same coast/river

Reduction of **land consumption** and production of benefits in **land reclamation** and **port pollution**

* **COMPLEMENTARITY**

Of equipment, the mobility system can be more **hierarchical** and **intermodal**

* **RATIONALISATION**

Potential **redistribution** and **relocation of catalytic functions** within extended port city territories

* **INCLUSIVENESS**

Renewed governance of port clusters and **interfaces: cohesive planning** between ports (and cities) of the same cluster

* **PROXIMITY**

Architectural port-city heritage can be regenerated as a common system of territorial centralities, **reassessing communities' harmful perceptions of the port**



CONTACTS

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16123, Genoa (IT)**

PULSE

The Port-clUster LandScapE:
Developing a Spatial and Design Approach
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