



# A COLOR

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#### OPEN INNOVATION SYSTEM Based on Research and Innovation To Enhance Economic Growth and Development





MINISTERO DELL'ISTRUZIONE DELL'UNIVERSITA' E DELLA RICERCA



<u>~8</u>

A system managed by:



## **ARGO SYSTEM: WHY?**











**IMPACT** Jobs and investment generated













## **INNOVATIVE INDUSTRIAL SETTLEMENTS**





**TECHNOLOGY PLATFORMS & OPEN LABS** 













## INNOVATIVE INDUSTRIAL SETTLEMENTS

## **4 PUBLIC PARTNERS**

Autorità di Sistema Portuale del Mare Adriatico Orientale Porti di Trieste e Monfalcone

#### COSELAG





Municipality of Trieste
Municipality of San Dorligo della Valle
Municipality of Muggia

#### PLANNING AND EXPERIMENTATION OF A NEW INDUSTRIAL DEVELOPMENT MODEL IN THE COSELAG AREA

### **1 PRIVATE PARTNER**



FREEWRY TRIESTE THE INDUSTRIAL INNOVATION HUB









## INDUSTRIAL INNOVATIVE SETTLEMENTS

Creating a haven for industrial Innovation



Investments	Industrial settlements created	Industrial settlements	Jobs created
3M €	1	1800 MQ renovated warehouses	30
Negotiations for new settlements	Active working table	Decision making support system	Evolutive scenario analysis
2	9	2 developed	done

#### **STUDY CENTRE | Understanding and anticipating technological trends**

Studies carried out	Studies on going	Analysts employed	Proprietary data platforms developed
3	6	6	1
Data platforms available	Institutional collaborations on going		
3	3		













Tools for waste materials recovering: 2 examples

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Matilde Cecchi



#### 1. **REFIBER** Project

Mission: to create in Italy a regulatory framework and a qualified service provider network to **ensure safe disposal of End-of-Life recreational boats** and recovery of abandoned ones, based on:

- promoting recycle and reuse of materials from dismissed boats
- aligning boat producer and distributors strategies with eco-responsible sailing
- adopting the principles of Extended Producer Responsibility (EPR)







#### Recovery of raw materials

Today boats are often illegally abandoned in land or in the water

Problems for:

- **environment**: casual disposal of fiberglass boats is harming our coastal marine life and filling landfills;
- fluidity of navigation;
- high costs for removal.

#### REFIBER solutions:

- reuse and maximize waste recovery with the most sustainable and economically viable methods → increase both the amount and the quality of recovered raw materials;
- by facilitating secure, affordable and stable access to raw materials → achieve a direct impact on the Europe's economy.

#### Fiberglass

# **90% of fiberglass waste** are sent to **landfill** or incinerators (from not only boats hull, but also campers, bathtubs, wind turbines..)







#### Today.. we are creating the network of **stakeholders**

- Boat producers
- Boat distributors
- Designers and material suppliers to the boating industry
- Companies providing processing and logistic solutions for the management of End-of-Life boats
- Technology companies specialized in advanced treatment processes for GRC and other complex-to-recycle materials
- Private and public stakeholders

# 2. A protothype of **DSS** supporting industrial symbiosis within industrial areas

**Industrial symbiosis:** a collaboration between several different companies and factories closely co-located in clusters or industrial parks exchanging resources (e.g., materials, energy, water and by-products) that can be used as substitutes for products or raw materials, with benefits for the environment and for the companies



#### Data sources

For managers of consortia/industrial areas, the main problem is the lack of data on materials flows and of tools to enhance them.

The knowledge and monitoring of flows is an indispensable tool for the planning and implementation of industrial symbiosis strategies.



#### Waste produced in the industrial area CoSELAG: class 13



Class 13 of European Waste Catologue (EWC or CER): *Spent oils and liquid fuel residues* 

They are interesting for:

- the big quantity produced;
- the possibility to recover oil substances for several sectors as industrial applications or fuel production

 $\rightarrow$  An example fitting the involvement of different supply chains

#### Who is the tool for?

The methodology can be replicated and is useful for 3 different typologies of subject:

Users	Aim
Local policy makers	monitor waste production year by year and elaborate management strategies for some flows
Industrial consorzia managers	evaluate feasible projects of industrial symbiosis, with a top-down development approach
Private stakeholders	assess the extent of certain flows and the location of their production plants (recovery/recycle plants or others )

Next steps

#### Extension of contents with other data:

- Input
- Raw materials: from direct interviews to companies
- Energy consumptions (renewables energies and not)
- Water consumptions
- Output
- By-products
- Reusable process water



#### Thanks for your attention!

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