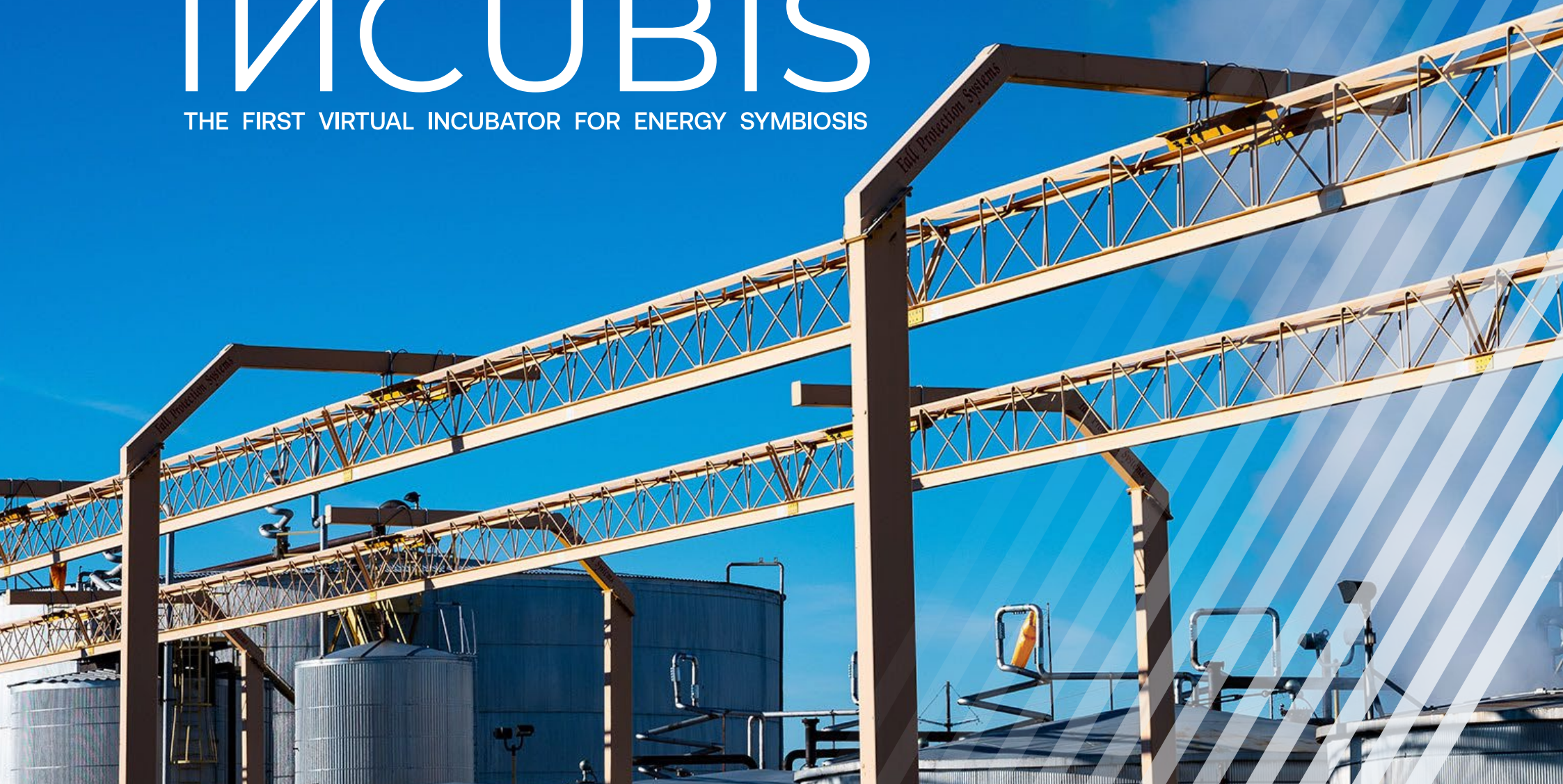




Welcome to INCUBIS

THE FIRST VIRTUAL INCUBATOR FOR ENERGY SYMBIOSIS





INCUBIS

ENERGY SYMBIOSIS INCUBATOR

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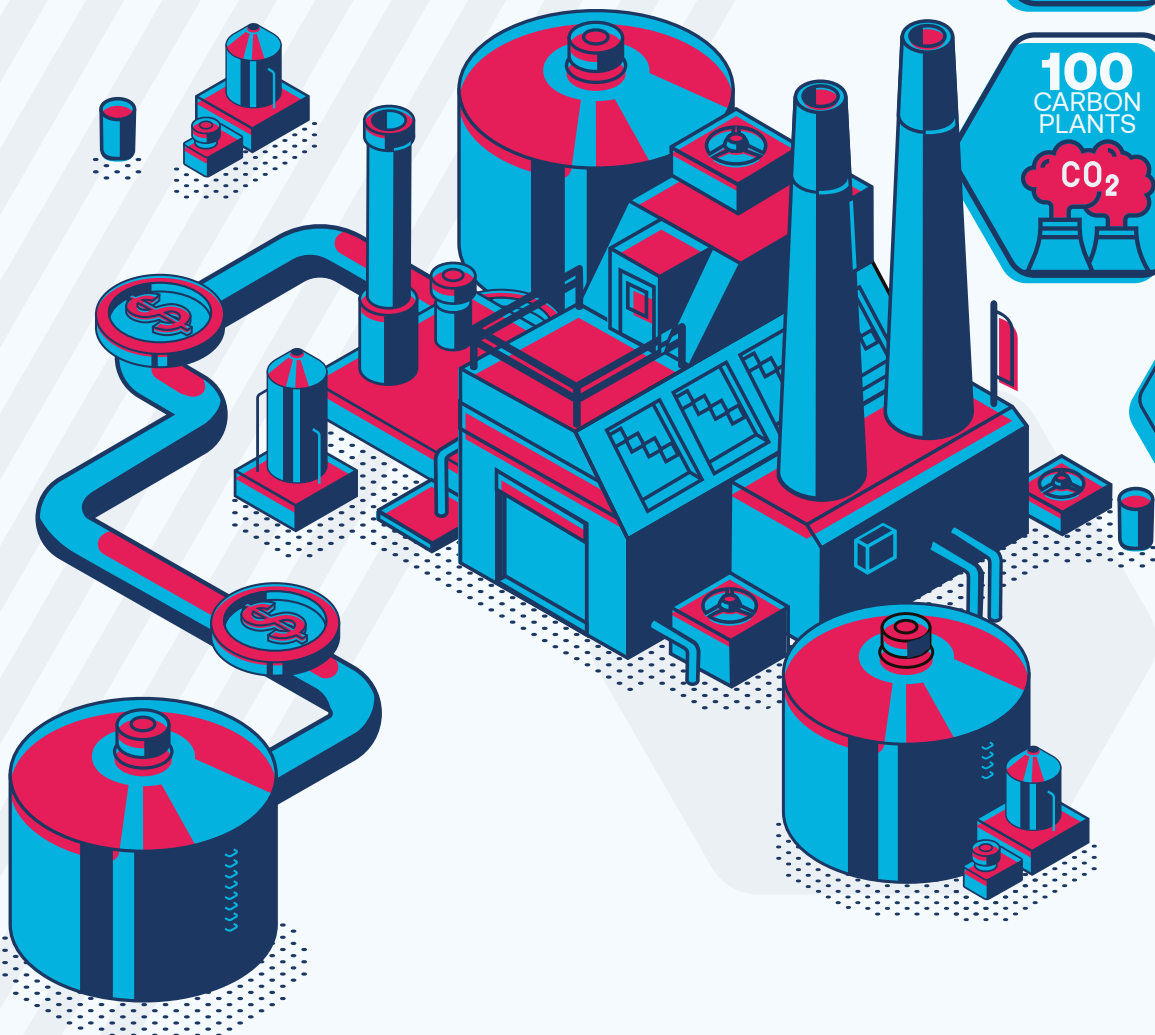


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Did you know?



20-50%
LOST WASTE HEAT



An estimated **20-50%** of the energy used in industrial processes is lost as waste heat.

100
CARBON PLANTS



As much as **370.41 TWh/year** could be recovered and used. This is equivalent to the annual energy consumption of a country the size of Spain or Italy. It is also equivalent to the total electricity generation of more than **100** coal-fired power plants.



Traditional energy efficiency improvements, focused on a single process or site, are not enough to exploit this potential.

Here is where industry needs to look beyond its own site, and identify exploitable opportunities based on 'symbiotic' relationships between different sites.

Introduction to Energy Symbiosis

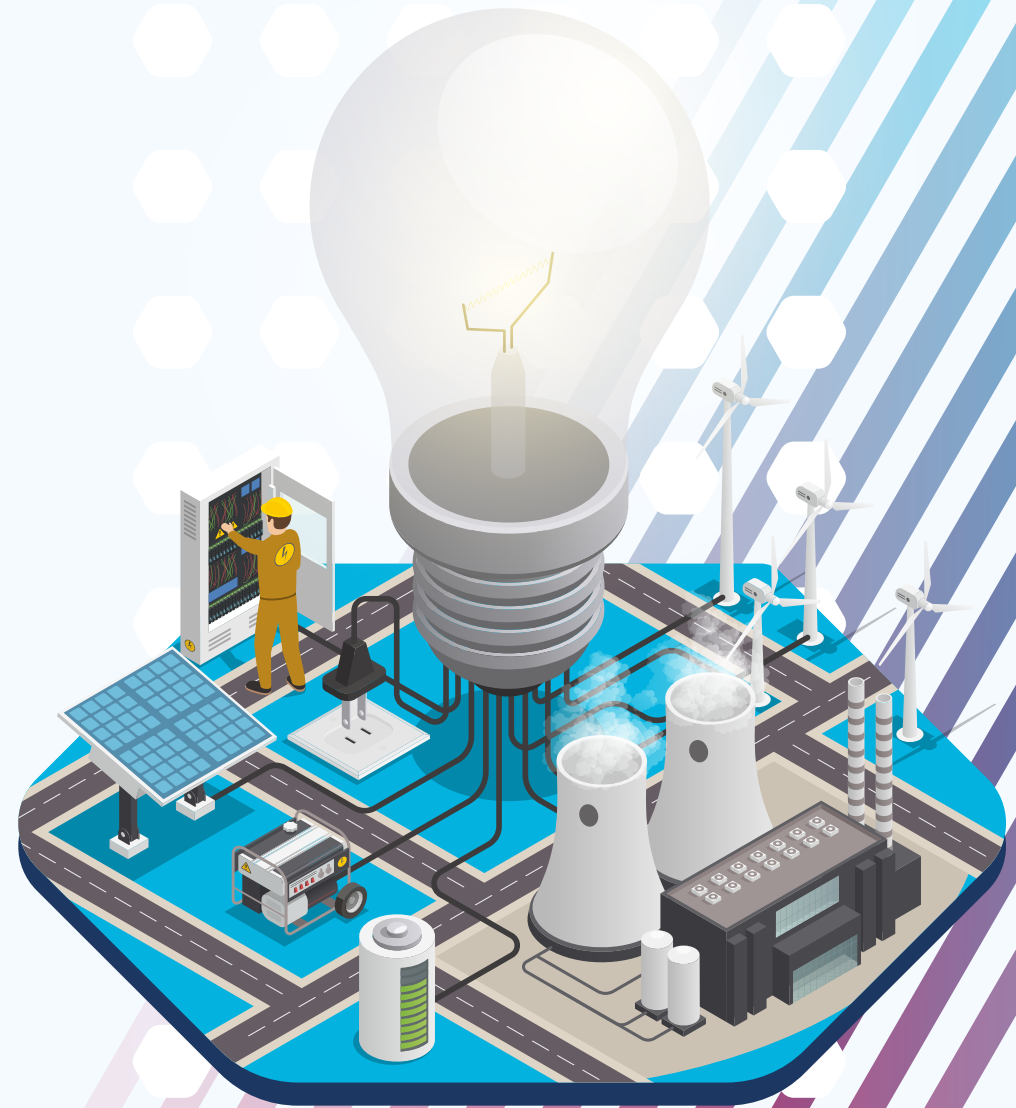
Energy symbiosis is a concept that refers to the efficient and sustainable use of energy resources by different industrial sectors and facilities. It deals with the usage of the waste energetic resources of an industry or industrial process as a substitute to that traditionally used by another industrial process.

In other words, it is based on the idea of utilizing waste heat, by-products, and other forms of energy that would otherwise be discarded, and redirecting them towards other processes or facilities that can use them.

Given that it can lead to significant energy savings and reduced greenhouse gas emissions, as well as improved resource efficiency, it has been recognized as part of the European strategy to use resources efficiently.

An example of energy symbiosis:

In an industrial park, a steel factory may produce waste heat that can be captured and used to heat nearby buildings or greenhouses.





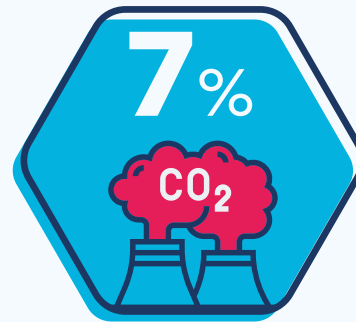
Massive potential impacts for Europe

According to a study by the European Commission, the implementation of energy symbiosis in the European Union has the potential to:



Reduce primary energy consumption by up to 10%

This is equivalent to saving the amount of energy produced by around 20 medium-sized coal power plants operating at full capacity for a whole year, or the energy consumption of a country the size of Austria or Portugal.



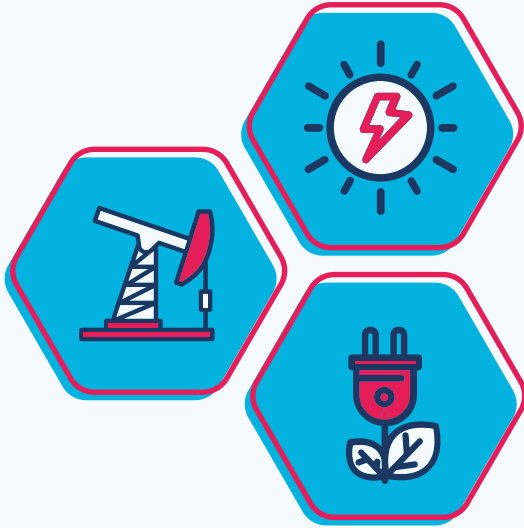
Reduce greenhouse gas emissions by up to 7%

This is equivalent to removing the annual emissions of more than 70 million cars from the road, or to shutting down 70 coal-fired power plants. It's like taking the carbon sequestered by more than 200 million acres of forest in a year.



Lead to cost savings of up to €12 billion per year.

Just to put this into everyday perspective, these savings for Europe could equate to the GDP of a small country like Malta. It's also equivalent to the annual salary of about 240,000 highly paid doctors. It could also cover the tuition fees for about 12 million university students for a year.



- Reduced industrial fossil fuels dependency
- Achievement of the decarbonisation goals of eco-industrial parks in Europe
- Helping industries transition towards a more resilient, competitive and sustainable industrial model.

Good for industry.

Good for the environment.

Good for European energy security.





Barriers to industrial symbiosis

Despite its massive potential, energy symbiosis still remains a niche market in Europe.

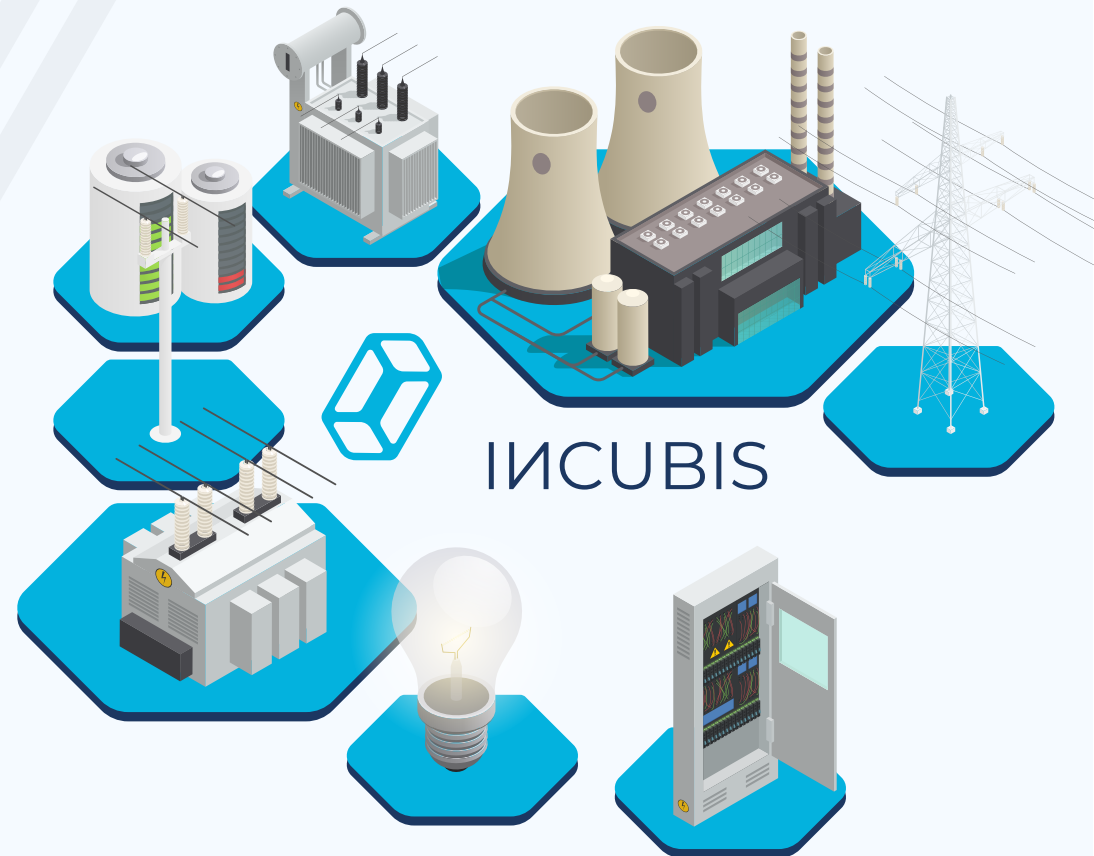
The main challenges are:

- Coordinating multiple stakeholders
- Appropriating knowledge in assessing and de-risking investments
- Dealing with high transaction costs and long development times.

Energy symbiosis is an opportunity that does not materialize on its own. Energy synergies need to be

- Identified:** In a geographically viable proximity
- Evaluated:** So the best matches can be made
- Enabled:** Collaboration and investment is needed to make these synergies happen.

The massive wave of digitalisation that Europe is experiencing, can be an enabler for helping to break down these barriers.





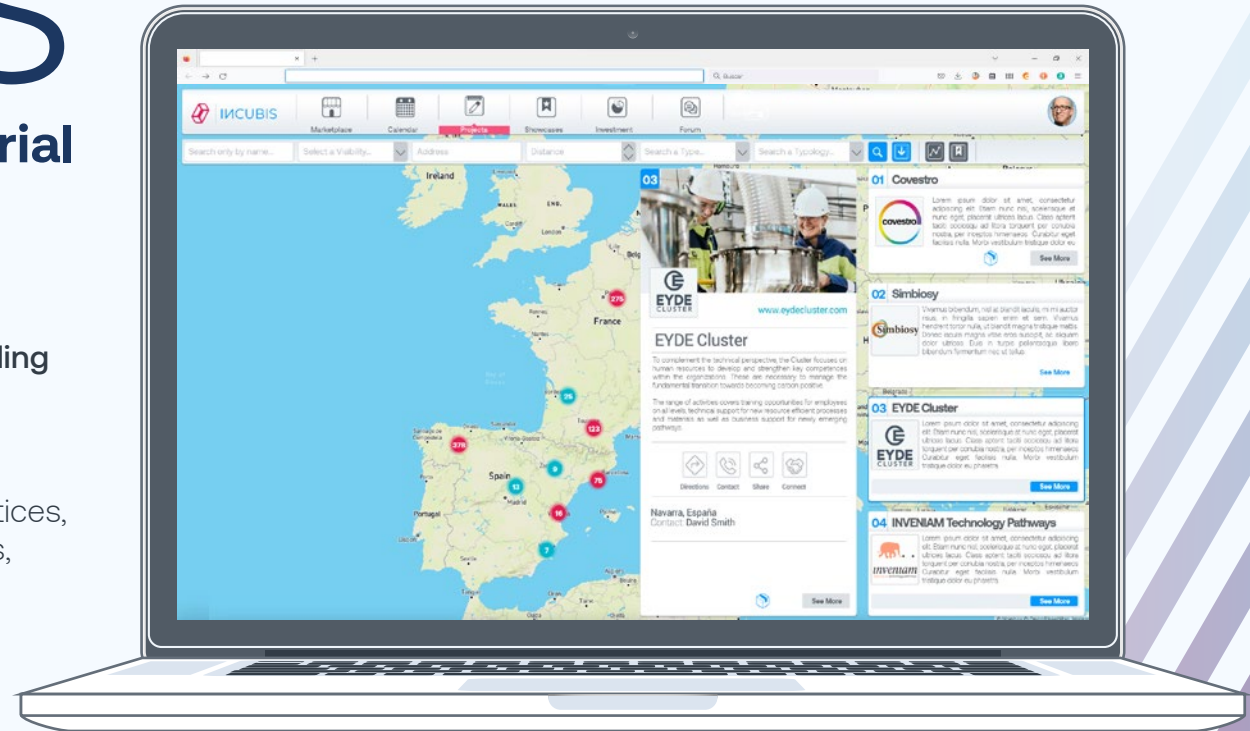
INCUBIS

A virtual incubator for industrial symbiosis projects.

A toolbox for the delivery of energy symbiosis enabling services:

INCUBIS is a platform that integrates matchmaking functionalities, ranking tools, feasibility tools, best practices, guidelines, training materials and funding opportunities, functioning as a toolbox for the delivery of Incubator services.

The platform allows users to:



1
IDENTIFY
energy
symbiosis
opportunities



2
EVALUATE
them for
optimized
synergy
matching



3
REMOVE
barriers to
ACTIVATE
energy
symbiosis



Who is the platform targeted to?

- Energy symbiosis facilitators
- Industrial Park managers
- Industrial factories that manage thermal waste
- Public agents that promote industrial symbiosis programs
- Investors

The perfect match

- 1 Management of Industrial Symbiosis projects
- 2 Synergy matching
- 3 Learning
- 4 Creating community
- 5 Financing
- 6 Best Practice showcases





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INCUBIS platform: www.incubis.org

INCUBIS project: www.incub-is.eu