

ECONOMIC DYNAMISM & ENVIRONMENTAL EXCELLENCE

PLATFORM FOR INDUSTRY AND INNOVATION AT CABAN TONKIN

www.piicto.fr





A LEADING INDUSTRIAL HUB OPEN TO THE WORLD

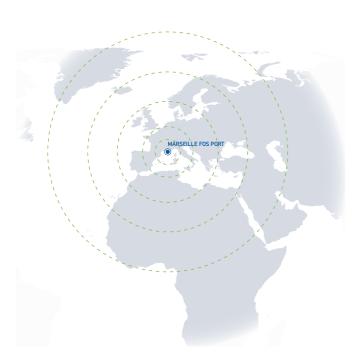
The Platform for Industry and Innovation at Caban Tonkin (PIICTO) is a unique space for projects, investment and innovation in Southern Europe.

Located in Marseille, the oldest and largest port in France, PIICTO brings together leaders in the chemistry, energy, waste treatment, and steel industries.



A MULTIMODAL PLATFORM ANCHORED IN ITS TERRITORY AND EQUIPPED FOR INDUSTRIAL NEEDS

✓ DIRECT ACCESS TO THE LARGEST FRENCH PORT



MULTIMODAL PLATFORMS AND DIRECT **ACCESS TO MAJOR EUROPEAN AND MEDITERRANEAN ROUTES:**







MARITIME



A LEADING ENERGY HUB IN SOUTHERN EUROPE

With top infrastructures and world-class players, PIICTO is a unique energy hub in southern Europe.

TOP INFRASTRUCTURES AND NETWORKS:

Electricity (2 x 225 kV lines)





Natural gas (2 terminals)





Coal, biomass (solid bulk terminal)





Wind, solar power



(electrolysers + pipeline)



Ethylene & propylene



Nitrogen & oxygen

PILOT SITES FOR INDUSTRIAL PROCESSES INNOVATIONS

Solamat Merex (treatment of hazardous waste), LyondellBasell (safety - security)...

MAJOR INFRASTRUCTURES FOR THE **DEVELOPMENT OF NEW ENERGIES**

Air Liquide (H2 Mobility), Elengy (LNG terminal), CNR (wind power), Combigolfe (combined cycle power station), KemOne (hydrogen byproduct), Jupiter 1000 (green hydrogen - methane synthesis)...

MATERIAL RECOVERY HUBS

Ascométal (metal recycling), EveRé (treatment and recovery of household waste), Solamat Merex (treatment of hazardous waste - solvent regeneration), Calcaires Régionaux/EJL (recycling of quarry and site waste)...



AN INDUSTRIAL PLATFORM ENGAGED IN THE CIRCULAR ECONOMY

Since 2015, PIICTO has fostered a collaborative dynamic with effective industrial cooperation.



A UNIQUE CONCENTRATION OF INDUSTRIAL SITES ON 1,200 HECTARES 19 1 LINDE 8 CNR 15 ASCOMÉTAL 2 KEM ONE 16 ELENGY TONKIN 9 ENGIE COMBIGOLFE 3 EIFFAGE 10 CARFOS SEA INVEST 17 AIR LIQUIDE 4 LYONDELL CHIMIEFRANCE 11 CALCIA 18 NEGRI 5 COVESTRO 12 LAFARGE 19 SBM 6 EVERÉ 13 VICAT 7 SOLAMAT MEREX 14 EJL / CALCAIRES RÉGIONAUX 8 9

DIFFERENTS TYPES OF COLLABORATION

MATERIALS AND ENERGY



- > Synergies on incoming / outgoing flows (energy, raw materials, etc.
- Cost snaring (supply, waste, etc.)
- > Energy recovery

INFRASTRUCTURE

SERVICES



- Utility production sites and distribution infrastructure
- Industrial demonstrators
- Logistics and multimodal platform
- Shared equipment

(demineralised water production, effluent treatment, electrical transformation, etc.)

> Caterin

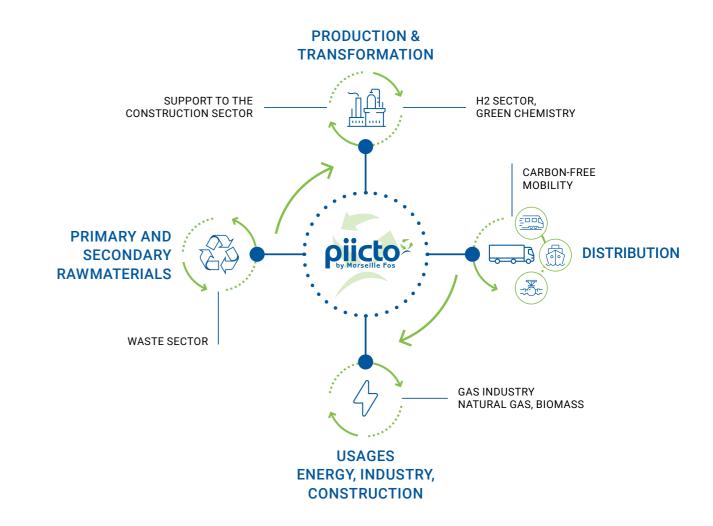
Security

- Fnyironmental / sanitary analysis
- Transport maintenance
- Personal protective equipment maintenance

A LOCAL DYNAMIC, INVOLVING MULTIPLE STAKEHOLDERS

Since 2015, a circular economy dynamic has been developed between the industrial players of the platform and the Port of Marseille Fos, co-founders of the association.

New opportunities are also being explored with other manufacturers and stakeholders present in the Marseille Fos Industrial Zone at a local, national and European level.



4



PIICTO, A COLLECTIVE DYNAMIC



« OUR INTEGRATION MODEL IS PRAGMATIC, SCALABLE, **BUILT ON PROJECTS »**





LARGE INDUSTRIES

In energy, chemistry, logistics, processing waste, metallurgy, materials



1,500+ **DIRECT JOBS**

18,000 related jobs in France



€1 BILLION+ OF ADDED VALUE PER YEAR



→ AN INNOVATIVE & EVOLVING ASSOCIATIVE MODEL



→ PIICTO AT THE HEART OF MARSEILLE PROVENCE NEW PRIORITIES













→ COLLECTIVE INTELLIGENCE



GOVERNANCE

The PIICTO association brings together nearly 40 members, including manufacturers, promoters, the Marseille Fos Port Authority (active members) as well as local authorities, local communities, business and innovation clusters (qualified members).







OUR KEY CHALLENGE IN THE JUPITER 1000 PROJECT IS TO BE ABLE TO STORE RENEWABLE ENERGY PRODUCTION. »



BUILD COLLABORATION

PIICTO is a trusted third party bringing expertise at all levels: technical, industrial, economic and regulatory. PIICTO facilitates collaboration between stakeholders at all stages (identification of opportunities, pre-feasibility, project launch and development, promotion, etc.).

	PROJECTS	MARKETS	ASSOCIATED PLAYERS	IMPACTS	LEARN MORE
e Kem One	VABOSCO Valorisation of several thousand tonnes of co-products (sludge) from industrial activities in France	Building and public works	Jean Lefebvre Méditerranée, Calcaires Régionaux, Kem One, Région Sud, ADEME, DREAL	16,000 tons of co-products (sludge) from industrial activities in France 3 tons of CO ₂ / year avoided	
O Cash	ICaRe Valorisation of co-products (sludge) from industrial activities in France	Industrial waste treatment	Solamat Merex, ADEME, Région Sud	2,500 tons of co-products (sludge) from industrial activities Industrial waste treatment 1,400 tons of natural lime saved / year	
MMADO	DEMINERALISED WATER Development of over-capacity demineralised water	Security of supply	Engie Thermique France, Kem One	7,000 tons of demineralised water over 3 years	
⊕ Kem One	HCL33% Development of a HCL33% local value chain	Local supply	Kem One, Naphtachimie, Ascométal, Arcelor Mittal, LyondellBasell, Rousselot	200 tons of CO ₂ spared / year Local supply chains	
Est Les Abelles	PERSONAL PROTECTIVE EQUIPMENT WASHING Personal protective equipment maintenance	Maintenance	ESAT Les abeilles, EveRé, Elengy, Solamat Merex, Air Liquide, Kem One	Over 5,500 pieces processed / year Optimisation of the logistics loop and services Diminution of CO ₂ emissions	

Projects short list - 20/01/2020



ACCELERATE INNOVATION

Building on its existing industrial ecosystem, PIICTO is a unique space to invent the industry of tomorrow and meet environmental challenges. PIICTO welcomes semi-industrial demonstrators, in either a dedicated area of 12 hectares, at INNOVEX located at the north of the platform (e.g., Jupiter 1000 projects, Combigreen), or directly on existing industrial sites (e.g., Vasco2 project, etc.).

	PROJECTS	MARKETS	ASSOCIATED PLAYERS	IMPACTS	LEARN MORE
Carbon4PUR	CARBON 4 Pur Industrial smoke recovery and substitution of raw materials	Decarbonization of polyol production	14 partners from 7 Europeans countries: Covestro, Arcelor Mittal, CEA, GPMM, Universiteit Leiden, Universiteit Gent, Recticel, Imperial College London, and more.	CO ₂ capture and recovery	
LaM	VALHYDATE Fuel cell (H2)	Stationary energy Decarbonated mobility	ENGIE, Kem One, GPMM, Linde, AREVA SE, Rising Sud, Capenergies	Reducing pollution in the maritime sector Hydrogen recovery and purification	M
© Air Liquide / JP	HyAMMED H2 for heavy-duty vehicle	Decarbonated mobility	Air Liquide, Kem One, Carrefour, Greent GT, Iveco, Jacky Perrenot, TC AMPM, Capenergies, ADEME	Reduction of CO ₂ emissions (8,000t / year) Deployment of 8 trucks (pilot project in Europe)	
	JUPITER 1000 Convert renewable power surplus into green hydrogen and syngas for storage	Power to Gas	GRT Gaz, RTE, CEA, GPMM, CNR, RTE, Etat, ADEME, Région Sud, LyondellBasell, Kem One	Green Hydrogen injection (200 m³/h) and Methane production (25 m³/h) First industrial demonstrator of POWER TO GAS in France	
WW/do o	VASCO 2 Industrial smoke bioremediation	Smoke treatments and CO ₂ bio- remediation Biofuels	12 partners: GPMM, Kem One, Solamat Merex, Arcelor Mittal, AMPM, Coldep, Ifremer, CEA, Total, ADEME, and more.	Up to 130 tons of CO ₂ /year/ha	Ìm

Projects short list - 20/01/2020.





SUPPORT NEW INVESTORS

The PIICTO association offers free, personalised and confidential support services for investors and industries looking to invest in the Caban Tonkin platform. We offer 500 ha of land (plots varying from 2 to 100 hectares), help identifying and developing collaboration with existing industries, and help managing, sharing and anticipating industrial risks.

The Chinese group, the world's third-largest silica producer, will invest €105M in its first European production unit, coupled with a research center.



INTERFACE WITH OUR STAKEHOLDERS

Ongoing actions and projects developed on PIICTO are regularly shared with the different stakeholders of the territory

Through workshops, hosting delegations, site visits or academic seminars, PIICTO helps promote the initiatives of industry and the circular economy dynamic implemented in the Marseille Fos port area.

8 - 100

PIICTO 2025 : ECONOMIC DYNAMISM AND ENVIRONMENTAL EXCELLENCE



2020-2025 is a new stage for PIICTO, with a 2025 strategic vision, a new cycle of investments planned dedicated to competitiveness and environmental excellence, and new players coming on board.







A NEW INVESTMENT CYCLE

A majority of our investments is dedicated to a better management of resources (energy optimisation, recovery of secondary raw materials).



A NEW VISION AND MISSION

We are consolidating our initial ambitions (consolidate existing jobs, attract new industrialists, prepare the industry of tomorrow) with a strong focus towards environmental excellence.

We are moving from an industry-to-industry cooperation model to a more complex, resilient and open ecosystem involving more stakeholders.



3 KEY OBJECTIVES

We organise our actions around 3 key objectives:



Decouple economic growth from

economic growth from environmental impact



Attract new businesses and

consolidate existing jobs



Innovate

and accelerate the transition of our industries and associated members



INNOVATION DOMAINS

We work on 3 main innovation domains:



ENERGY RECOVERY AND REDUCTION OF ${\rm CO_2}$ EMISSIONS

- > CO2 and industrial emissions,
- > Effluents and cooling water,
- Solid waste,

- > Secondary raw materials,
- > Depolymerisation of plastics



GREEN GASES, HYDROGEN AND BIO-FUELS

- > Energy conversion and storage,
- > Power to Gas,
- > Power to liquids,

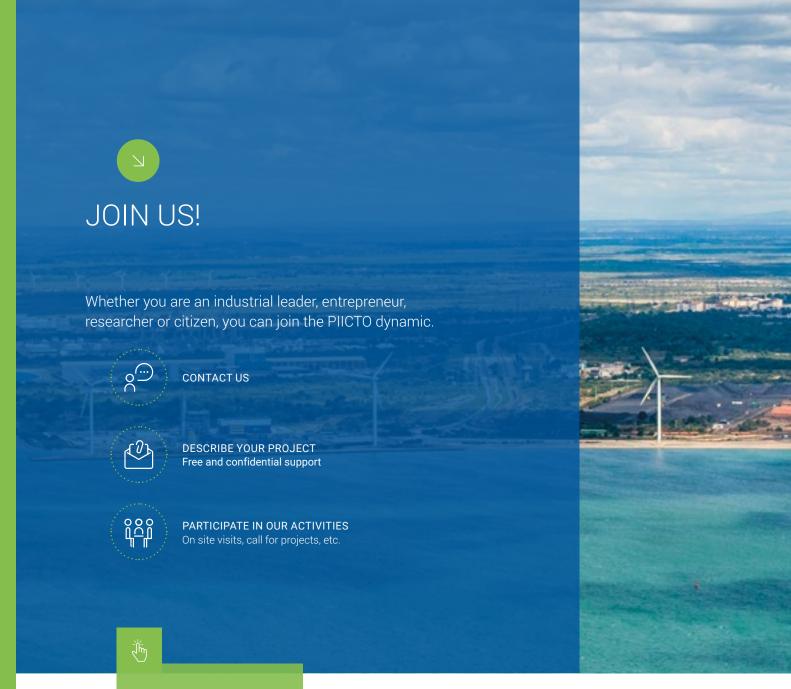
- Power to power,
- > Biofuels (2nd and 3rd generation),
- Biomethane

RENEWABLE ENERGY PRODUCTION AND ENERGY RECOVERY

- Development of new production capacities,
- > Energy storage,

- > Energy Recovery,
- Industrial smart grid

11



www.piicto.fr



PLATFORM FOR INDUSTRY AND INNOVATION AT CABAN TONKIN