SUSTAINABLE PLACES 2022

R2M SOLUTION | MÉTROPOLE NICE CÔTE D'AZUR | VILLE DE NICE | iae nice Graduate School of Management | UNIVERSITÉ CÔTE D'AZUR

Sep. 6 - Sep. 9, 2022 Nice, France |
Centre Universitaire Méditerranéen

@Photo Ville de Nice

Overview of the programme

SUSTAINABLE PLACES 2022

Sep. 6 - Sep. 9, 2022 | Nice, France

SUSTAINABLE PLACES 2022

Sep. 6 - Sep. 9, 2022 | Nice, France

Day 1

06 September 2022
Hybrid event
C.U.M., Nice, FR

- 09.00 – 12.00 Potential pre-event private meetings
- 13.00 – 13.45 Registration & welcome coffee
- 13.45 – 15.35 Plenary Opening
- 15.50 Break
- 15.50 – 17.00 Parallel sessions & EU Info Day
- 17.00 – 18.00 Welcome cocktail

Day 2

07 September 2022
Hybrid event
C.U.M., Nice, FR

- 08.30 – 10.00 Workshops / Papers
- 10.15 Break
- 10.15 – 11.45 Workshops / Paper sessions
- 11.45 – 13.30 Networking lunch
- 13.30 – 14.30 Plenary session
- 14.45 Break
- 14.45 – 16.15 Workshops / Paper sessions
- 16.30 Break
- 16.30 – 18.00 Workshops / Paper sessions
- 19.00 – 22.00 Gala dinner at Le Negresco

Day 3

08 September 2022
Hybrid event
IAE, Nice, FR

- 09.00 – 10.30 Workshops / Papers
- 10.45 Break
- 10.45 – 12.15 Workshops / Paper sessions
- 12.15 – 14.00 Networking lunch
- 14.00 – 15.30 Workshops / Paper sessions
- 16.00 Break
- 16.00 – 17.30 Workshops / Paper sessions
- 17.30 – 19.00 Evening walk up to the Colline du Château

Day 4

09 September 2022
Hybrid event
IAE, Nice, FR

- 09.00 – 10.30 Workshops / Papers
- 11.00 Break
- 11.00 – 12.15 Workshops / Paper sessions
- 12.15 – 14.00 Closing and farewell lunch (on-site or take away)
- 14.00 – 17.00 IMREDD Smart City Innovation Center visit (registration required)

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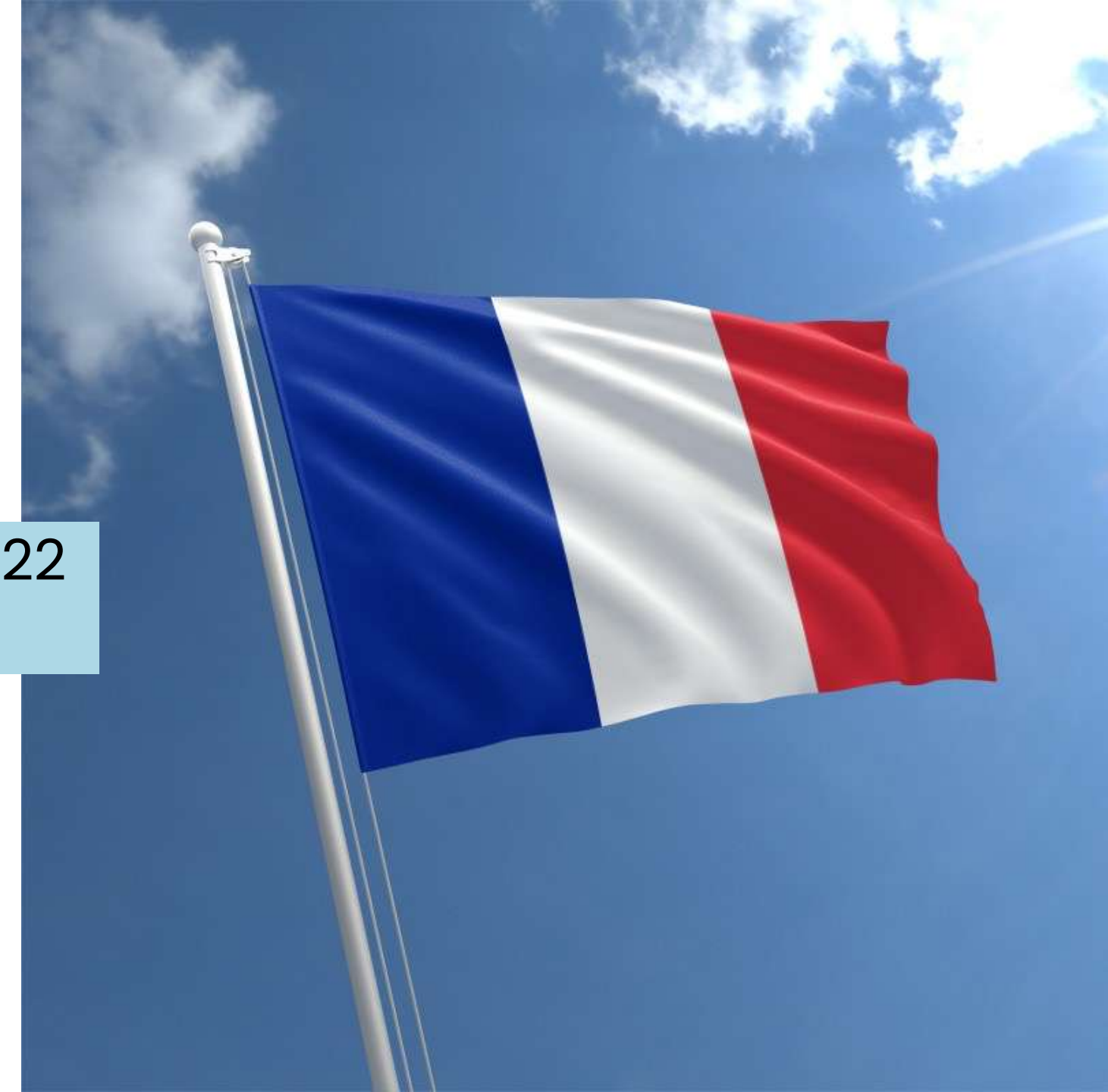
INNOVATE WITH FRANCE

Sustainable Places 2022
Opening session

Centre Universitaire Méditerranéen (CUM), Nice, 6 September 2022

SUSTAINABLE PLACES 2022



INNOVATE WITH FRANCE

- Opening address: Nice, a pioneering smart city
- Welcoming words: international collaboration at University Côte d'Azur
- Testimony from a local industrial player with international outreach
- How a business ecosystem supports a territory's energy transition *followed by pitches from regional innovators*

- Energy efficiency policies : European background
- Building in France: A revolution?
- Advancing the transition to net zero, *followed by pitches from regional innovators*

Short break

- Infoday: Upcoming Horizon Europe and LIFE calls in the building and energy sectors

Welcome cocktail

SUSTAINABLE PLACES 2022

INNOVATE WITH FRANCE

Opening address:
Nice, a pioneering smart city

Agnès Rampal
Deputy Mayor of Nice, Vice President of the Nice Côte d'Azur Metropolis

SUSTAINABLE PLACES 2022

INNOVATE WITH FRANCE

Welcoming words: International collaboration at University Côte d'Azur

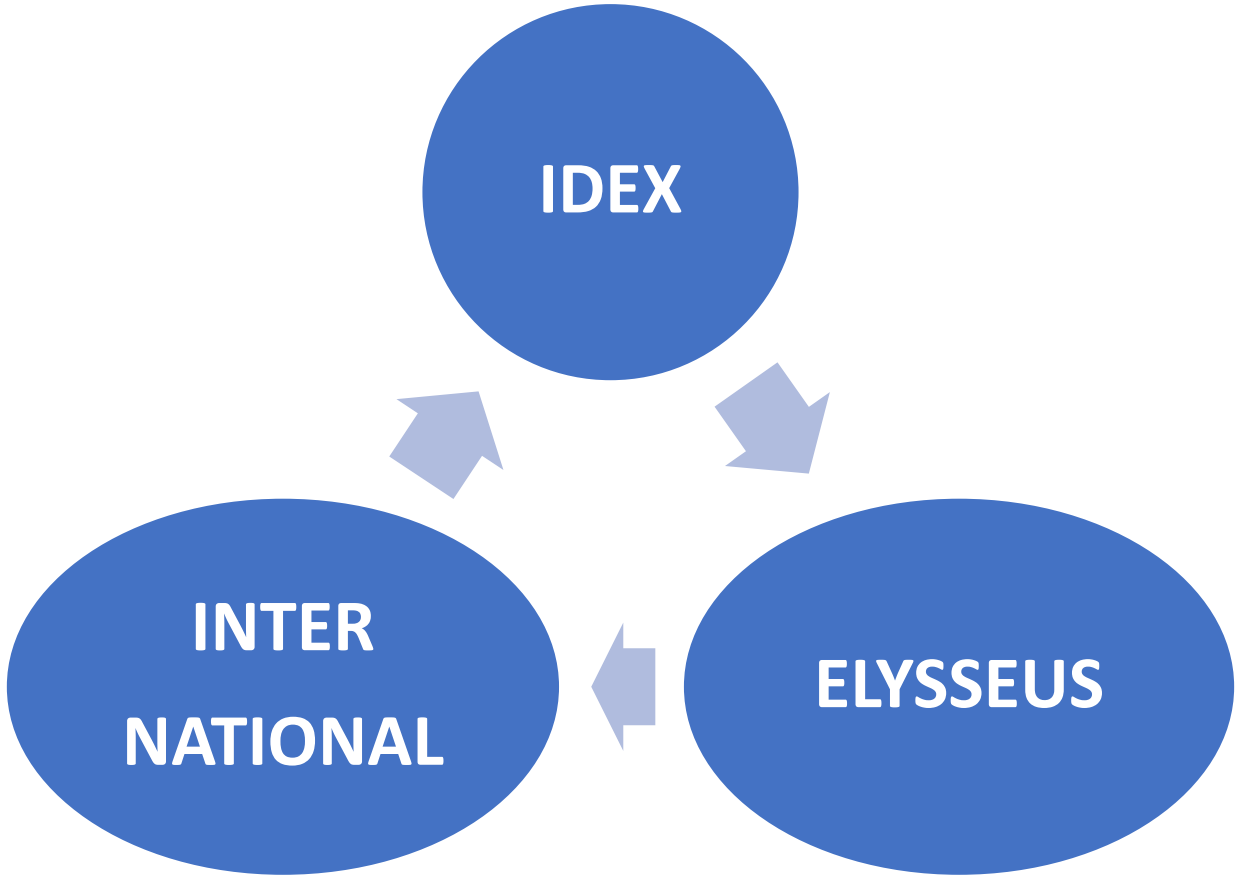
Nadine Tournois
Professor Emeritus, ex-Dean of the IAE Nice Graduate School of Business and Vice-President for University Côte d'Azur

SUSTAINABLE PLACES 2022

UNIVERSITÉ
CÔTE D'AZUR

iae nice
Graduate School of Management

Université Côte d'Azur



Université Côte d’Azur

- 35000 students
- 28 schools and graduate schools
- 12 campuses
- 1200 faculty
- 50 research laboratories

IAE Nice – Graduate School of Management

- 16 Master degrees - all ranked among the best of France
  - 6 entirely taught in English
- 1 laboratory: Groupe de Recherche en Management – GRM
- 1500 students
- 42% of foreign students
- 66 different nationalities represented

A strategy based on the IMPACT of IAE NICE

IAE Nice – Graduate School of Management

An innovative strategy based on the IMPACT of IAE NICE

- **Impact of research on entreprises: « useful research »**
- **Impact on economy (2017-2022)**
  - **40 Cies created abroad for 1409 jobs created**
  - **90 Cies created in France for 381 jobs created**
  - **Direct and indirect annual economic impact: 112 638 316 € (Source BSIS 2022)**
- **Impact on the society (24% fellows of IAE)**
- **Impact on environment:**
  - **Fair Trade School (since 2019)**
  - **PRME member (Principles for Responsible Management Education) (2022)**
  - **Global Compact (since 2012)**

IAE Nice – Graduate School of Management

IAE Nice

a school created

for welcoming Sustainable Places Conference 2022 ?!

INNOVATE WITH FRANCE

Testimony from a local industrial player with international outreach: Malongo

Jean-Pierre Blanc
CEO of Malongo

SUSTAINABLE PLACES 2022

Malongo®

ROASTER SINCE 1934

MALONGO COMPANY

Founded in Nice in 1934

An atypical brand

Leader in organic and fair trade coffees

A commitment that is part of the brand's DNA

Radical positions and strong opinions

The desire not to be followers, to chart its own way

Traditional roasting since 1934

Quality - Ethics - Innovation

Malongo

Quality

from plantation to cup

Terroir Arabica coffees

High altitude plantation under shade

Hand picking

Traditional roasting

Respectful packaging

Choosing the best processes

at each stage of the coffee chain

Malongo®

Fair Trade

Label Fairtrade / Max Havelaar

Guaranteed Minimum Price

Economic, social and environmental aspects

Autonomy and democratic governance

Commitment to quality

A guarantee for the producer

A quality coffee for the consumer

Malongo

30 years of commitment

Assisting cooperatives and improving quality

Supporting the transition to organic and fair trade

Long-term commitment to producers

On-site training, infrastructure financing

Guaranteed minimum price, direct purchases

Projects in Mexico, Congo, Laos, Bolivia, Myanmar …

Malongo

Organic farming

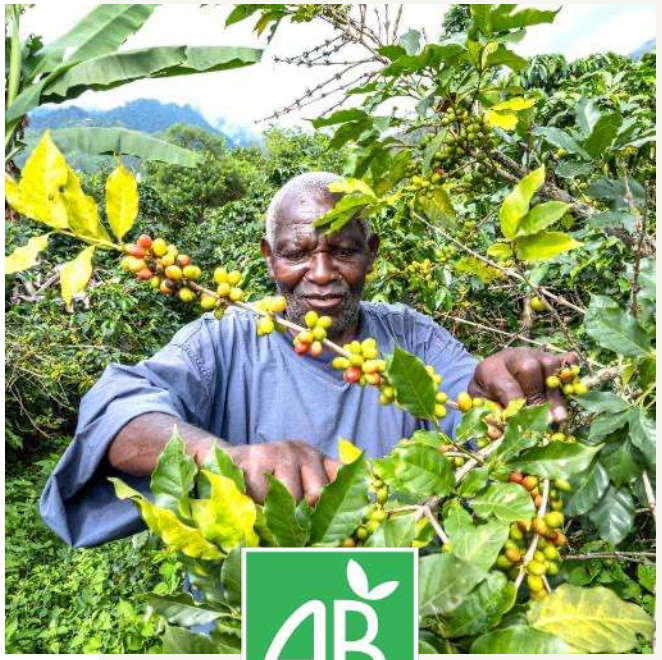
Cultivation without pesticides and synthetic products

Agroforestry: coffee + shade trees

Diversification of income sources / C02 absorption

Positive impact on the environment of local populations

Coffee production that respects the land and biodiversity



Malongo

Blockchain Traceability

In partnership with the brand Carrefour

QR CODE allowing access to information about the coffee

Number of villages, altitude, producers

The dates of the key stages of production

Create a connection between producers and consumers

Myanmar: a project to replace poppy growing with coffee growing

Malongo

Machine EOH
Made in France

Relocating production to the Vendée (western France)

Malongo produces its own machines

Compact, easy to use and fast machine

Eco-designed, recyclable and guaranteed for 5 years (15,000 coffees)

Natural fibre paper pods

The reflection of our commitment to quality, sustainable development, organic and fair trade, in the pure know-how of French espresso.

Malongo

MtoM PROJECT

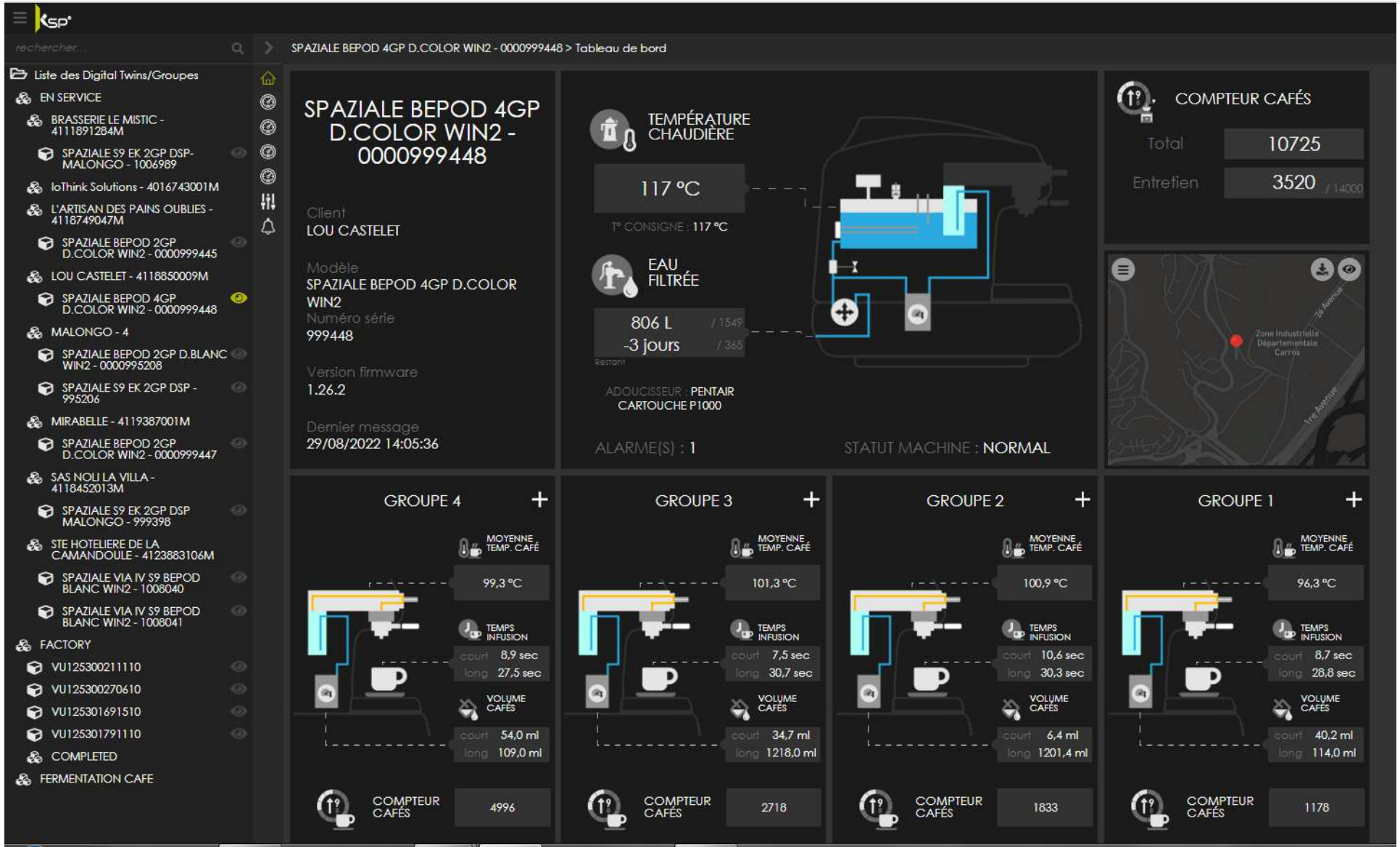
Improvement of CUSTOMER QUALITY
Predictive after-sales service
Preventive after-sales service

Malongo

Machine Parameters		**Quality objectives**
Volume of filtered water	⟷	**Water treatment management**
Coffee quality	⟷	**Brewing time analysis**
Coffee temperature	⟷	**View of the T° in the coffee cup**
Boiler temperature	⟷	**View of the T° of the coffee machine**
Number of cycles	⟷	**Planning of machine and grinder revisions**
Machine failures	⟷	**Viewing of faults identified by the machine electronics**
Machine ON/OFF	⟷	**Detection of the machine situation**

Malongo®

Control screen
MtoM system



MACHINE
PRODUCTION SITE

PLATFORM (cloud)
MtoM

CUSTOMER X
MALONGO

SALESPERSON
Commercial follow-up

SALESPERSON
Billing by the cup

SALESPERSON
Customer stock management with automatic restocking

CUSTOMER Y
MALONGO

AFTER-SALES
WORKSHOP

Malongo®

THANK YOU

INNOVATE WITH FRANCE

How a business ecosystem supports a territory's energy transition

Followed by pitches from regional innovators

Ludovic Asso
Head of Industry & Energy
Chamber of Commerce and Industry Nice Côte d'Azur

SUSTAINABLE PLACES 2022

HOW A BUSINESS ECOSYSTEM SUPPORTS A TERRITORY'S ENERGY TRANSITION

#FilièreEnergie06

Club Énergie
Côte d'Azur

Groupe

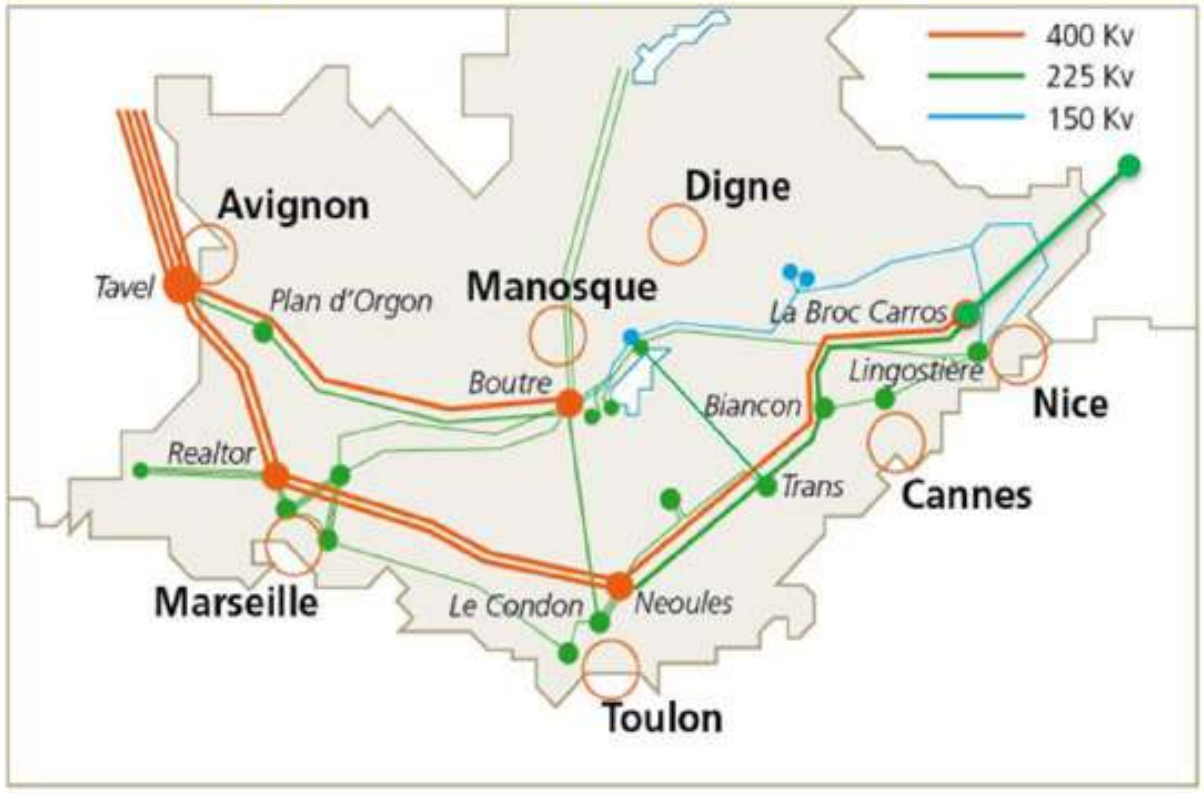
CCI NICE CÔTE D'AZUR

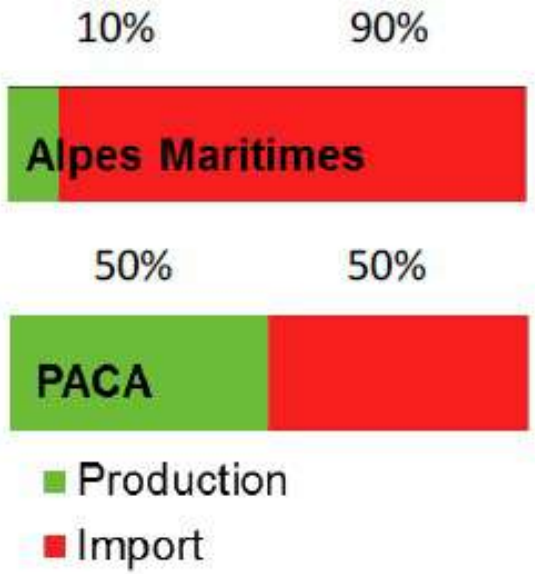
September 6 2022

SUSTAINABLE PLACES

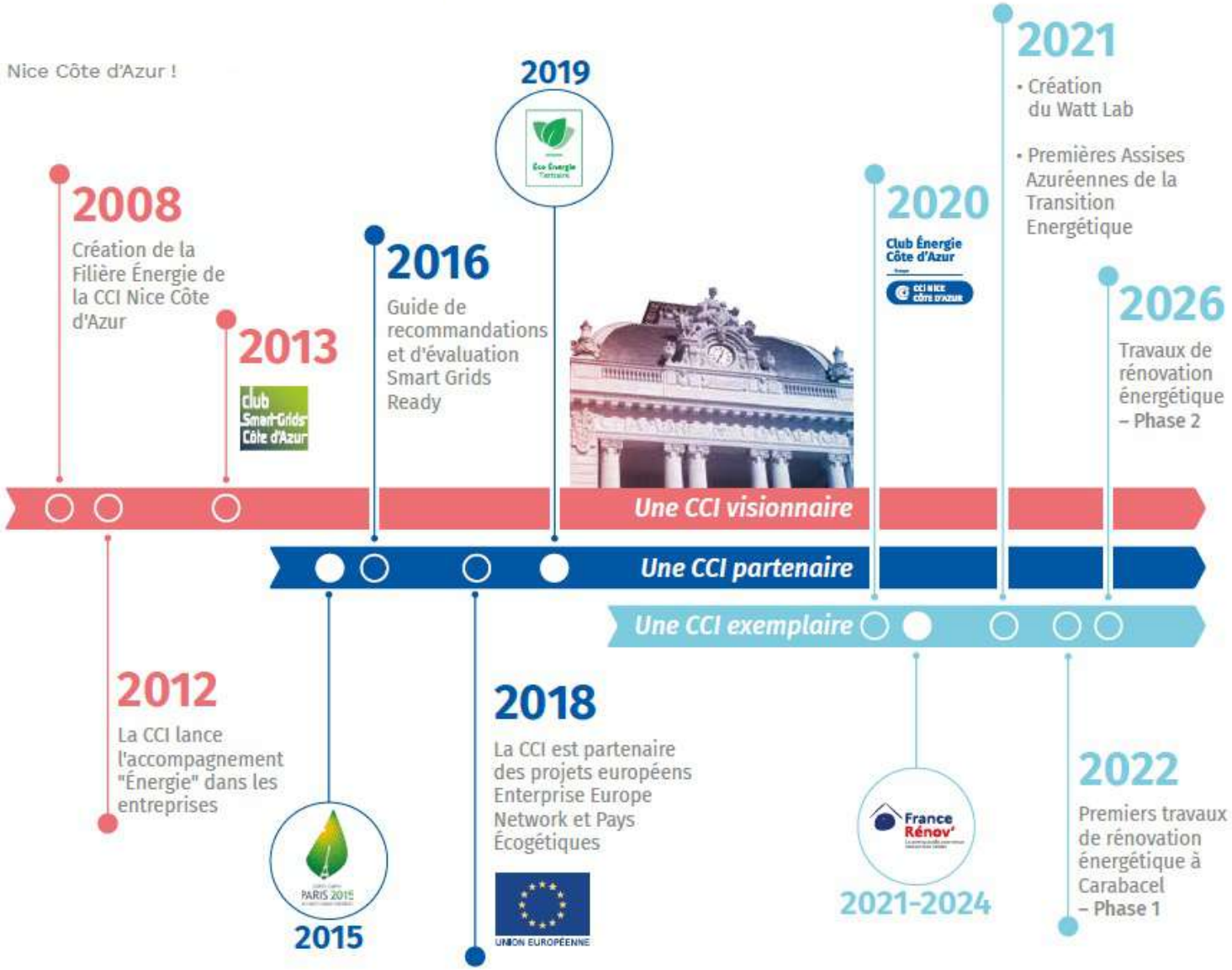
Production, transportation and distribution

03/11/2008 → 30/7/2009 → 15/12/2009 → 21/12/2009 → 01/02/2010





HISTORY OF THE ENERGY SECTOR OF THE CCI Nice Côte d'Azur



Watt Lab CCI NICE CÔTE D'AZUR

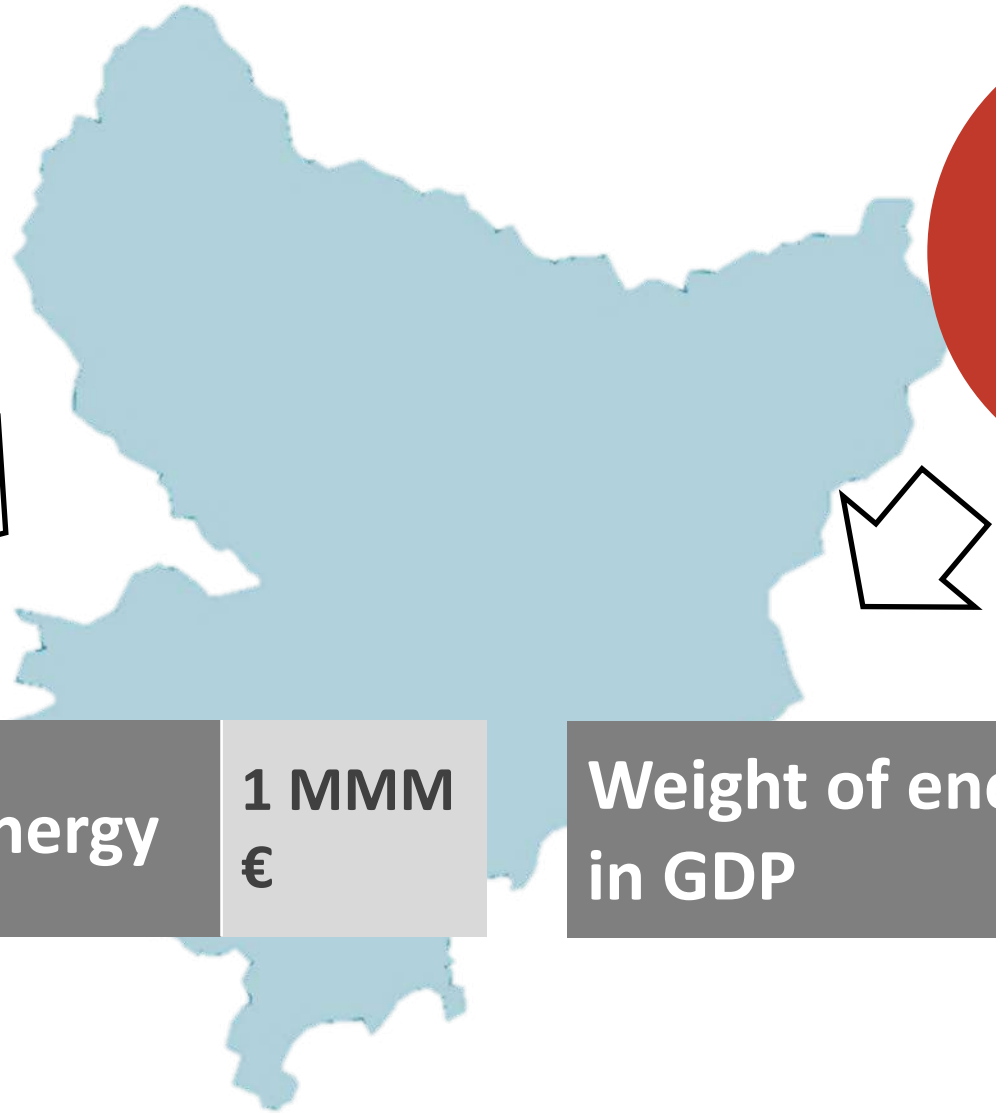
Le démonstrateur énergétique de la CCI Nice Côte d'Azur !

The energy transition in action at the CCI Nice Côte d'Azur

Key figures and characteristics of the energy sector in the Alpes-Maritimes

300
establishments in the 06

4000
direct jobs (FTE)



Weight of energy	1 MMM €
Weight of energy in GDP	2,7%

Sources: Figures from the « Etude Prospective d'Evaluation du Poids de l'Industrie dans les Filières Industrielles Stratégiques des Alpes-Maritimes », 2019 and a Sirius study 2018

History of the Club Energie

Club Energie Côte d'Azur was created in **2020**, following the merger of Club Smart Grids and the Energy Efficiency and Renewable Energy players' group

+ 100 members

- Companies in the energy sector (design offices, energy suppliers, installers, etc.)
- Technicians from institutions dealing with energy transition issues
- Institutional actors (elected representatives, associations, etc.)
- Students in the energy and sustainable development sector

4 strategic themes

SUSTAINABLE MOBILITY

HYDROGEN

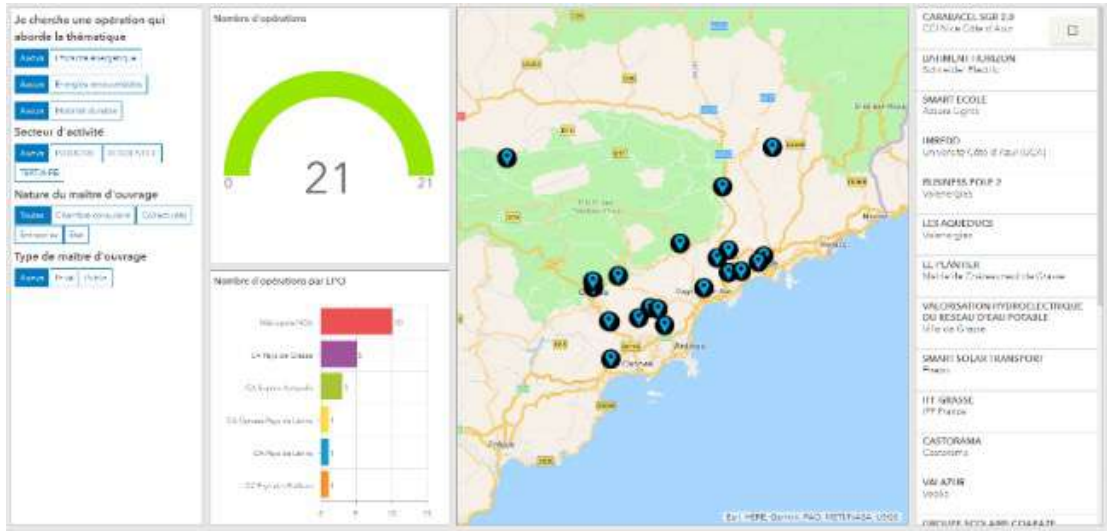
ENERGY EFFICIENCY

RENEWABLE ENERGIES

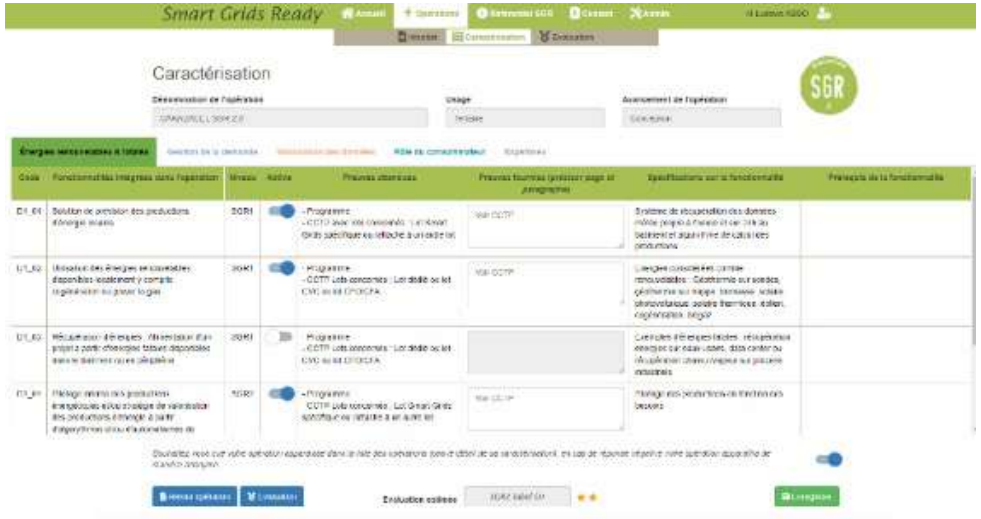
Major Achievements of the Club

Technical Data Sheets

The Côte d'Azur Energy Transition Observatory



Smart Grids Ready



Visits to exemplary sites

Les Assises Azuréennes de la Transition Energétique

1ère édition: 8 juillet 2021, Allianz Riviera

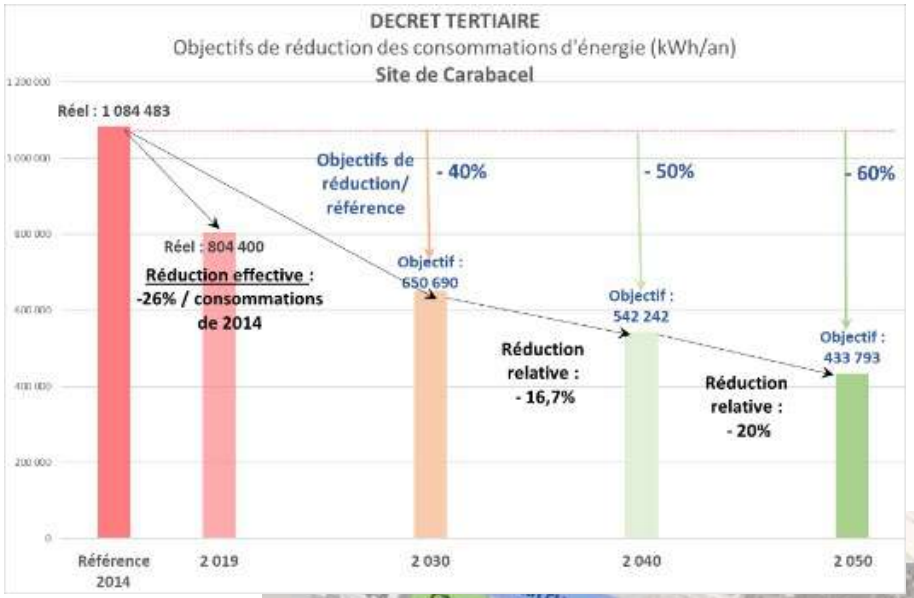
- 180 participants
- 5 round tables
- 20+ speakers
- 1 Place Business convention
- 1 partners' village
- 13 partners

SAVE THE DATE

2ième édition

Mardi 11 octobre 2022

Grasse – Palais des Congrès



AN EXEMPLARY ENERGY RENOVATION PROJECT

WATT LAB

Pedagogical path: examples of visuals

Club Énergie
Côte d'Azur

Groupe

CCI NICE
CÔTE D'AZUR

Any questions ?

#FilièreEnergie06

SUSTAINABLE
PLACES

20, boulevard Carabacel I CS 11259 I 06005 NICE CEDEX 01
T. 0 800 422 222 I www.cote-azur.cci.fr

CCI NICE CÔTE D'AZUR

SUSTAINABLE PLACES 2022

PITCHING SESSION

QUALISTEO
Rethinking Energy Efficiency

Solar Cloth

SUN and GO

WIT

PITCHING SESSION

QUALISTEO
Rethinking Energy Efficiency

SUSTAINABLE PLACES 2022

CCI NICE CÔTE D'AZUR

Elodie Bondi, general director

elodie.bondi@qualisteo.com

QUALISTEO

Rethinking Energy Efficiency

Introduction to our solutions and services

A world of challenges

Energy efficiency is part of a necessary decarbonization plan

Climate change

2022 is the 3rd hotest consecutive year in the history

Booming energy prices

Energy prices have reached unprecedented levels and that is a long term trend

Energy efficiency

Governments and major utilities are requesting massive reduction of energy consumptions

Qualisteo

A pioneer into innovative smart-metering

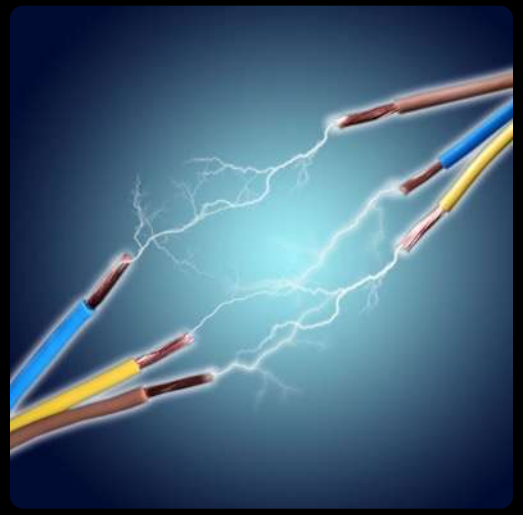
A global solution dedicated to energy efficiency in buildings and manufacturing sites

Renowned for its innovative technology in smart metering

- Company founded in 2010
- European Innovation Award winner
- 20+ team in Nice & Paris
- Solution deployed in 35 countries
- 500 projects operating 1500 systems
- Patented & certified solution

A unique solution

Relying on 4 innovative pilars



Smart metering

Lynx²

A multiple energy & fluids meatering system

Electricity, gas, water

Data management

Patented algorithms

Software pack dedicated to data management

Dashboards

Wattseeker

Energy data analytics, dashboarding & reporting software platform

Energy efficiency

Energy management

Energy auditing, action plan reviews, ISO50001, compliance

Energy optimization

10% savings with ROI in less than a year

Measure

Certified smart metering system

Easy-to-install, non-intrusive, no process shut down

Accurate and reliable consumption data

Understand

Real time data available live on the SaaS platform

Breakdown of consumptions by zone & usage

Energy Performance Indicators

Save

Consumptions mapping, fault identifications, and improvement plan

Regular action plan monitoring to ensure effective 10% savings

Fitted for ISO 50001 and IPMVP

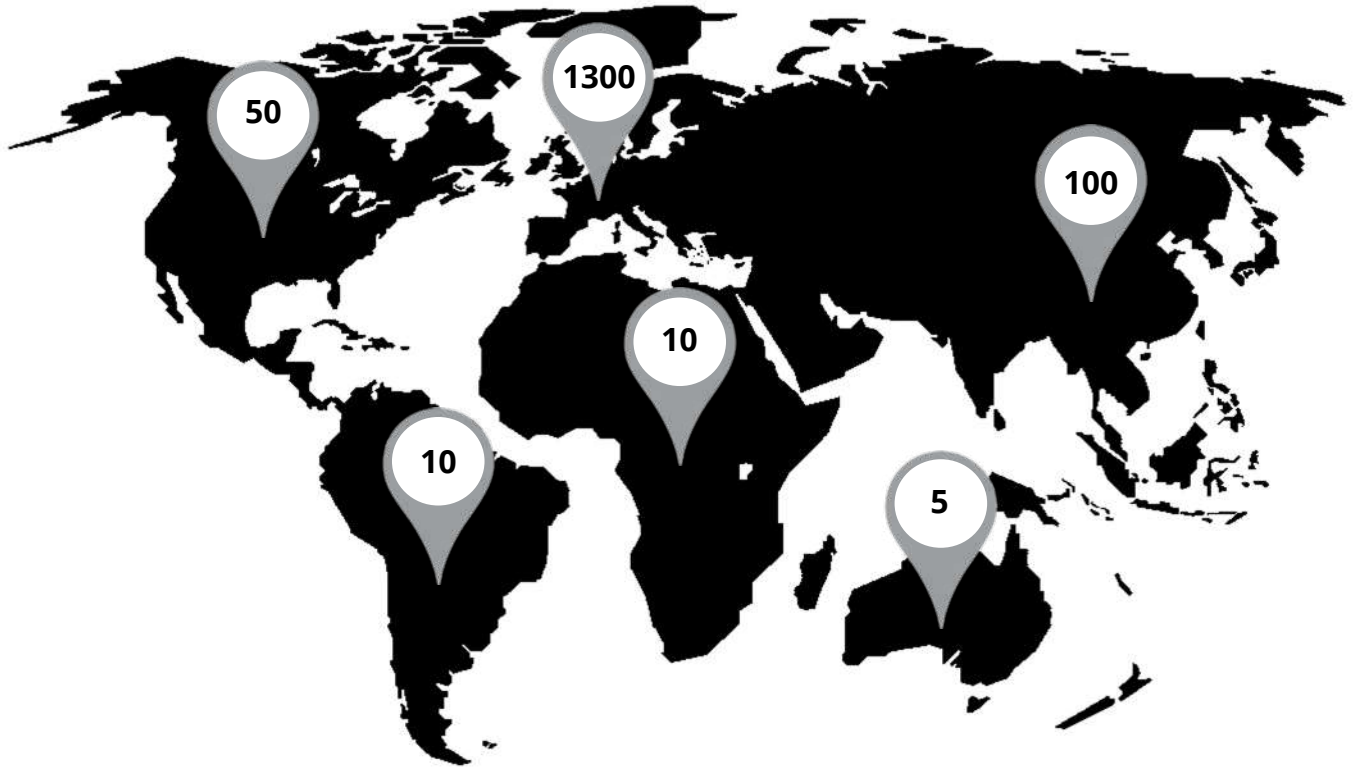
At a glance

Our value proposition

1. **Smart** accurate, reliable, non-intrusive submetering system
2. **Simple** easy-to-install and cost-competitive solution
3. **Service** inside to generate effective savings

They rely on Qualisteo

In more than 35 countries around the globe



NOVARES VINCI ALSTOM

SUEZ VEOLIA Aptargroup

EIFFAGE SANOFI MERCK

ENGIE eau de toulouse métropole TotalEnergies

LOUVRE igesa GROUPE ADP GreenFlex

They did it...

What about you ?

EIFFEL TOWER

Technical systems, restaurant & shops

- **12% savings**
- Identification of faulty consumptions
- Energy Audit EN16247

INCINERATION PLANT

Domestic waste incineration plant

- **9.5% savings**
- Air treatment
- Compressed air
- Lighting
- Smoke treatment
- Hydraulic force

AIRPORT

12 buildings and terminals

- **17% savings**
- Peak consumption management
- Lighting management
- Compressor optimization
- Adjustment of HVAC controls

PHARMACEUTICAL PLANT

Pharmaceutical processing site (production of injectable ampoules, tablets, capsules, syrups, …)

- **19% savings**
- Lighting replacement
- Timer on vacuum cleaners
- HVAC controls

They did it...

What about you ?

STADIUM

Stadium, swimming pool, sport hall, parking, catering

- **13% savings**
- Continuously operating equipment with a special focus on HVAC systems
- Synchronization of pumps and extended duration of outages
- Reduced mode on electric heating equipments

HQ BUILDING

Office tower located in Paris La Défense

- **14% savings**
- HVAC controls
- Domestic hot water
- Lighting
- Optimization of peaks on other types of equipment

MUSEUM

Main hall and exhibition rooms

- **17% savings**
- Reduction of base load
- Retrofit of lighting systems
- Optimization of compressors
- BMS retrocommissioning

WATER TREATMENT PLANT

Waste Water Treatment Centre

- **13% savings**
- Driving force
- Lighting
- Process optimization
- Maintenance optimization

QUALISTEO

Rethinking Energy Efficiency

266, Avenue de la Californie

06200 Nice - France

+33493973762

contact@qualisteo.com

PITCHING SESSION

Solar Cloth

SUSTAINABLE PLACES 2022

CCI NICE CÔTE D'AZUR

William Borderie, sales director

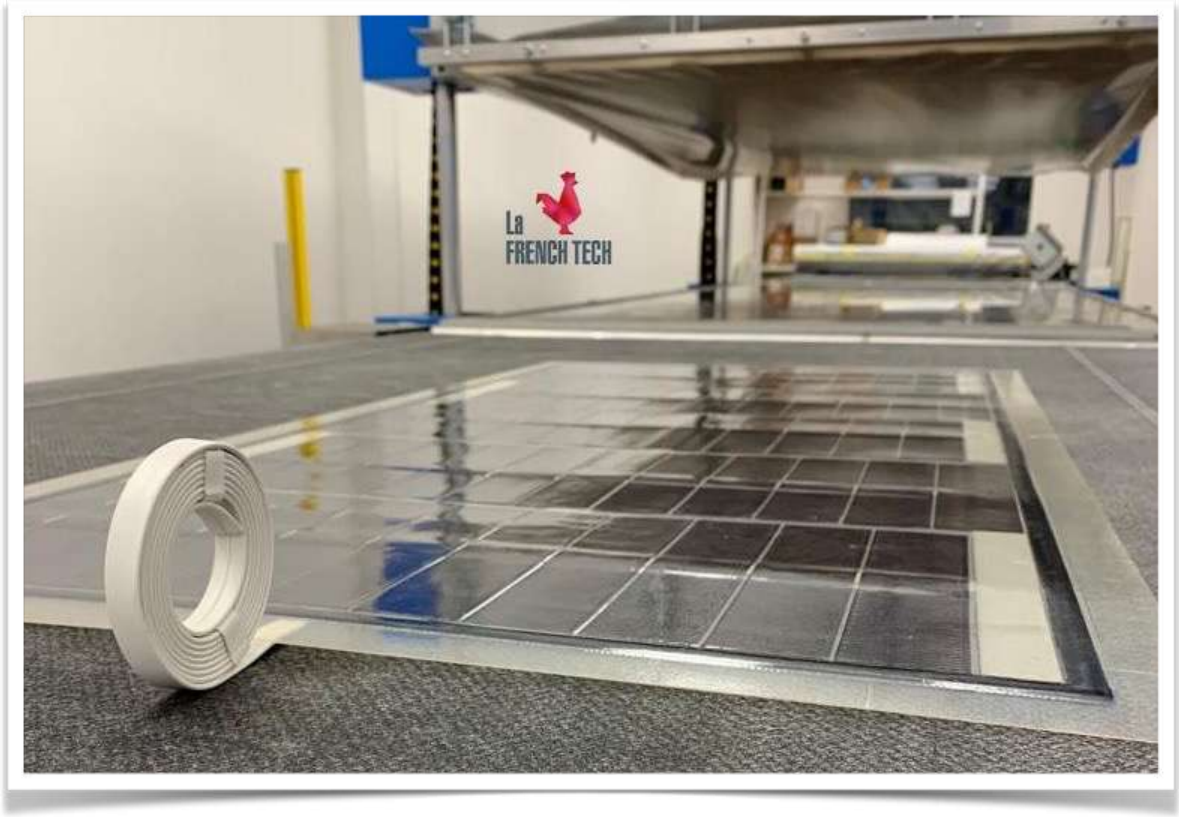
william.borderie@solar-cloth.fr

SolarCloth

Marine Outdoor Mobility Agriculture Aerospace Humanitarian

Tailor-made CIGS thin film solar panels

When regular solar panels are no longer relevant, we are the best alternative



La FRENCH FAB

SolarCloth

Roots / R&D

From boat sails to photovoltaic panels

SolarCloth

Technical specification

1.	**Powerful**	*17,6% of efficiency*
2.	**Thin**	*< 1mm*
3.	**Light**	*1,7kg per m^2*
4.	**Any shapes**	*L, trapezoid, accordion (foldable), ...*
5.	**Adapting to any surface**	*glue, sewing, straps, welding, velcro, zip, ...*
6.	**Unbreakable** *&* **ultra flexible**	*no glass*
7.	**Low carbon footprint**	*15gr of CO2 per kWh*
8.	**20+ years of lifespan**	*and 80% of efficiency in 20 years*

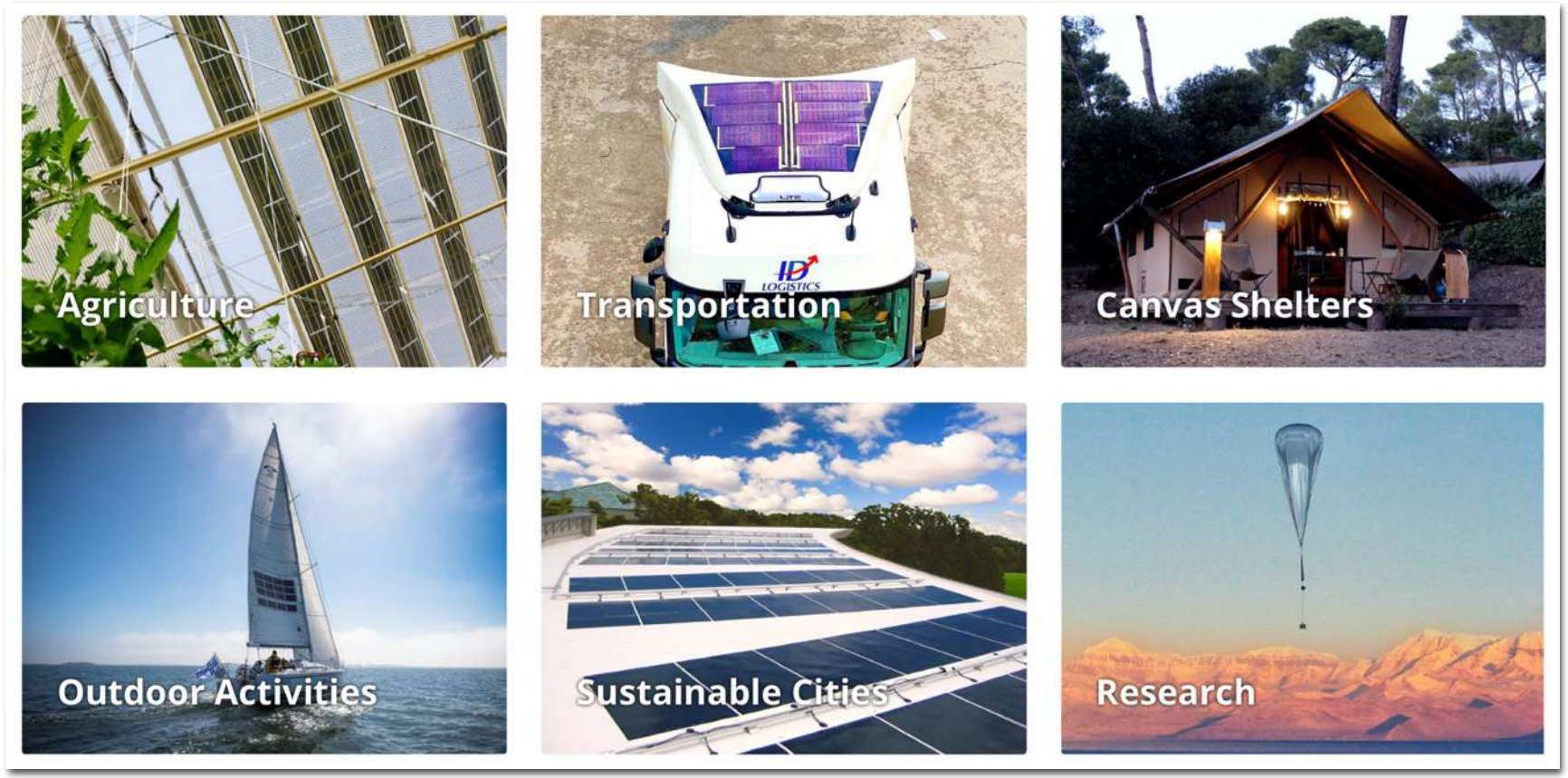
Solar Cloth

Competitive positioning

1	***Best weight/power ratio on the market***	*2x to 5x lighter than regular solutions*
2	***Shock & shadow proof***	*1 bypass diodes every 2 cells* *88 diodes for a 478W panel vs 1 to 3 for regular ones*
3	***Heat resistant***	*-10% efficiency at 55°C to 60°C*
4	***Better capture of indirect sun rays***	*start working with very first and last solar rays, and during cloudy days*
5	***No micro-cracks***	*handle vibrations*

Solar Cloth

Markets

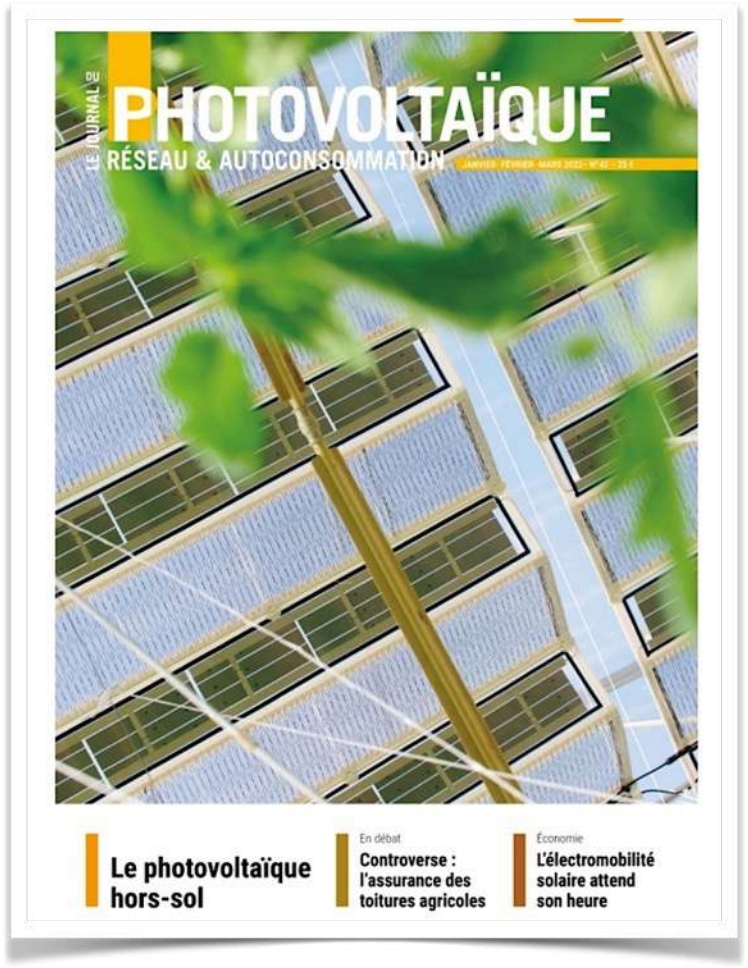


SolarCloth

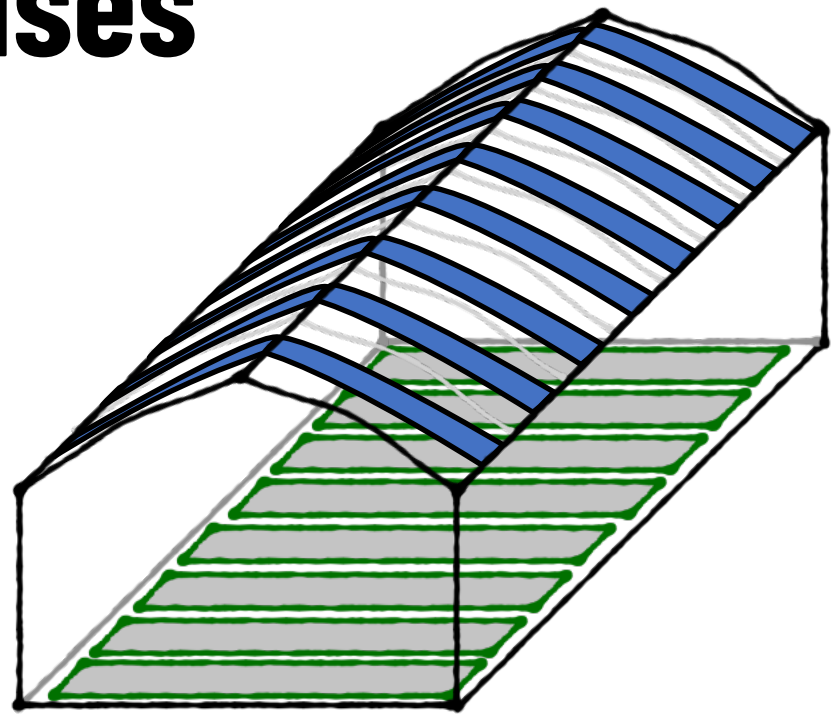
Tents and light structures

Solar Cloth

Greenhouses



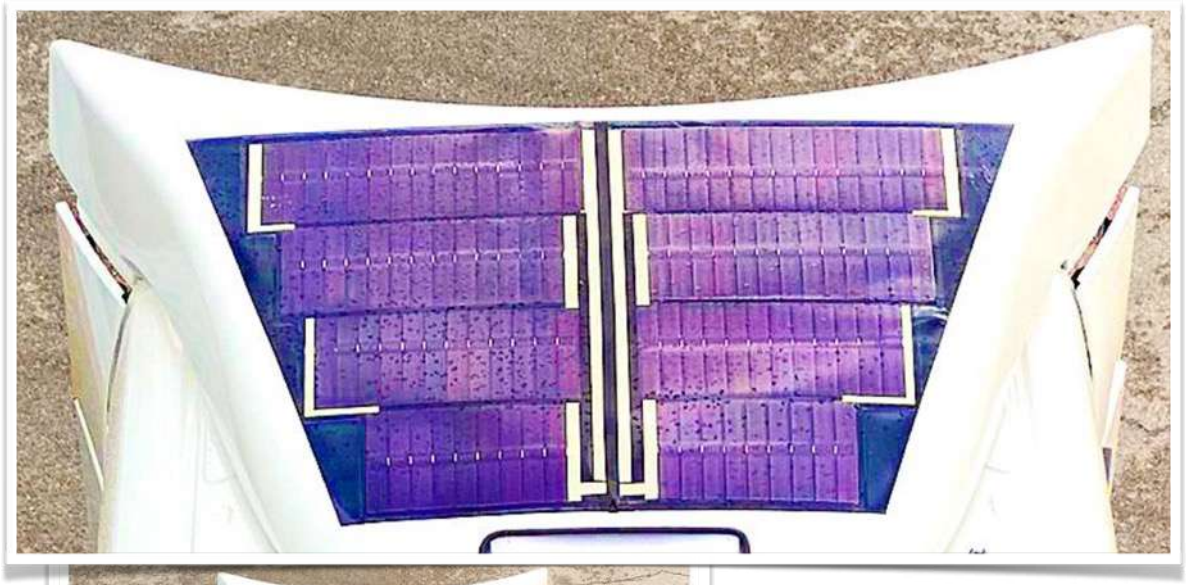
Internal & foldable solution



or **tailor-made panels & fixation on the roof, generating the right amount of shadow**

SolarCloth

Mobility



Supplier for Renault / Volvo Trucks
and the French Army (trucks & more)

(registered at the IMDS - International Material Data System)

Solar Cloth

Credibility to carry the project

Labels *and* **awards**

Working on the **French PV branch** *to manage our production + R&D.*

Target: from 17,6% to 20-25% efficiency within 3 to 5 years

MINISTÈRE
DE LA TRANSITION
ÉCOLOGIQUE
ET DE LA COHÉSION
DES TERRITOIRES
Liberté
Égalité
Fraternité

SOLAR IMPULSE
LABEL
EFFICIENT SOLUTION

ADEME
Agence de l'Environnement
et de la Maîtrise de l'Energie

Capenergies

TALENTS
inpi

i-Nov
concours d'innovation

Solar Cloth

SolarCloth

Marine Outdoor Mobility Agriculture Aerospace Humanitarian

PITCHING SESSION

SUSTAINABLE PLACES 2022

CCI NICE CÔTE D'AZUR

Olivier Bechu, CEO & co-founder

obechu@sunandgo.com

sün and Go

PHOTOVOLTAIC CHARGING POINTS FOR ELECTRIC MOBILITY

Olivier BECHU

Actor of Energy Transition

Design
Implementation
Maintenance

EXEMPLE OF PROJECTS

CONTACT

OLIVIER BECHU

contact@sunandgo.com

04 28 70 99 69

PITCHING SESSION

SUSTAINABLE PLACES 2022

CCI NICE CÔTE D'AZUR

Cindy Umaña-Lopez, project manager

cindy.umanalopez@wit.fr

OPTIMIZE THE PERFORMANCE OF YOUR BUILDINGS, ENSURE THE COMFORT OF YOUR CUSTOMERS AND CONTROL YOUR OPERATING COSTS

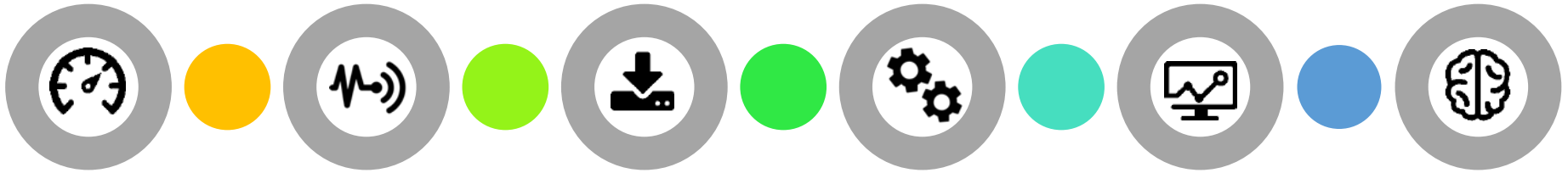
Solutions for Building Technical and Energy Management

ABOUT US

WIT is a French industrial company, which for more than 35 years has been developing technological solutions for:

Control, Secure and remotely Operate all kind of equipments and facilities.

Our expertise allows us to cover the entire technological cycle as follows:



DATA COLLECTION TRANSMISSION STORAGE PROCESSING RESTITUTION INTERPRETATION

ABOUT US

OUR MISSION

As an **independent manufacturer**, guaranteeing the quality of its products, our main asset is the complete technological and industrial **mastery of all our product lines.**

As an experienced technology assembler, we provide our customers with a **global solution** that allows us to become a true **partner in their energy transition**.

Present throughout France, we are also **active internationally**, in Italy, Switzerland, Spain, North Africa and Canada, through our subsidiaries and our network of partners.

OUR EXPERTISE

Industrial know-how

Electronic card design - Large-scale production
Manufacturing of more than 30 000 electronic cards per year
Technological and industrial control of all our product lines
Multi-generational compatibility
Lifetime warranty on certain product lines

Technological know-how

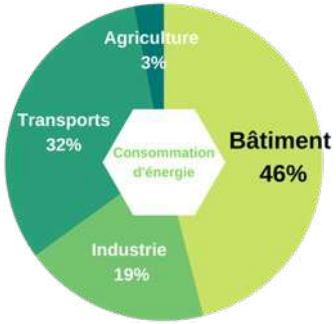
Expertise in Embedded/Radio/Web/Digital Platform
Open protocols - Multi-compatibility
15% of turnover in R&D
Anticipation: monitoring and research unit

Business know-how

Expertise in AI, automation, regulation, access control, HVAC, load shedding, etc.
150,000 successful projects carried out

ENERGY MANAGEMENT CHALLENGES

Environmental



The building sector accounts for 46% of the energy consumed in France and emits more than 30% of greenhouse gases

Climate plan: achieve carbon neutrality by 2050 and reduce the carbon footprint of French consumption.

Legal

« DISPOSITIF ECO ENERGIE TERTIAIRE DECRET TERTIAIRE »

Transmission of consumption data and reduction of energy consumption

« DECRET « BACS » *BUILDING AUTOMATION & CONTROL SYSTEMS »*

Energy monitoring and automatic control of technical building systems.

Financial

CEE Les certificats D'ÉCONOMIES D'ÉNERGIE

The CEE mechanism was introduced in 2006 by the government, which commits energy suppliers to finance energy efficiency projects for individuals and companies.

OUR SOLUTIONS' APPROACH

DATA ACQUISITION
to benefit from a global vision of your technical installations

MULTI-ENERGY METERING

SENSORS AND MEASUREMENT

ANALYSIS
to make the best decisions

DECISION SUPPORT

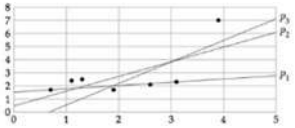
ACTION
To drive performance and reduce costs

CONTROL

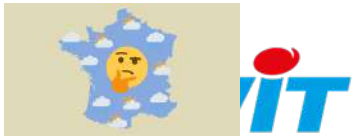
PLANNING

ANTICIPATION
to generate more productivity, responsiveness, savings and avoid technical dysfunction

LEARNING

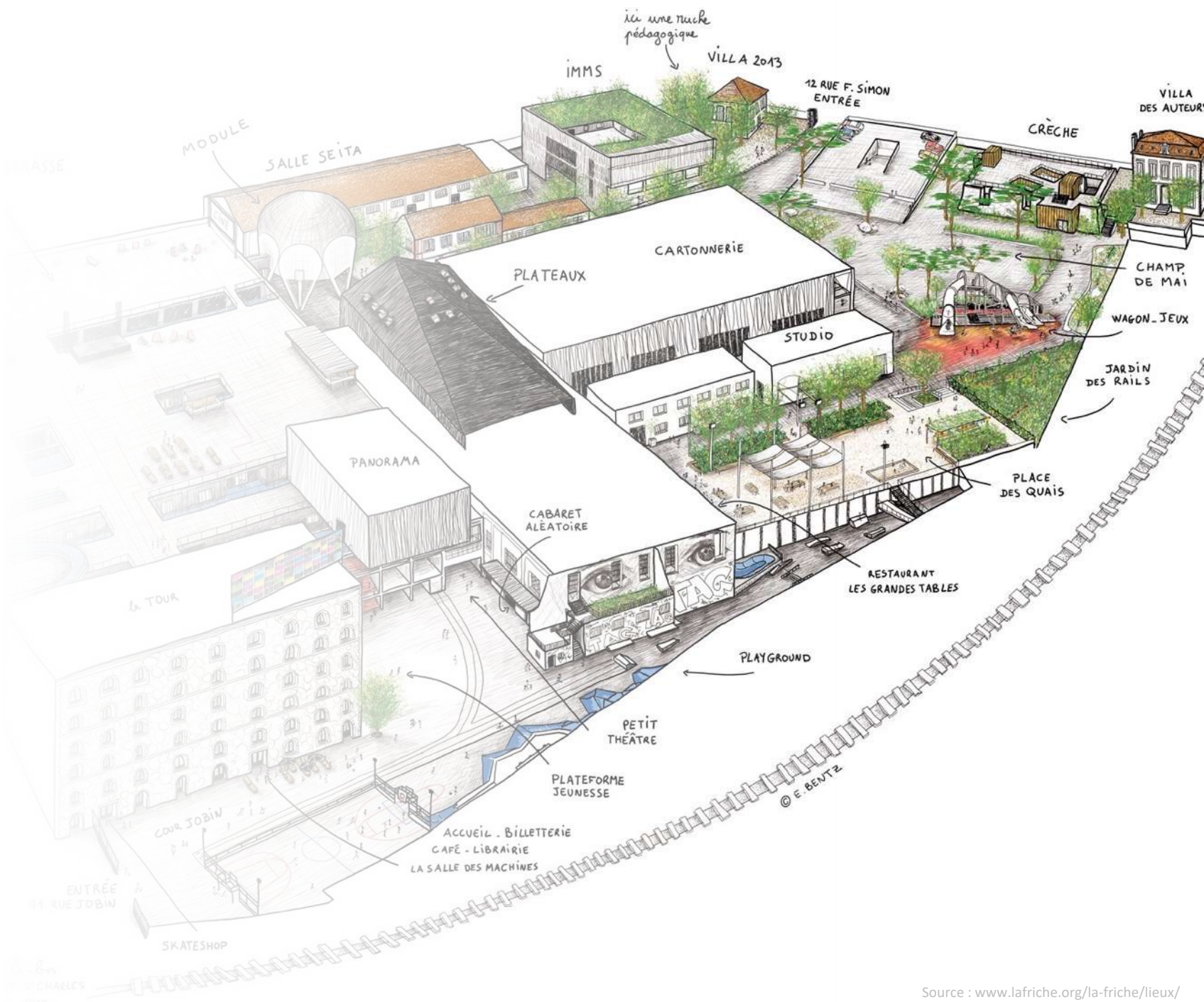


WEATHER FORECAST



FRICHE LA BELLE DE MAI

A resilient solution architecture, incorporating the latest technologies to facilitate operation, optimise performance, ensure occupant comfort and reduce operating costs.



Source : www.lafriche.org/la-friche/lieux/

MANAGE OPERATING EXPENSES TO LIMIT COSTS

Measure to identify savings

- Measurement and analysis of room and common area temperatures
- Consumption metering by building, by type of energy (water, gas, electricity, fuel, etc.) and by use

Optimise the operation of your facilities

- Control of Sanitary Hot Water
- Heating regulation thanks to the optimised heating curve
- Boiler cascade management
- Optimisation of your energy mix
- Lighting programming
- Optimised management of your fleet, for easier implementation

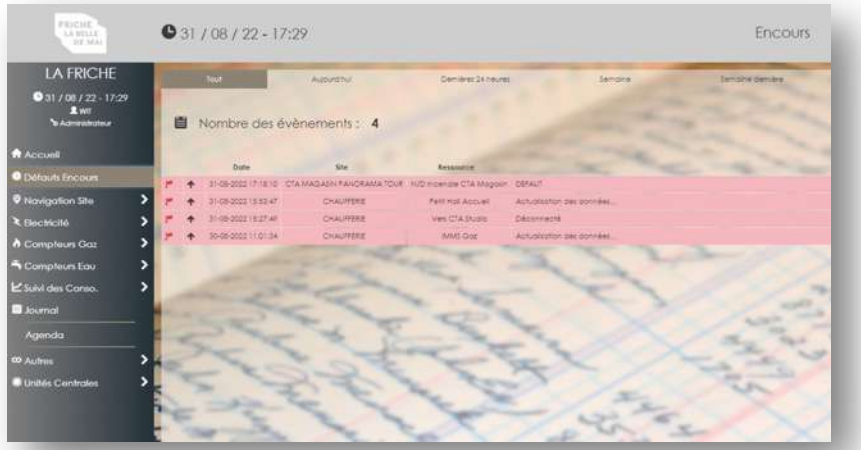
ENSURE CONTINUITY OF SERVICE

Monitor dysfunctions in real time

- Instant transmission of alerts and anomalies by SMS, e-mail, etc.
- Visualisation of the operating status of each equipment in real time,

Avoid breakdowns

- Limitation of untimely start-ups that are detrimental to their lifespan,
- Consultation of the event history.
- Monitoring of operating time,
- Automatic switching of equipment according to the manufacturer's running time or the occurrence of a fault,
- Sending reminders for maintenance work according to a maintenance schedule,



ENSURE OCCUPANT COMFORT

Monitor the comfort level continuously

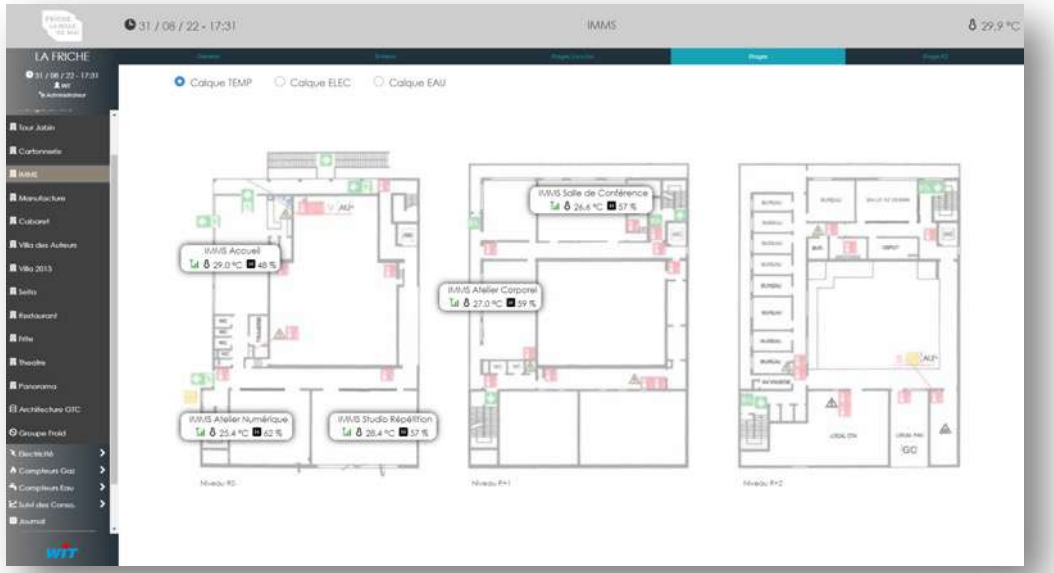
- Real-time measurement and control of comfort data: temperature, light levels, humidity, CO2/VOC levels, etc.

Take action in real time

- Alerts in case of non-compliance with temperature commitments.
- Corresponding indicators: number and duration of events.
- Remote control of heating equipment to correct the comfort level

Anticipate for better results

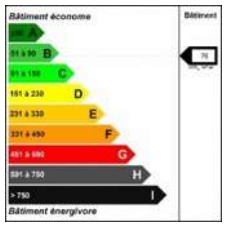
- Integration of weather forecasts to anticipate comfort management

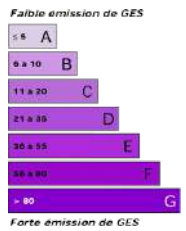


INVOLVE OCCUPANTS TO ENCOURAGE THEIR EFFORTS

Informing visitors with meaningful indicators.

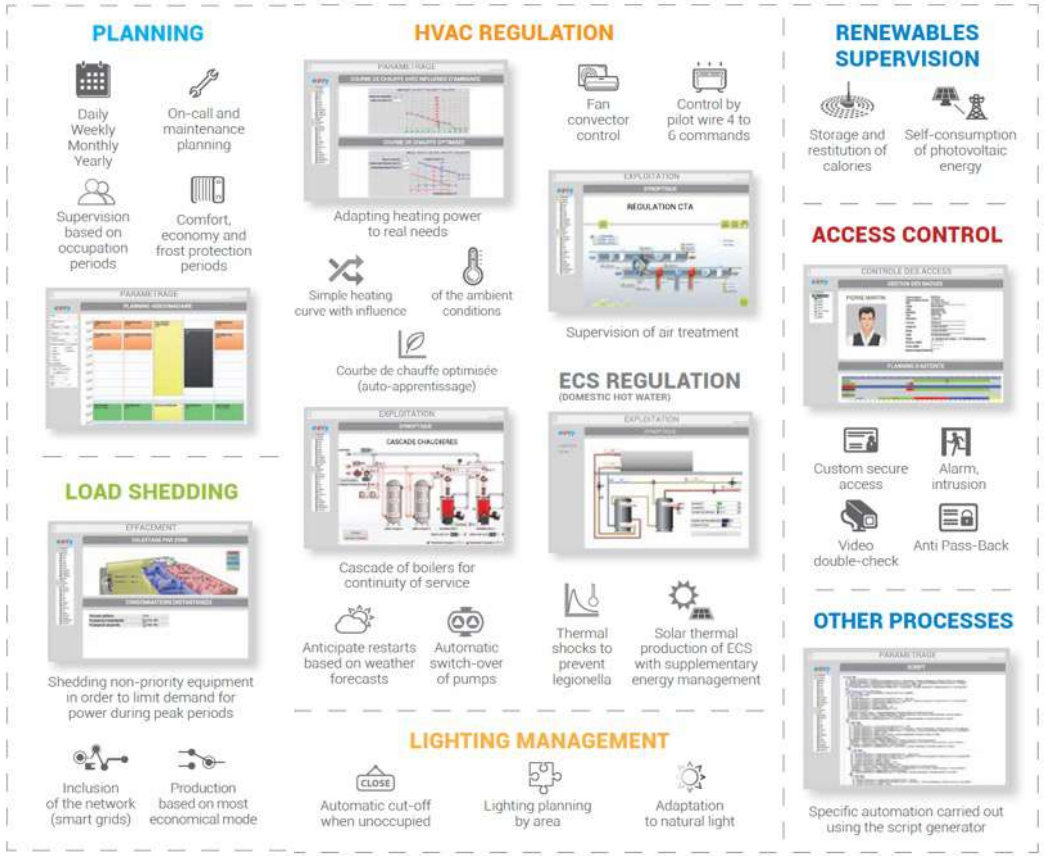
- Setting the results into perspective: Equivalence in kilometers travelled, hours of lighting, etc.
- Specific indicators: Consumption per person, consumption trends, etc.
- External information: weather forecasts, EcoWatt alerts, examples of eco-actions, etc.
- Environmental indicators: Energy label, CO2 and greenhouse gases





MANAGING ALL THE TECHNICAL ASPECTS OF THE BUILDING

In order to improve the technical and energy performance of a building, action is needed on all technical aspects, which have to interact with one another. Energy management, supervision, control, regulation and automation features will reduce consumption and operating costs.



PREVENT HEALTH RISKS

Monitor hot water temperatures to avoid legionella

- Continuous measurement of domestic hot water supply and return temperatures.
- Alert in case of hot water temperature below 50°C.
- Automatic triggering of periodic thermal shocks and on alert (70°C).

Control room air quality

- Continuous CO2 measurement
- Humidity monitoring
- VOC monitoring

Thank you for your attention !

Cindy UMAÑA LOPEZ

Marketing

cindy.umanalopez@wit.fr

+ 33 (0)4 93 19 37 37

Our team is always to your disposal to give you further information.

WIT France

Siège : 7 avenue Raymond Féraud
CS 81 003 - F-06205 NICE Cedex 3
Tel : +33 (0)4 93 19 37 37
Fax : +33 (0)4 93 07 60 40
wit@wit.fr

INNOVATE WITH FRANCE

Policy background on the proposed revision of the Energy Efficiency Directive

Margot Pinault
Policy Officer
Directorate-General for Energy, European Commission

SUSTAINABLE PLACES 2022

Delivering on the European Green Deal and Fit for 55

Main elements of the Energy Efficiency Directive revision

Financing energy efficiency

European Commission – DG ENER
Energy Efficiency unit
Margot Pinault

SUSTAINABLE PLACES

September 2022

Main elements of the EED revision proposal

Binding EU **energy efficiency target** & indicative national contributions

9% in 2030 further increased to 13% (REpowerEU) over 2020 ref. scenario

'Energy Efficiency First' Principle – making it an integral part of policy and investment decisions

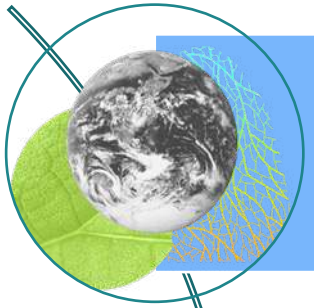
Strengthened **energy savings obligation** in end-use with an increased focus on alleviating energy poverty

Stronger exemplary role of **public sector** including **public buildings renovation** (3%/y of useful floor area in all public administration levels)

New definition of **efficient district heating and cooling**

European Commission

Exemplary role of public sector: Articles 5, 6, 7



Obligation of annual **reduction of energy consumption** of 1.7% in public sector (MS to select public bodies)

NEW

Annual **renovation** of 3% of useful floor area of public buildings above 250 m2

Applicable to all public administration levels

Alternative approach removed

Take into account energy efficiency requirements and focus on EE1st in **public procurement** for all public administration levels

Public buildings and Energy Performance Contracts

Article 6:

3% renovation target applies:

-to all building owned by public bodies and not only to central government buildings

-to be transformed to nearly zero-energy buildings

Article 7:

In public procurement the contracting authorities shall purchase only products, services, buildings and works with high energy-efficiency performance.

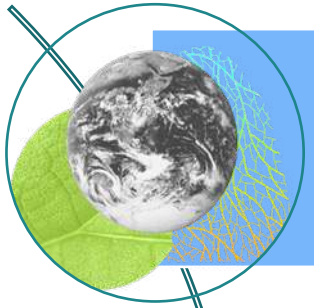
Moreover, they should assess the feasibility of long-term EnPCs for contracts wit significant energy content.

Definition of efficient district heating and cooling

Art. 24

until 2025	Current definition: at least 50% RES, 50% waste heat, 75% cogenerated heat OR their combination where those sources provide half of the heat
from 2026	at least 50% RES, 50% waste heat, 80% of heat from high-efficiency cogeneration or at least combination of such thermal energy where RES is at least 5% and the total share of RES, waste heat or high-efficiency cogenerated heat is at least 50%
from 2035	at least 50% RES and waste heat (where RES is at least 20%)
from 2045	at least 75 % RES and waste heat (where RES is at least 40%)
from 2050	only RES and waste heat (where RES is at least 60%)

Energy services (Energy Performance Contracting) – Article 27



Encouraging public bodies to use energy performance contracting for renovations of large buildings and to combine energy performance contracting with demand response and

For renovations of **large non-residential buildings** (above 1000 m2):

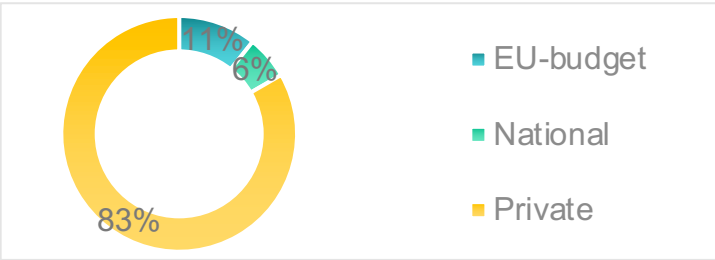
public bodies will have to assess <u>feasibility</u> of using an EnPC

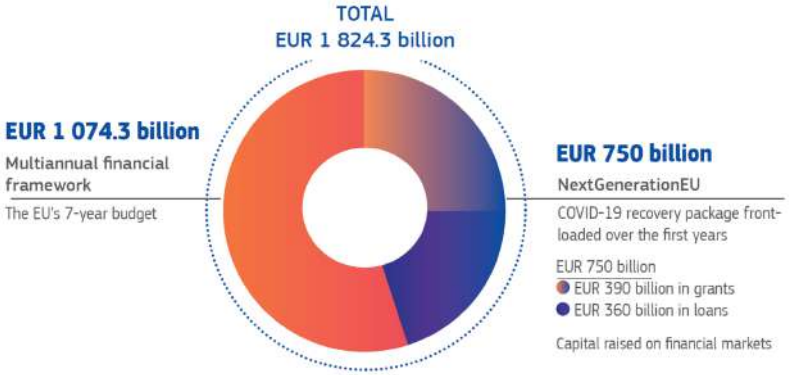
Increased **role of advisory bodies,** independent market intermediaries, one stop s

Finance for energy efficiency

Investment needs

- **FF55 package** estimate **an additional annual investment** need to achieve 2030 energy efficiency targets at **around 150€bn**.
- **REPowerEU:** additional **300€bn investments from now until 2030** (210€bn the end of 2027) to phase-out dependence on Russian fuels.
- **REPowerEU:** specifically **56€bn additional investments in energy efficiency and heat pumps**, plus solar rooftop initiative.
- In total: **1150€bn by 2027** and **1400€bn by 2030** on energy efficiency/demand-side investments.





Financial resources

- Out of the total 1.800€bn (NGEU + MFF 2021-2027), more than 30% of these resources, **around 626€bn**, earmarked to **deliver the climate goals** of the European Green Deal.
- While there is **no specific earmarking for energy efficiency**, EU-budget support (MFF, RRF, ETS revenues) for energy efficiency could be estimates **around 120 to 150€bn**.
- National **financial support vary significantly across Member States**, in total (all MS) we can expect 100€bn.
- **KEY**: Cost-efficient use of public funding for **private capital mobilisation**

EU-funding landscape

- **Direct investments:** Recovery and Resilience Facility (EEF), Cohesion Policy Funds (ERDF/CF), Just Transition Fund (JTF), ETS Revenues, Modernisation Fund.
- **Leverage private capitals, project development assistance and advisory**: InvestEU, ELENA Facility, Technical Support Instrument (TSI).
- **Market uptake, policy enhancement activities, technological development, research and innovation:** Horizon Europe, Built4People Partnership, LIFE Clean Energy Transition, Innovation Fund.

European Commission

INNOVATE WITH FRANCE

Buildings: A key component to achieving a climate-neutral Europe

Thibault Roy
Policy Officer
Directorate-General for Energy, European Commission

SUSTAINABLE PLACES 2022

Delivering on the European
Green Deal and Fit for 55

Buildings in 2030 and 2050
EU perspective

European Commission – DG ENER
Unit on the energy performance of buildings and products
Thibault ROY
September 2022

SUSTAINABLE PLACES

European Green Deal

- ✓ Increased climate ambition with **buildings and their renovation** as a key focus:
  - ➢ Big energy consumers: -40% of energy consumed
  - ➢ Very slow rate of renovation, exposing citizens to spikes in energy prices and to volatility
  - ➢ At the same time, many citizens struggle to keep their homes warm
  - ➢ Building renovation creates jobs, reduces greenhouse gas emissions and improves quality of lives

The Renovation Wave strategy and action plan

Decarbonisation of heating and cooling

Tackling energy poverty and **worst-performing buildings**

Renovation of public buildings and social infrastructure such as schools, hospitals and administrative buildings

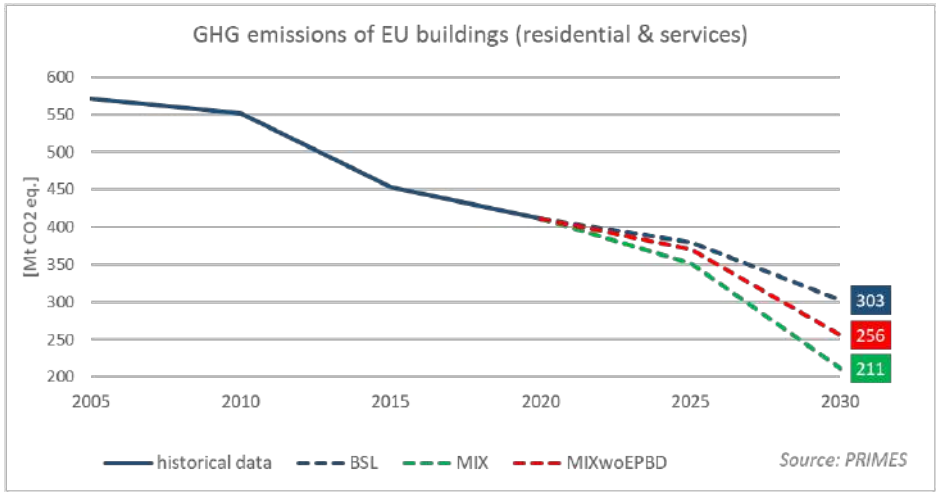
A set of policy measures, **funding tools** and **technical assistance instruments** to break down of existing barriers throughout the renovation chain – from the conception of a project to its funding and completion. **Digital as key enabler => measures in the RW Action Plan**

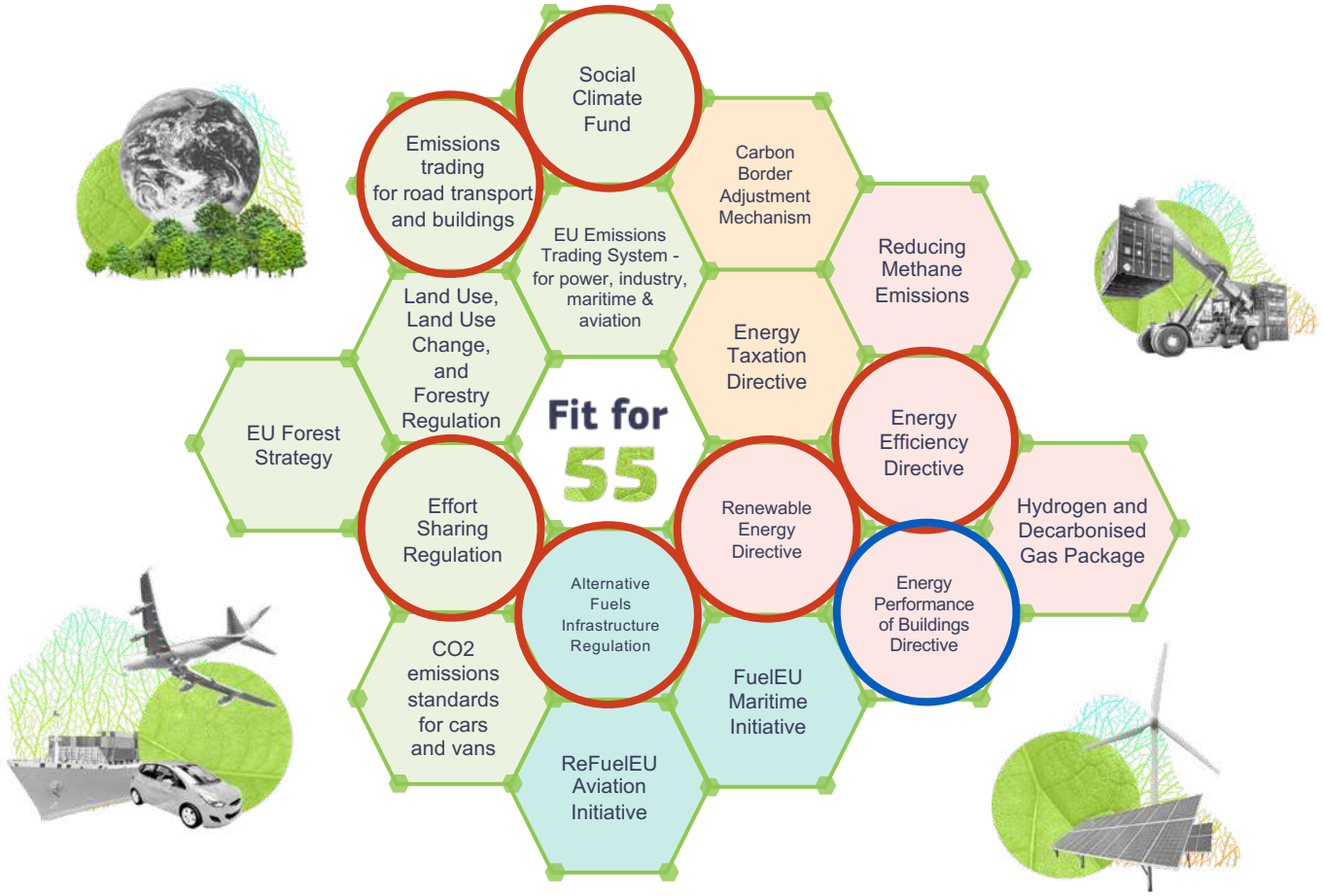
European Commission

“Fit for 55”: buildings’ key role

MAKING OUR HOMES AND BUILDINGS FIT FOR A GREENER FUTURE

- decrease emissions
- save energy
- tackle energy poverty
- improve quality of life
- generate jobs and growth

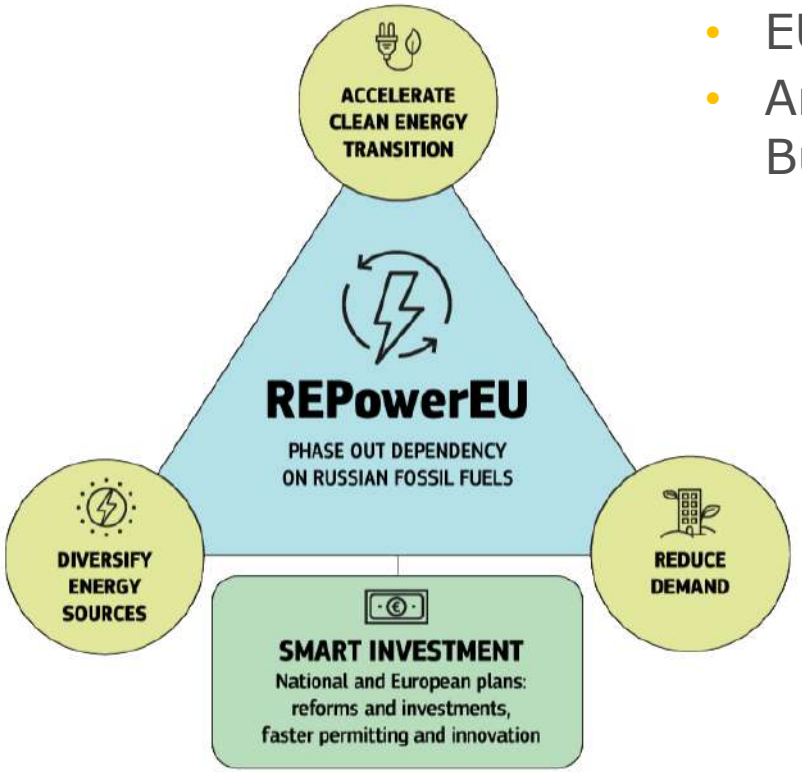




https://ec.europa.eu/commission/presscorner/detail/en/IP_21_3541

European Commission

REPowerEU and EU Save Energy plans: from goals to actions



Most relevant buildings-related documents

- REPowerEU Communication
- EU Save Energy Communication
- Amendments to Renewable Energy, Energy Performance of Buildings and Energy Efficiency Directives

Solar: proposed amendments to EPBD

(1) New buildings: solar *readiness* a must

(2) MSs shall ensure the *deployment* of solar energy installation

Heat pumps: doubling of rate of installation identified, together with progressive phase-out of fossil-fuel-based appliances

European Commission

Objectives of the EPBD revision as part of the Fit for 55 package

- **Climate Target Plan:** by 2030 the EU should reduce buildings' GHG emissions by 60%, their final energy consumption by 14% and energy consumption for heating and cooling by 18%.

- **Renovation Wave** aims at doubling renovations by 2030 and foster deep renovations

Twofold objective:

→ Contribute to **reducing buildings' GHG emissions and final energy consumption by 2030**

→ Provide a long-term vision for buildings and ensure an adequate contribution to achieving **climate neutrality in 2050**

European Commission

Focus areas

Renovation

- ***Minimum Energy Performance Standards***
- ***Energy Performance Certificates***
- National Building Renovation Plans and renovation passports for individual buildings

Decarbonisation

- **Introduction of zero-emission buildings as new standard for new buildings**
- Consideration of whole life cycle carbon
- Phasing out incentives for fossil fuels and new legal basis for national bans

Financing

- Sustainable finance and energy poverty alleviation
- Deep renovation standard
- Renovation passports for individual buildings

Modernisation & system integration

- Infrastructure for sustainable mobility
- **Smart Readiness Indicator**
- Indoor air quality: ventilation and other technical building systems

European Commission

Main provisions on existing buildings in EPBD proposal

Minimum Energy Performance Standards:

- **Union-wide MEPS to phase out worst-performing buildings**
  - **Public and other non-residential buildings: at least EPC class F by 2027 & EPC class E by 2030**
  - **Residential buildings: at least EPC class F by 2030 & EPC class E by 2033**
- **MS to set up timelines for further improvement of their building stock in their building renovation plans**

National Building Renovation Plans (replacing the long-term renovation strategies)

- Common template with only national goals and key mandatory indicator, several elements opening to other dimensions beyond energy remain voluntary (accessibility, safety,..)

Definition of „deep renovation“

Strengthened requirements for recharging of e-vehicles in case of major renovation

Stronger provisions on the removal of obstacles and barriers to renovation (right to renovate)

Member States must not subsidise fossil-fuel boilers as of 2027.

Main provisions on new buildings in EPBD proposal

From Nearly zero energy to zero emission buildings

- **Update based on benchmarks per climatic zones, to be applied by 2030 (2027 for public buildings)**
- **On-site renewables, efficient district heating and energy communities**

The life-cycle Global Warming Potential (GWP) of new buildings will have to be calculated as of 2030 in accordance with the Level(s) framework, informing on whole life-cycle carbon emissions (2027 for large buildings)

Strengthened requirements for recharging of e-vehicles, and mandatory bicycle parking in new buildings

European Commission

Main provisions on information tools in EPBD proposal

Energy Performance Certificates (EPC)

- **by 2025 all energy performance certificates must be based on a harmonised scale of energy performance classes (from A to G, with A = ZEB and G = 15% worst buildings)**
- **Common template with energy and GHG indicators, while other indicators remain voluntary**

New provisions to ensure access to buildings data, databases of EPCs and data interoperability

The methodology for calculating the energy performance of buildings is updated to clarify the possible use of metered energy and the cost-optimal methodology specifies how to take into account carbon prices

European Commission

Smart readiness indicator

The Smart readiness indicator (SRI)

- Common EU framework for rating the smart readiness of buildings
- 2 acts adopted in 2020: definition and calculation methodology, implementation modalities
- Testing phases in Member States
- LIFE funding
- SRI platform

MORE ON
https://ec.europa.eu/smart-readiness-indicator

EPBD proposal: SRI to be required for large non-residential buildings as of 2026

- Commission delegated act by 31 December 2025
- For non-residential buildings with an output of over 290 kW

European Commission


Thank you

INNOVATE WITH FRANCE

Building in France : A revolution ?

Emmanuel de Lanversin
Deputy Director for Housing, Urban Development and Landscape
Ministry of Ecological Transition

SUSTAINABLE PLACES 2022

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BUILDING IN FRANCE : A REVOLUTION ?

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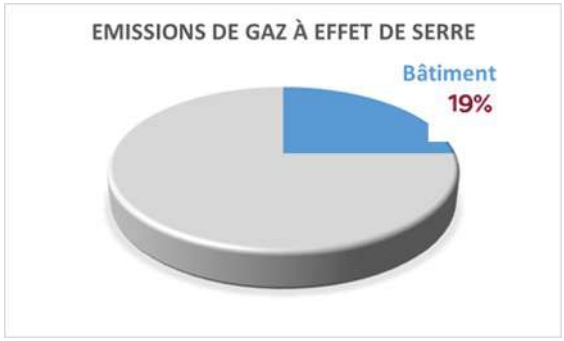
PARIS2015
CONFÉRENCE DES NATIONS UNIES SUR LES CHANGEMENTS CLIMATIQUES
COP21·CMP11

Context

State of play



European context – Fit for 55

- EED
- EPBD

French frame

LA TRANSITION ÉNERGÉTIQUE pour la CROISSANCE VERTE

Stratégie NATIONALE BAS-CARBONE

#LoiElan

RE 2020
Éco-construire pour le confort de tous

LOI CLIMAT ET RÉSILIENCE

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RE 2020

THE ENVIRONMENTAL REGULATION RE 2020

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Energy regulation for existing non residential buildings – Eco-Energy Tertiaire

OPERAT
Observatoire de la Performance Energétique de la Rénovation et des Actions du Tertiaire

https://operat.ademe.fr/#/public/accueil

ADEME
AGENCE DE LA TRANSITION ÉCOLOGIQUE

Gradually reduce the buildings energy consumption by :

40% in 2030	50% in 2040	60% in 2050

- *compared to a reference year which cannont be earlier then **2010***
- *mesasured in **final energy**, all uses combined (consumption available on the bill)*

OR

Achieve a treshold energy consumption per decade, defined according to the catergory of the building.

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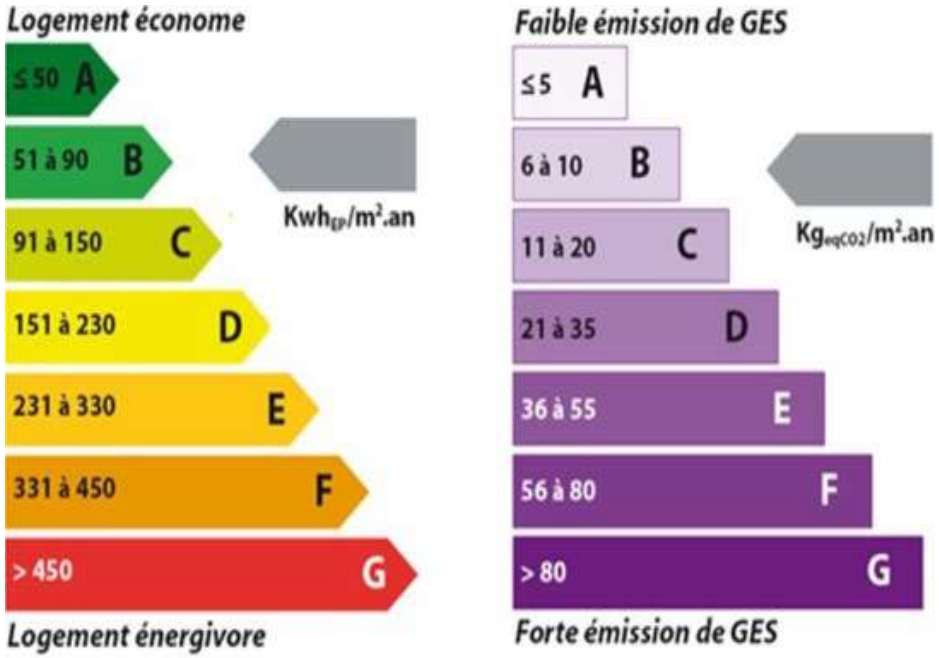
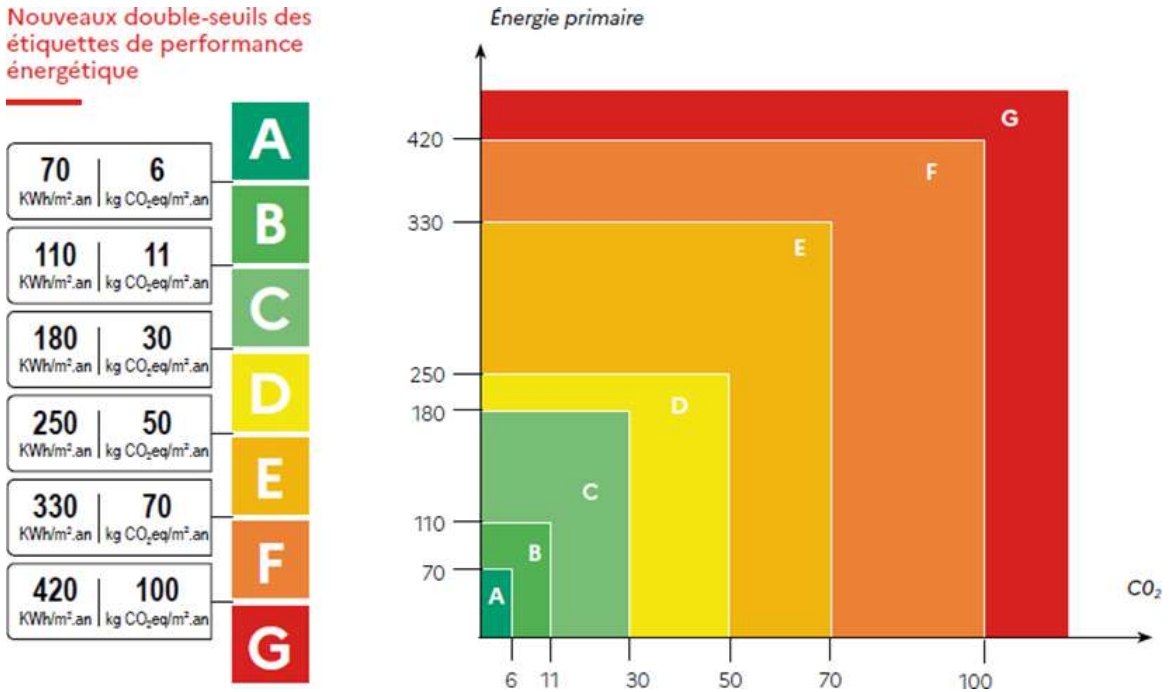
Reform of the energy performance diagnosis (EPD)

Former EPD
An energy label
An carbon label



New EPD (in force since July 2021)
A mixed label (double treshold)
A carbon label (for information)



Smart readiness indicator

https://www.ecologie.gouv.fr/smart-readiness-indicator-sri-lindicateur-potentiel-dintelligence-des-batiments

A test phase from October 2022

Lead by the ministry in collaboration with the Cerema

Panels of 30 buildings

Assessement leading to an SRI certificate for these 30 evaluations

Visibility of professionnals and owners participating in the test phase

Professionals in diagnosis and energy audit and equipment inspection

Selection by the ministry

Feedback from the Member States to the European Commission no later than 6 months after the end of the test phase

Towards zero net land artificialization

The Climate & Resilience Act sets de objective of achieving « **zero net land consumption** » by 2050.

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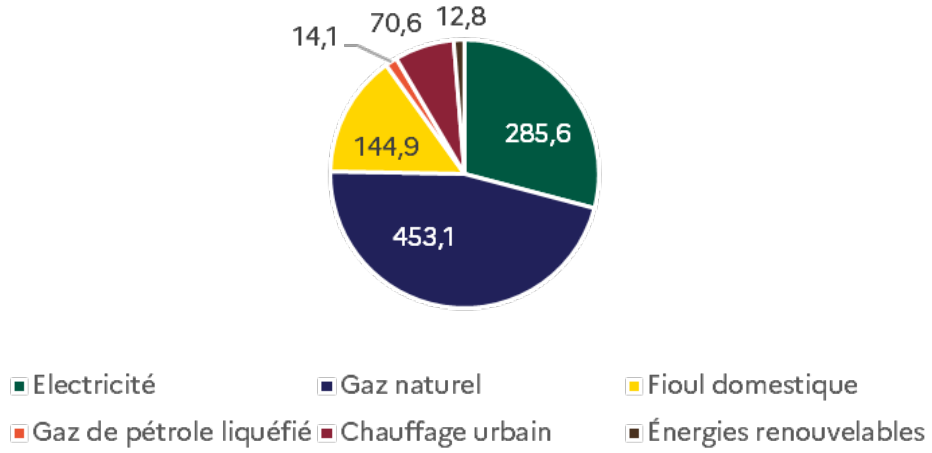
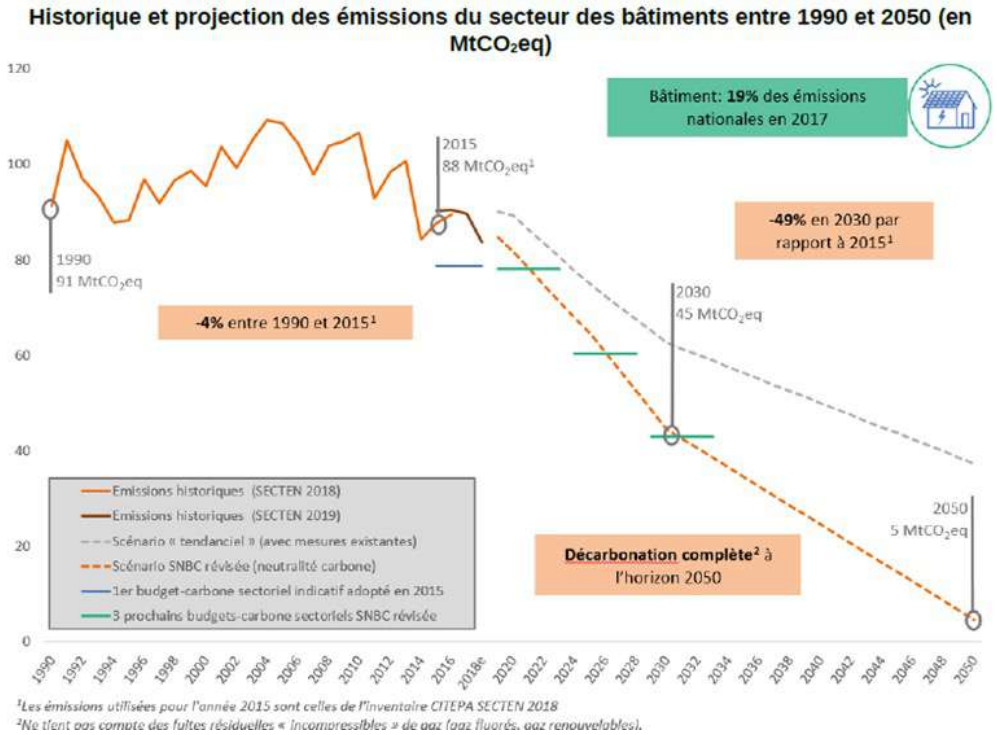
Conclusion : The future world

A mandatory adaptation

Surface area of tertiary buildings heated in millions of m2





Additional investments, in billions of euros

	Points de passage						Moyennes annuelles		Montants cumulés	
	2025	2030	2035	2040	2045	2050	2023-2030	2023-2050	2023-2030	2023-2050
Résidentiel	31	32	18	18	18	18	31	22	251	610
Tertiaire	10	11	12	13	14	15	10	12	83	347
Total	41	43	30	31	32	33	42	34	334	956

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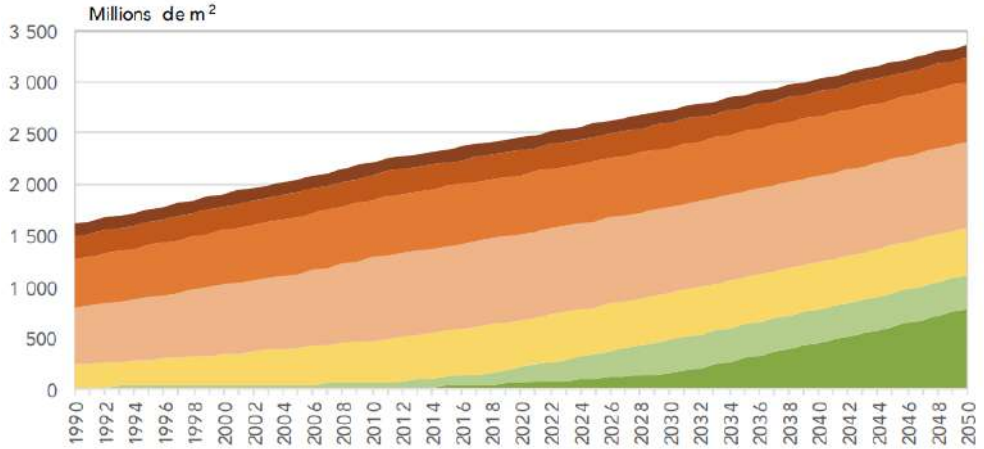
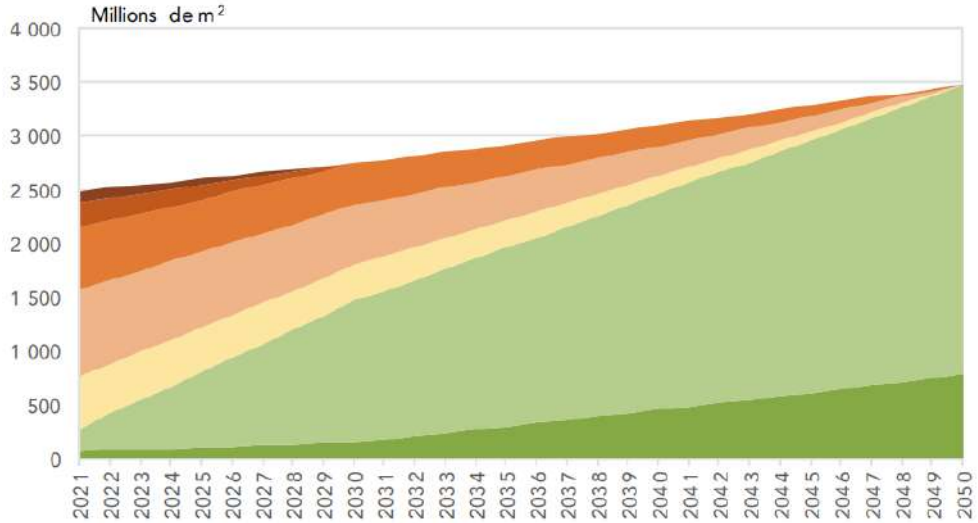
Conclusion : The future world





Conclusion : The future world

Thank you for your attention !

INNOVATE WITH FRANCE

Advancing the transition to net zero

Followed by pitches from regional innovators

Raphaël Rinaldi
Director for Europe & International Activities
Capenergies

SUSTAINABLE PLACES 2022

Capenergies

SUSTAINABLE PLACES 2022

FIGURES

530
MEMBERS

+ 300
FRENCH AND EUROPEAN PARTNERS

4
PARTNER TERRITORIES
+ Monaco

- Région Sud
- Corsica
- Guadeloupe
- Reunion island

> 800 accredited projects

OUR JOB: GUIDING AND SUPPORTING INNOVATION

CAPENERGIES LABEL
for companies & regions

CREATION OF PROJECTS
Innovative and formative

PROVIDING SUPPORT TO OBTAIN FRENCH AND EUROPEAN PUBLIC FUNDING
Targeting calls for tender for SMEs and sharing the results of our European projects

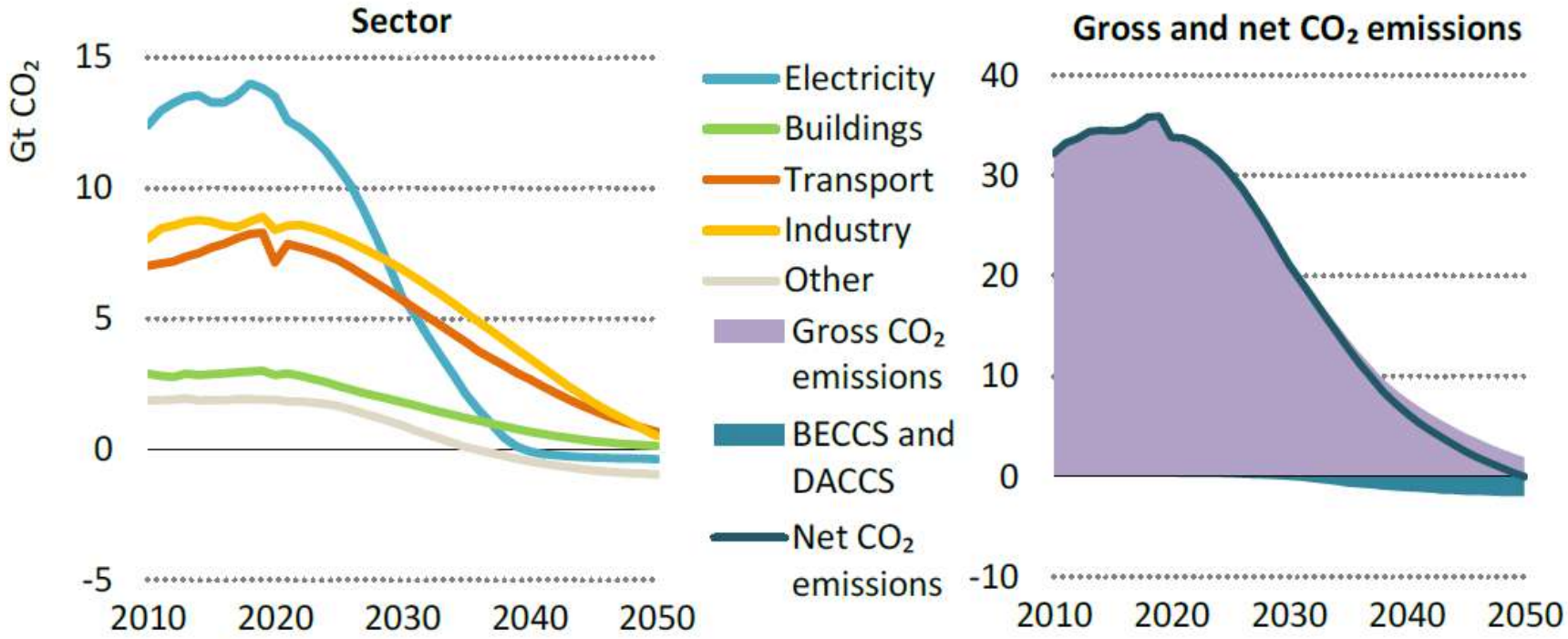
EU funded projects'

BUSINESS GROWTH
+ support for recruitment and employment of disabled workers

Customised services

NET ZERO BY 2050: WHAT DOES IT MEAN ?

Global gross and net CO2 emissions, and net-CO2 emissions by sector



Source: IEA, Net Zero by 2050, A Roadmap for the Global Energy Sector

Emissions from electricity fall fastest, with declines in industry and transport accelerating in the 2030s. Around 1,9 Gt of CO2 are removed in 2050 via BECCS and DACCS

NET ZERO BY 2050: KEY ACTIONS

ELECTRIFICATION

ZERO EMISSION MOBILITY

ENERGY EFFICIENCY

BEHAVIOURAL CHANGES

REAL-TIME and PLANNING OPTIMISATION

MULTI-FLUID INTEGRATION

LARGE-SCALE DEPLOYMENT OF SOLAR AND WIND

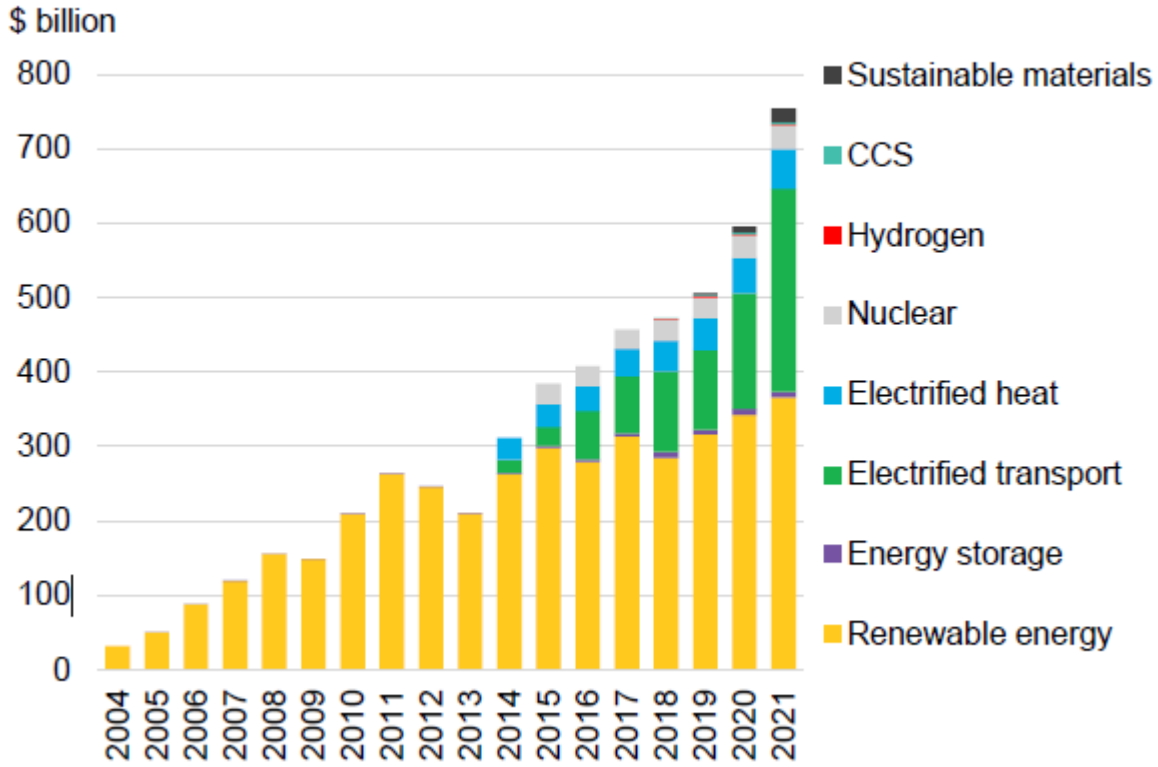
BIOENERGY

HYDROGEN

FLEXIBILITY AND STORAGE

NET ZERO BY 2050: WHAT HAS BEEN DONE YET ?

Global investment in energy transition by sector



Source: Bloomberg BNEF

$755 billion

Global energy transition investment in 2021

$165 billion

Global climate-tech equity investment in 2021

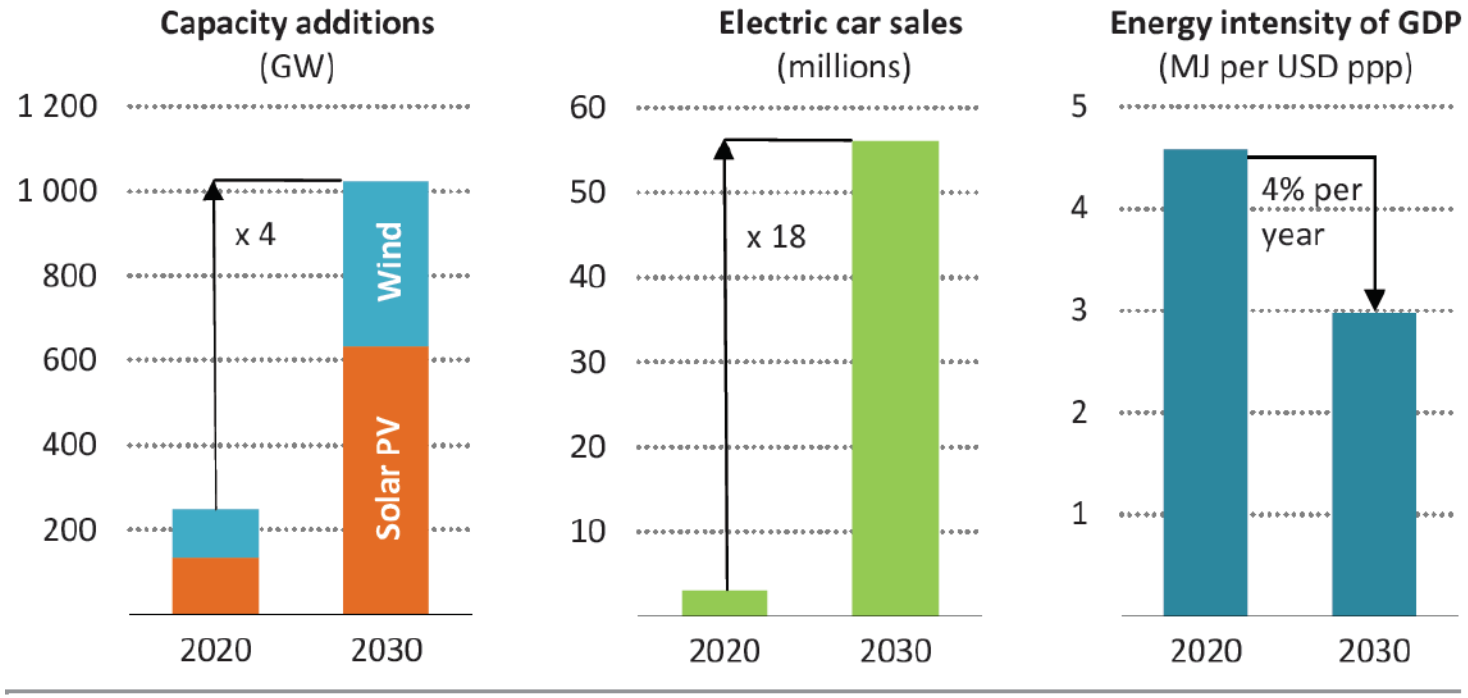
27%

Increase in energy transition investment 2020-2021

NET ZERO BY 2050: HOW TO REACH IT ?

First step 2030: all the technologies needed to achieve the necessary deep cuts in global emissions by 2030 already exist, and the policies that can drive their deployment are already proven.

Key clean technologies ramp up by 2030 in the net zero pathway



Note: MJ = megajoules; GDP = gross domestic product in purchasing power parity.

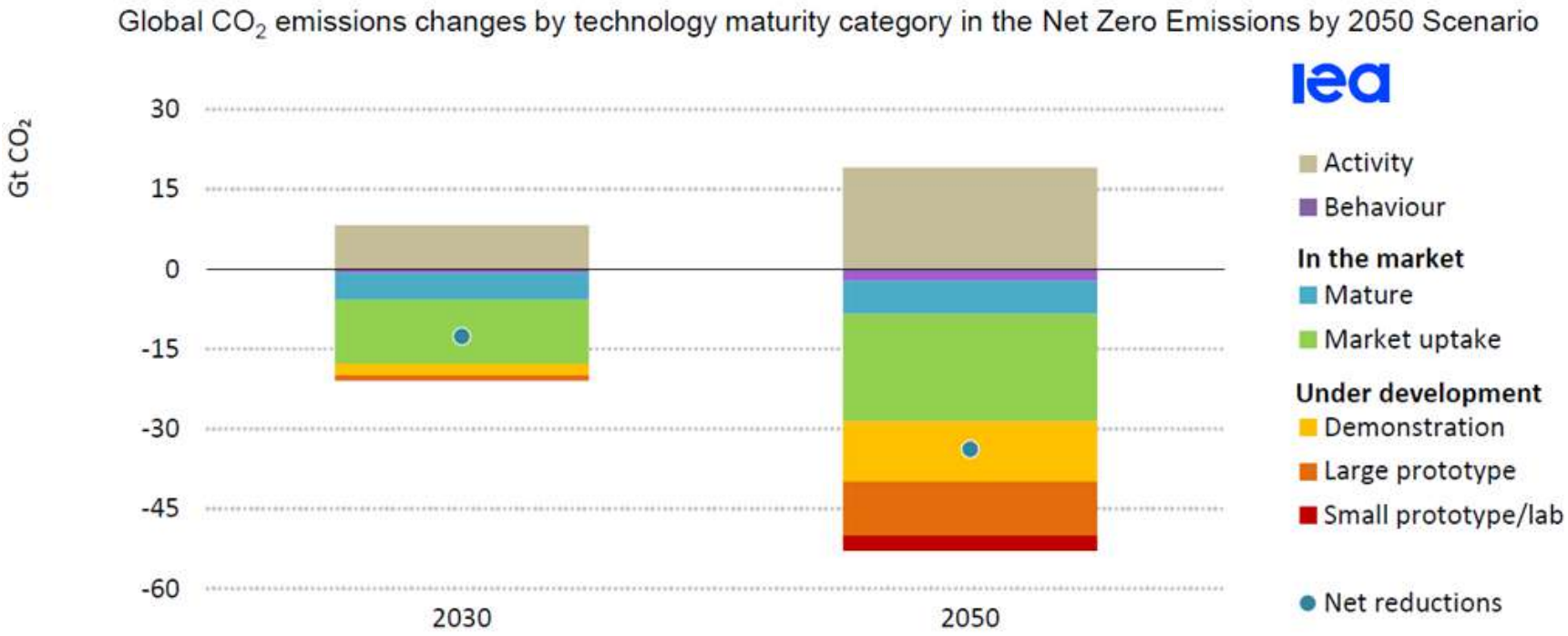
Source: IEA, Net Zero by 2050, A Roadmap for the Global Energy Sector

NET ZERO BY 2050

Next step requires huge leaps in clean energy innovation

Almost 50% of the emissions reductions needed in 2050 in the NZE depend on technologies that are at the prototype or demonstration stage, i.e. are not yet available on the market

Innovation is key to developing new clean energy technologies and advancing existing ones.



Source: IEA, Net Zero by 2050, A Roadmap for the Global Energy Sector

Capenergies

SUSTAINABLE PLACES 2022

NET ZERO BY 2050: EXAMPLES OF KEY INNOVATION PILLARS

The evolution of batteries

Old

lead–**acid battery**

Mature

Li-ion

From 100 to 270 Wh/kg

Innovative

Zinc–air

Over 1000 Wh/kg

EDF

Promising

demonstrators

Na-ION

Close to Li-ion technology
Fast charging, low cost, availability of materials, 10 years of lifecycle, but low energy density

Stationary storage

TIAMAT

research

Li-Air

High energy density (10 x higher than Li-ion expected)

E-mobility

Argonne NATIONAL LABORATORY

THE UNIVERSITY OF CHICAGO

prototyping

LI-S battery

Light materials, high energy density (400 Wh/Kg)

E-mobility

Expected 2025-2027

Nextech

research

All-Solid-State Batteries

Higher security, therefore less expensive, and possibility to use innovative active materials

E-mobility

saft a company of TOTAL

Capenergies

SUSTAINABLE PLACES 2022

NET ZERO BY 2050: EXAMPLES OF KEY INNOVATION PILLARS

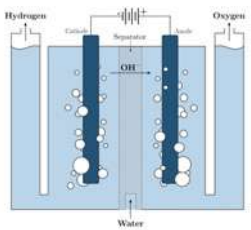
H_2 Development of more efficient hydrogen electrolysers

Mature

Deployment

Alkaline Electrolysis (AEL)

- ✓ Low CAPEX, cheap catalysts, durability, stable operation
- ✗ Corrosive syst, low purity, high energy consumption



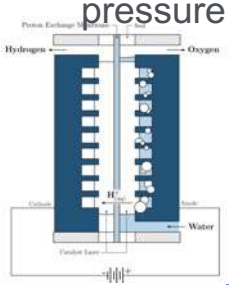
from EUR 1250 /kWel to around EUR 700/kWel

Innovative

Near commercial

Proton-Exchange Membrane Electrolysis (PEMEL)

- ✓ Higher purity, compact, high production rate
- ✗ Cost of rare components, acidic environment, high pressure

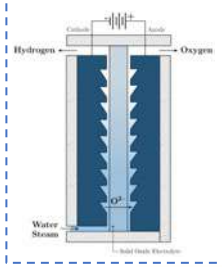


from around EUR 2000/kWel in 2020 to around EUR 900/kWel in 2030

Demonstrators

Solid Oxide Electrolysis (SOEL)

- ✓ High efficiency, low pressure, low energy consumption, no noble metal needed
- ✗ Large design, low durability, high temperature



Today > 3000/kWel, expected < € 750/kWel by 2030

Promising

Research

- **proton-conductive ceramic electrolyzers (PCCEL)**
- **microbial electrolysis**
- **artificial intelligence and computer neural networks**

potential to produce carbon-free hydrogen below 2 €/kgH2.

Jupiter 1000

McPhy Driving clean energy forward

sunfire

cea

Capenergies

SUSTAINABLE PLACES 2022

NET ZERO BY 2050: EXAMPLES OF KEY INNOVATION PILLARS

Direct air carbon capture and storage

Mature

Small direct air carbon capture and storage (DACCS)

2 technologies existing: liquid and solid DAC

CO2 captured and stored, or used to produce synthetic fuels

$600 per ton of CO_2

Scaling-up

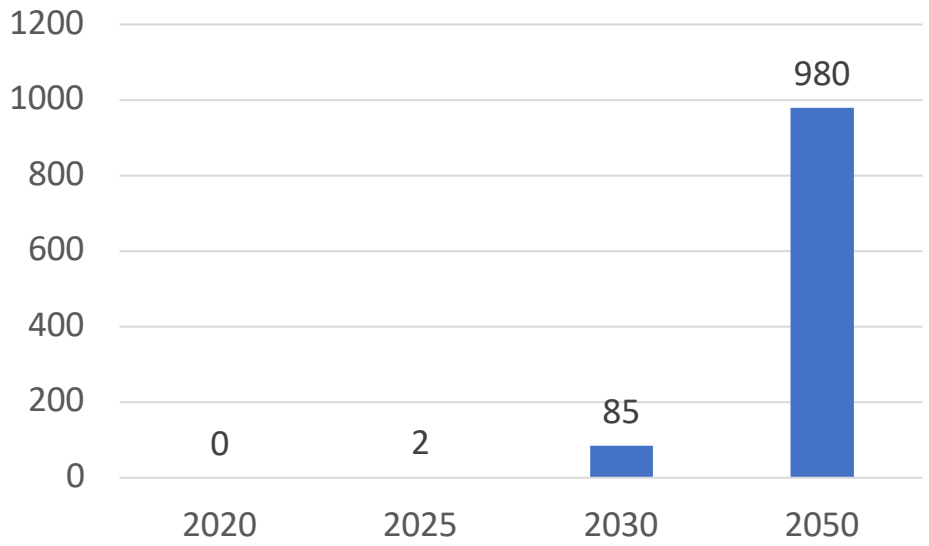
Large scale DACCS

Demonstrators needed to refine technology and reduce capture costs

CO2 mainly used to produce synthetic fuels

Expected to drop below $100 per ton

Mt of CO2 capture by direct air capture in the Net Zero Scenario



Source: www.iea.org/reports/direct-air-capture

Source: Airbus, Carbon engineering

Carbon Engineering

AIRBUS

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SUSTAINABLE PLACES 2022

PITCHING SESSION

ecoCO2 Donnons du sens à l'énergie

GRIDPOCKET

MACAUTO

oghji

PITCHING SESSION

eco CO_2
Donnons du sens à l'énergie

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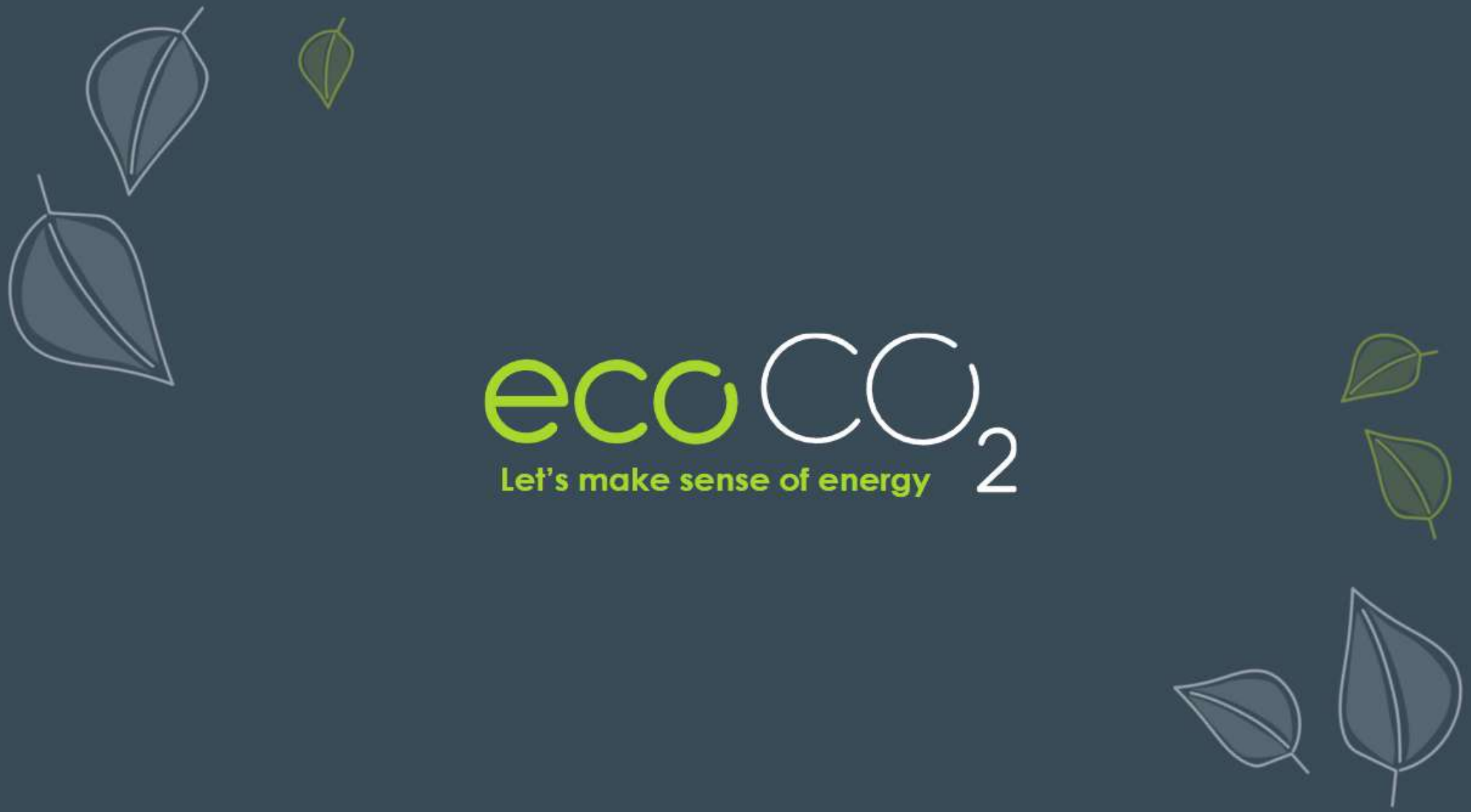
Valda Stanley, product manager

valda.stanley@ecoco2.com


eco CO2
Let's make sense of energy

Eco CO2

Key activities

Awareness Programs

Data-based studies

IoT solutions

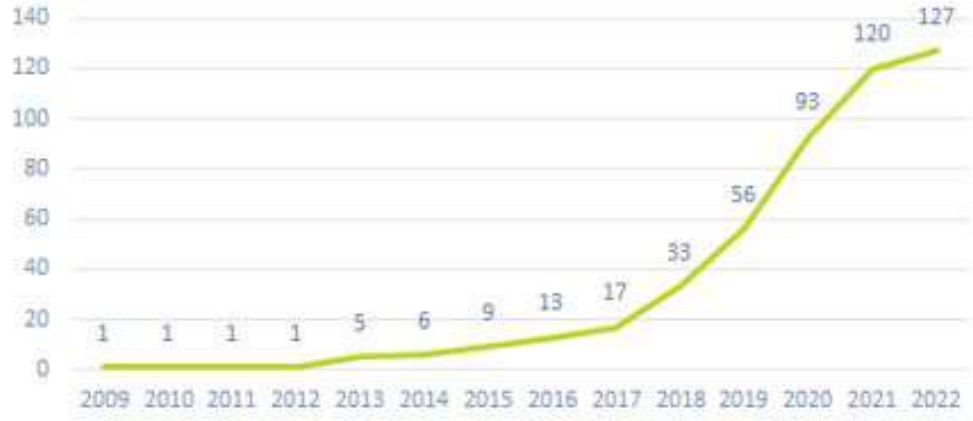
Revenue

60 % growth
in past 3 years

&

14m € in 2021

Employees



Energy-saving Studies

TBH Alliance

2014 – 2015

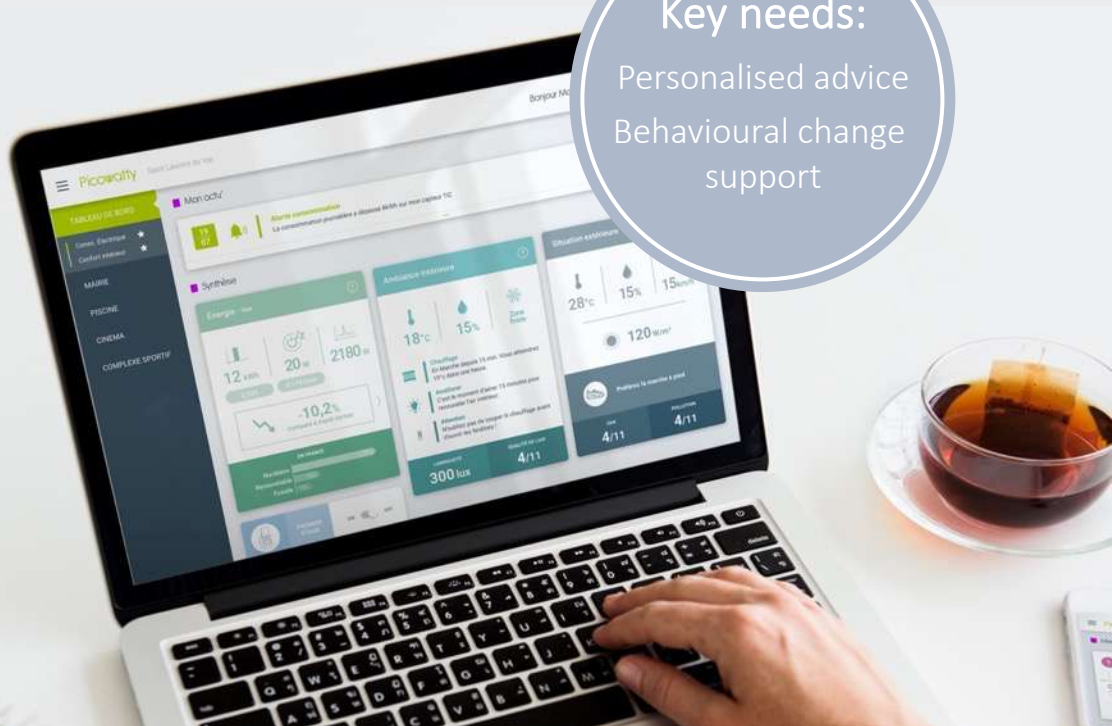
3200 French households

7,7% energy savings

PicoWatty

2019 - 2020

100 organisations & individuals



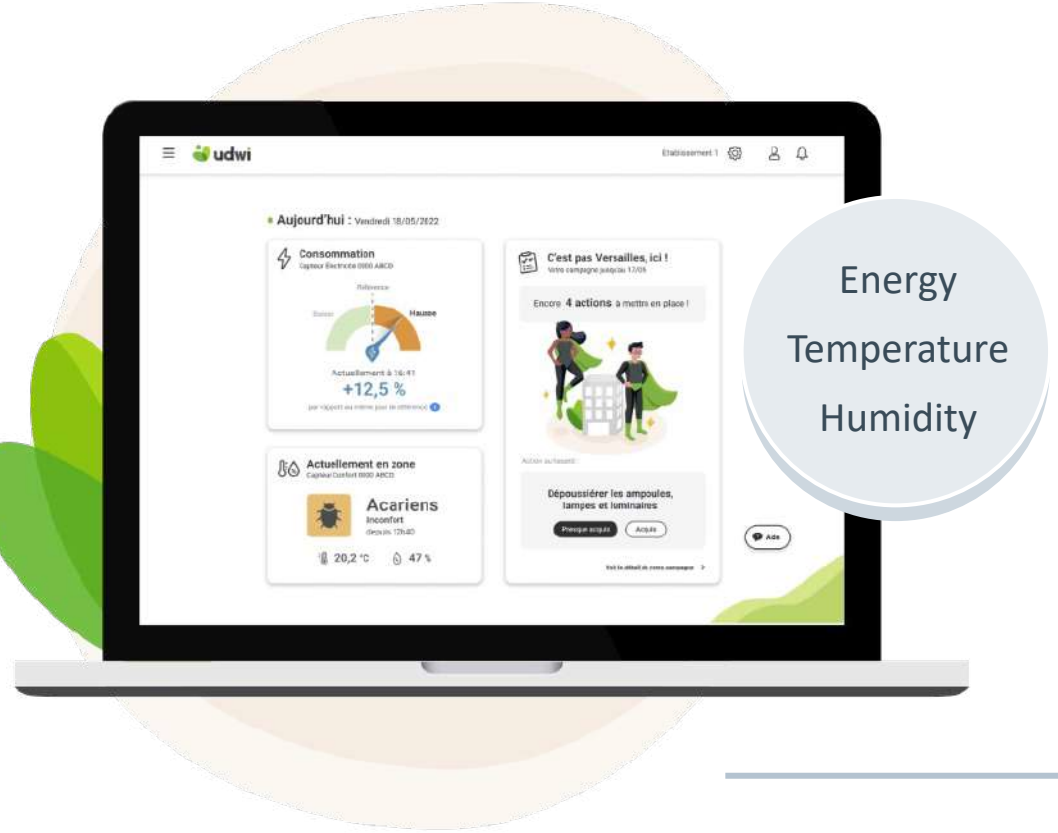
Key needs:

Personalised advice

Behavioural change support

Udwi

Small-medium organisations



Energy

Temperature

Humidity

Support & personalised advice

&

Awareness programs & material

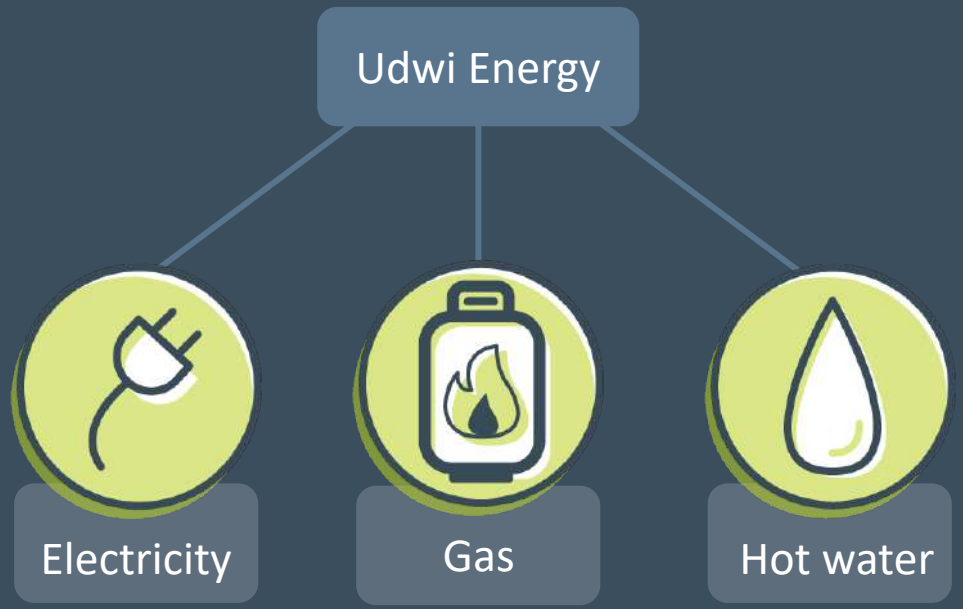
udwi

Udwi

Beta-test **2022**

Go-to-market **2023**

1



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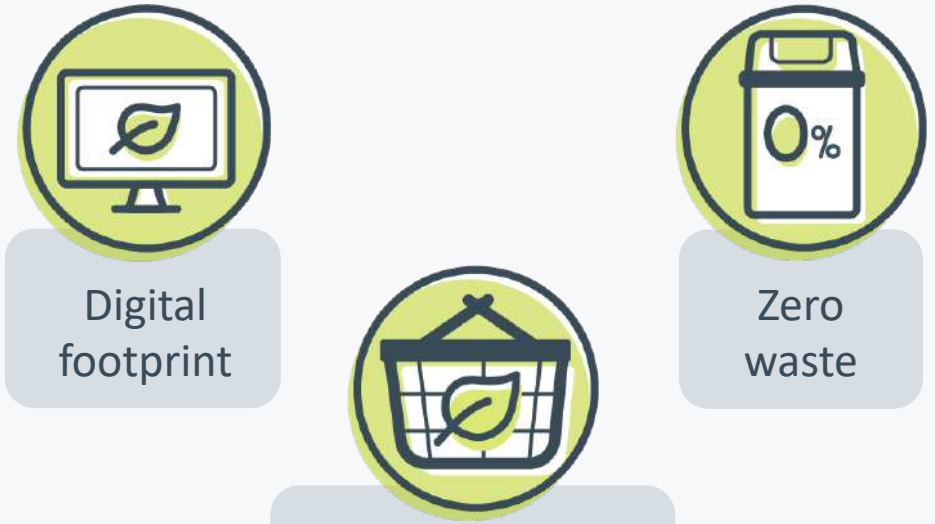


Donnons du sens à l'énergie

Valda Stanley
Udwi Product Manager

Mail : valda.stanley@ecoco2.com

www.ecoco2.com

facebook.com/EcoCO2
linkedin.com/company/eco-co2
twitter.com/EcoCO2
youtube.com/user/ecoco2channel

PITCHING SESSION

GRIDPOCKET

SUSTAINABLE PLACES 2022

Capenergies

Filip Gluszak, CEO

filipgluszak@gridpocket.com

SUSTAINABLE PLACES

GRIDPOCKET

PERSONAL SMARTGRID SOLUTIONS

06/09/2022 - SUSTAINABLE PLACES – NICE

Filip GLUSZAK, CEO

POWER VAS

Founded in 2009

7 awards

20+ implementations

Hundreds of features

Partnerships and strong growth

WE MAKE ENERGY MANAGEMENT PLATFORMS

- Transparency and engagement regarding energy
- Integration of New Usage's management
- Customer base loyalty

+5M

users

World-class energy experts

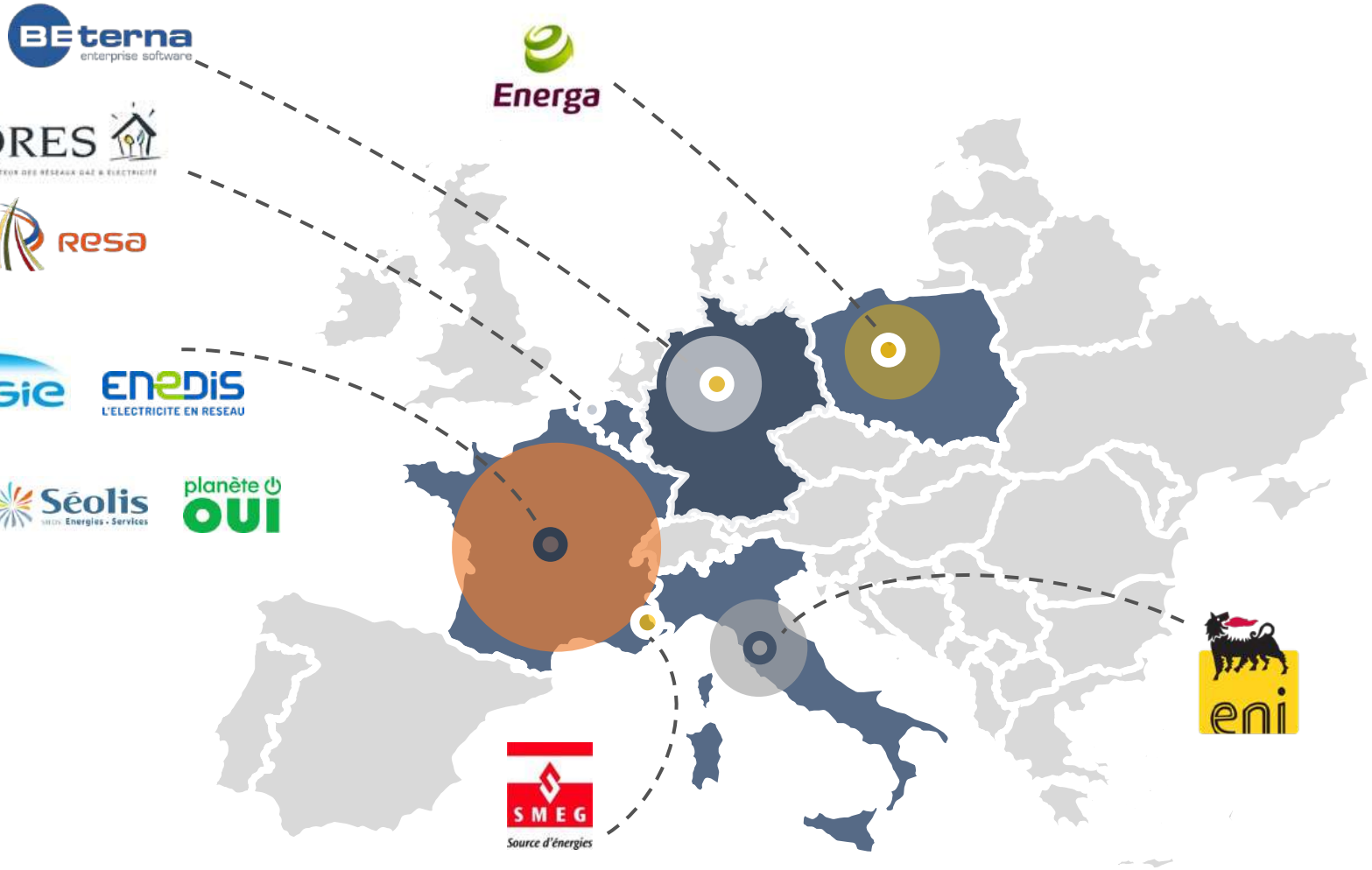
An International presence

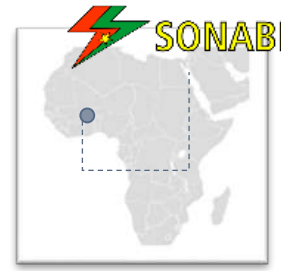
15 laboratories

Trust us

A STRONG PRESENCE WITH ENERGY SUPPLIERS

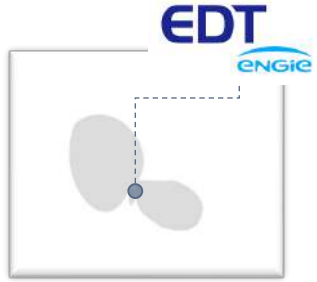
Clients in France and in Europe





Burkina Faso

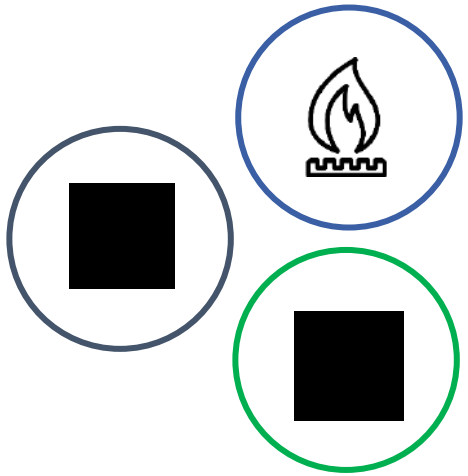
Nouvelle Calédonie



Polynésie Francaise

WHAT WE DO AT GRIDPOCKET

- ✓ Collect energy consumption and production data
- ✓ Deploy customized customer portals with intelligible and visual data
- ✓ Add value to data and create revenue streams



Multi-fluid network integration

Meter data interface to ERP,
CRM, Billing, MDMS, DSO platforms

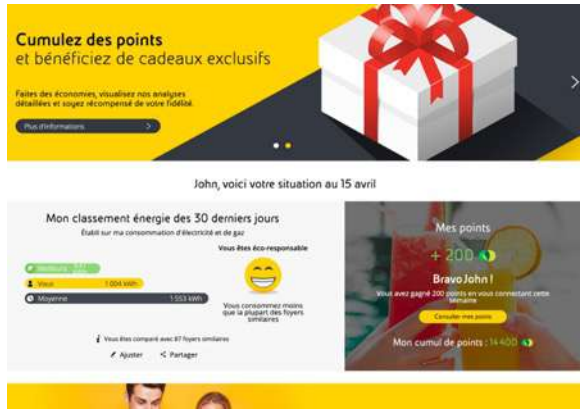
Energy Data Hub

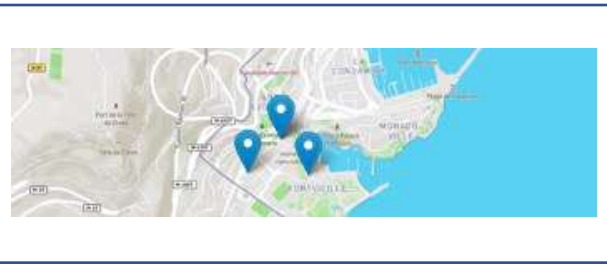
Data recovery & consolidation

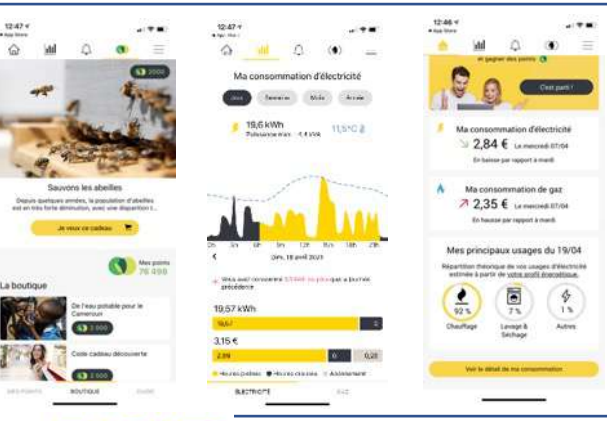
Customer's Engagement

B2C and B2B customer portals,
consumption monitoring,
online agency, administration, AI

A UNIQUE OFF THE SHELF PLATFORM FOR UTILITIES







GAMIFICATION

ANALYTICS

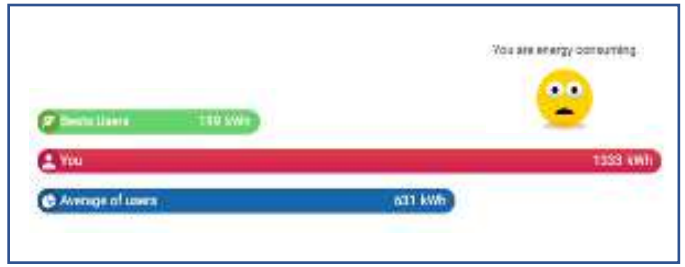
ONLINE AGENCY

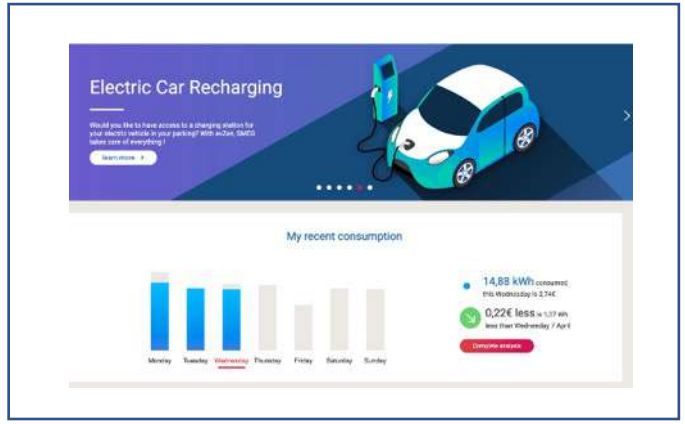
POWER UAS

MARKETPLACE

ENERGY AI
Data Hub Layer

PROSUMERS





Thank you

GridPocket SAS
300 Route des Crêtes
Valbonne Sophia Antipolis - 06560
France

+33 9 75 96 68 08

contact@gridpocket.com

PITCHING SESSION

MACAUTO

SUSTAINABLE PLACES 2022

Capenergies

Patrick Hurpin, CEO **Fabrice Berjoan, Partner**

macauto@free.fr

TEAM MACAUTO

CEO - EPHA - MACAUTO

Background and profils members 50% Ingeneers members

MACAUTO

PITCHING SESSION

MACAUTO HIVES

1 - How to produce regional green energy ?

2 - How to create Sovereign Data in a European offer ?

3 - How to capture and store green energy ?

4 - How to increase the purchasing power of employees without additional expenses?

5 - How not to systematically resort to public money?

network mesh + Territorial innovation + France + UE

MACAUTO

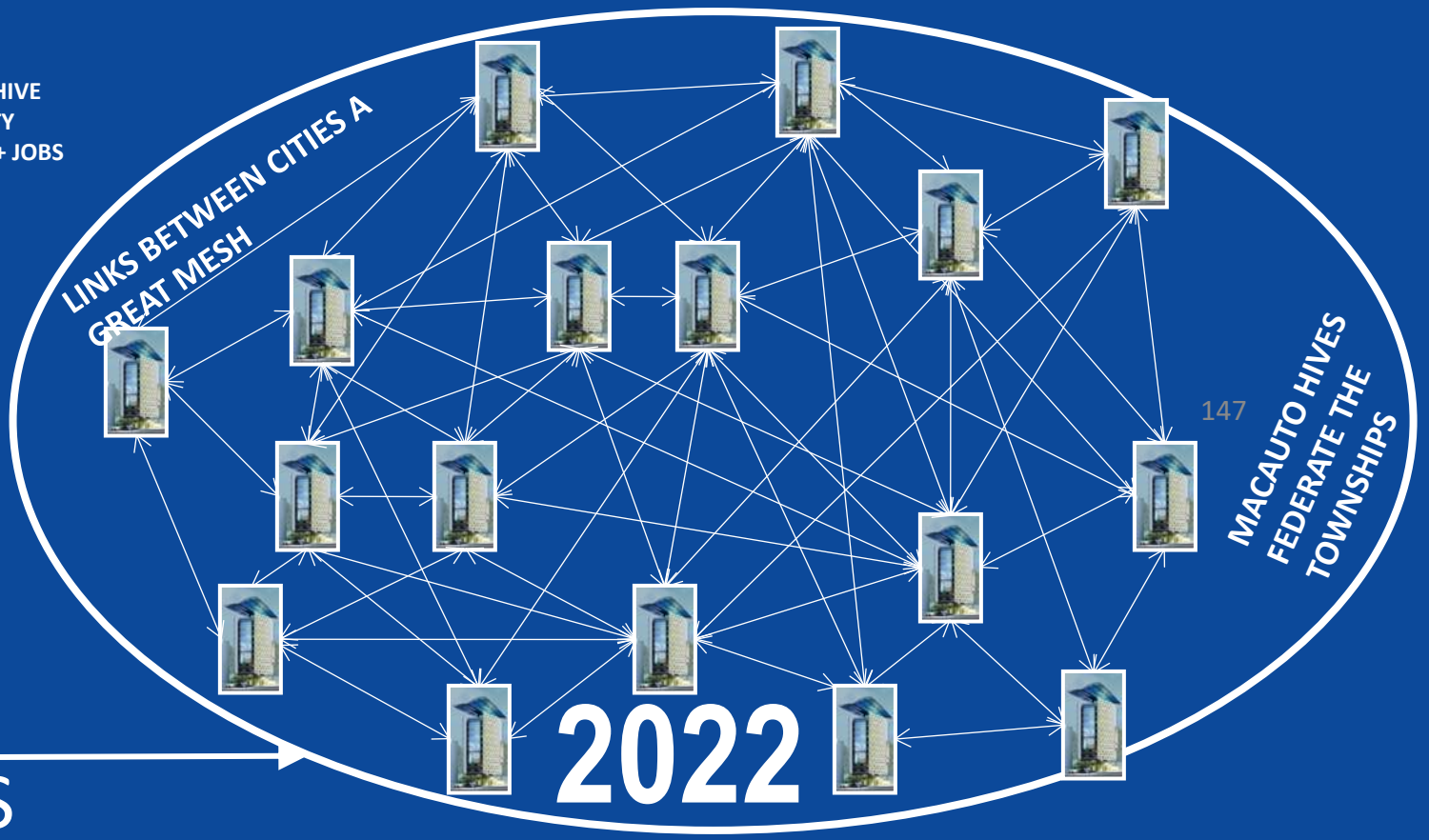
PITCHING SESSION

NETWORK MESH

ARCHITECTURE TOWNSHIPS & REGIONS + CITIES + COUNTRYSIDE + MOUNTAINS

1 - ENR energy storage
2 - ENR energy capture
3 - Mobility O GES = OK COP21
4 - National Networks Mesh
5 - DATA-AI +STOCK + 6,000 SMEs / HIVE
6 - URBAN + SEMI-URBAN + RURALITY
7 - ZERO PUBLIC DENIER + ACTIVITY + JOBS

MESH HIVES



network mesh + Territorial innovation + EU

MACAUTO

PITCHING SESSION

MACAUTO Hive Benefits

1 - Increase in Employee Purchasing Power €350 per month

2 - Capturing and producing green energy + producing green hydrogen

3 - Save land space 11,000 m² of parking per Hive

4 - Build Sovereign Data Edges for 6,000 small and medium enterprises

5 - Make carbon-free mobility + massively build electrical terminals

6 - Treat Urban Heat Islands with Urban Cool Islands

7 - Being a brake on public spending (by financing Franchisee tenants)

MACAUTO

PITCHING SESSION

BUSINESS CUSTOMERS ?

In need floor space savings + increased employee purchasing power + optimized carbon footprint

+

Then Network mesh

Renewable energy capture and storage
+ Sovereign data

+

+ Network meshing

Urban Heat Islands by Urban Cooling Islands

=

EU mobility network mesh for energy

independence and sovereign Data edge

MACAUTO

PITCHING SESSION

FINANCING A SOLO HIVE ? STAGES ?

AREA SAVING =

- money
- Land m²
- Carbon gain less tar
- Enterprise operability

1 - Save land 11,000 m² parking company per Hive

2 - Cost Reduced carbon tax + Climate emergency + Response

3 - Corporate CSR Policy + Improvement Purchasing Power at no cost

4 - OK + Business interests = Hives MACAUTO implantation studies

5 - Hives infrastructure financing by franchise tenants + Reservation

6 - Financing Ecology Social Management = Building permit + site

7 - MACAUTO Hive reception + Commissioning + Operational test

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PITCHING SESSION

MESH HIVE FUNDING ON TERRITORY ? STAGES ?

1 - On the basis of 7 à 27 solo Hives built agglomeration

2 - Carry out a study of additional development in public areas

3 - Estimate the financial returns for the public = land sales + taxes

=

4 - OK + Public interest = OK MACAUTO Hive implantation studies

5 - Hives infrastructure financing by Ecology Social Fund Management + Assembly

6 - Closing Funding Ecology Social Management = Building permit + Construction

7 - Reception Mesh hives + Commissioning + global Network mesh

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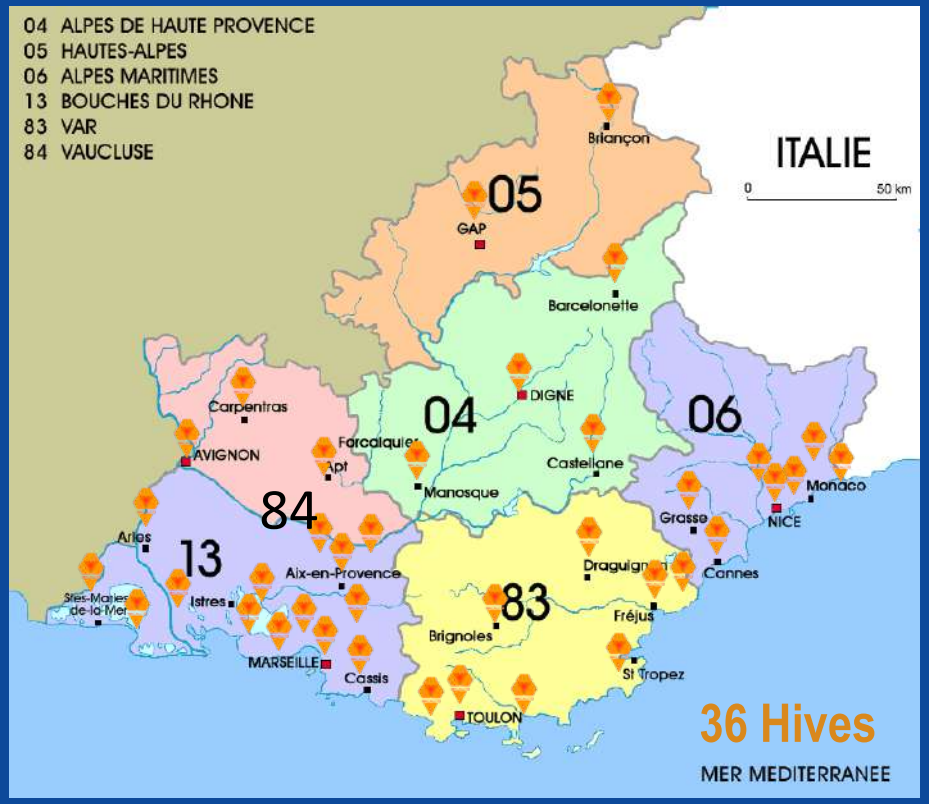
PITCHING SESSION

MACAUTO Hives Implantations



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MACAUTO

Number of VE electrical connections created = 3600 terminals
Region mesh = Stored green energy available = 90MGWatt
Carbon equivalent savings / year = 34,300 tonnes

FIN

PITCHING SESSION

PITCHING SESSION

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SUSTAINABLE PLACES 2022

Capenergies

Muriel Etievant, marketing manager

muriel.etievant@oghji.com

La FRENCH TECH

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Smart switchboards for planet earth

The digital, connected and eco responsible switchboard

- Energy savings for Smart Buildings
- Electric flows optimisation for Smart Cities

1970


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MODE PRÉSENCE / ABSENCE
MODE ACTUEL
PRÉSENCE
ABSENCE
VACANCES
Voici vos circuits ayant un filtre présence/absence
CIRCUITS
PRÉSENCE
ABSENCE
VACANCES

2022

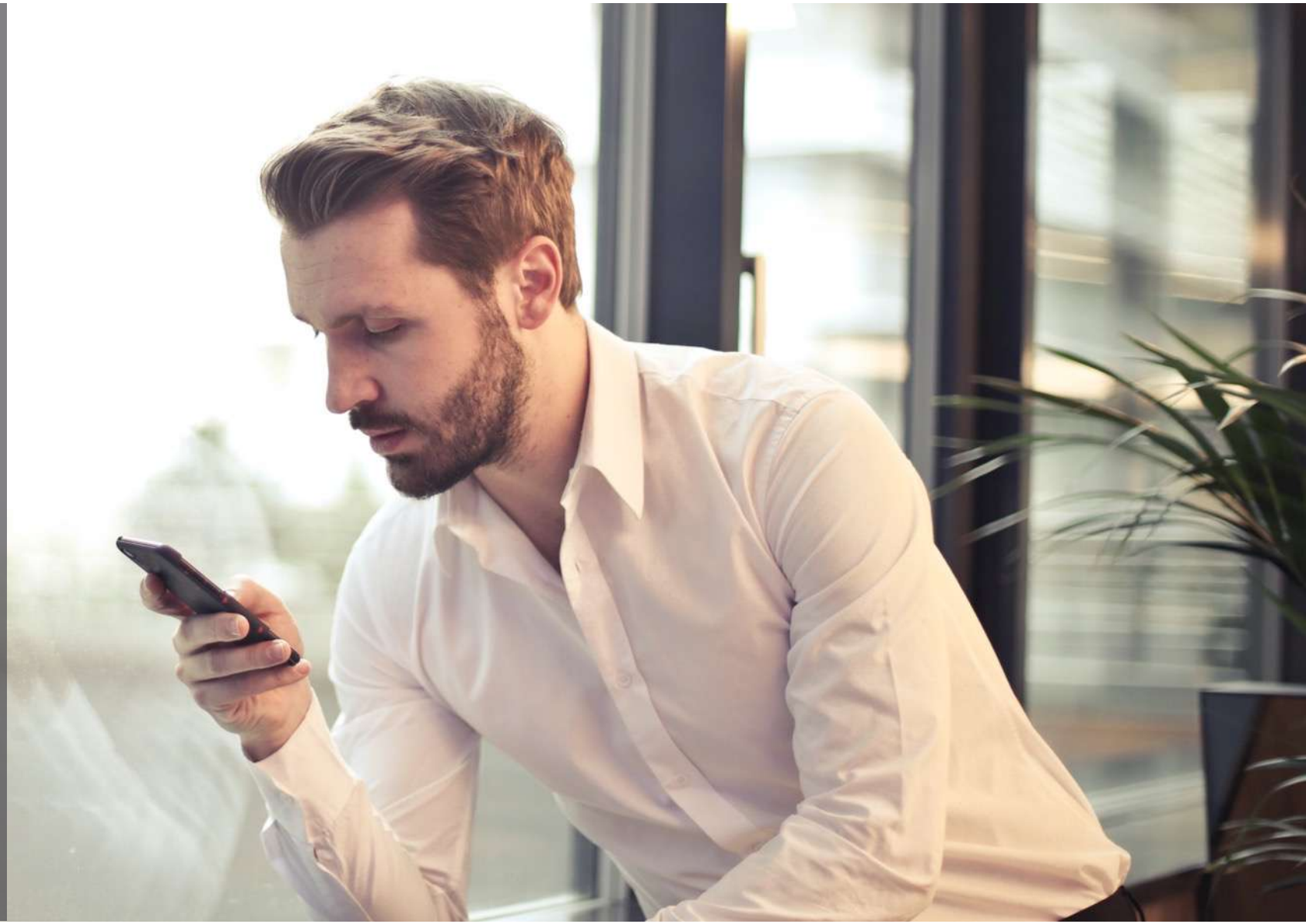
Smart Home

✓Electrical protection

✓Measure & Analysis

✓Consumption optimisation

Up to 20% energy savings

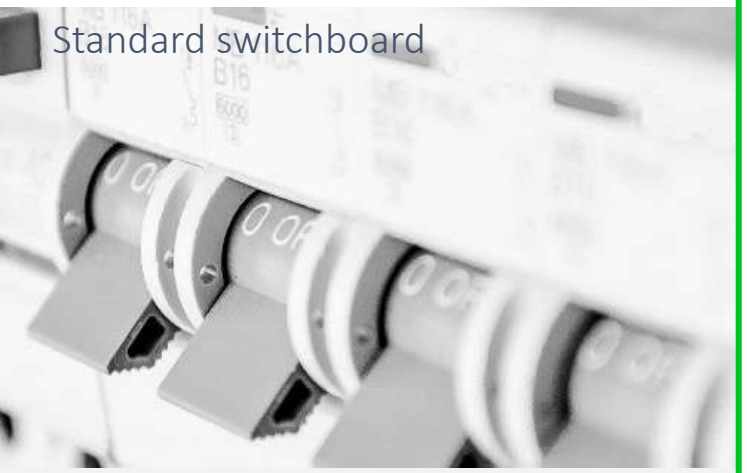


Smart City

- ✓ Consumption sensor
- ✓ Flow optimization
- ✓ Crisis management

In favor of green energies

Standard switchboard



✓ Electrical protection

+ in options :

- Control unit
- Connected energy meter
- 6 circuits eco meter
- Contactor for off-peak tariffs
- Connected load shedder
- Contactor connected

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The « all in one » solution

- ✓ Electrical protection
- ✓ Energy meter
- ✓ Steering
- ✓ Connectivity
- ✓ Load shedding

- ✓ Comfort
- ✓ Design
- ✓ Ergonomics
- ✓ Space saving

- ✓ Smart Grid

La FRENCH TECH

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Smart switchboards for planet earth

Thanks !

The digital, connected and eco responsible switchboard

- Energy savings for Smart Buildings
- Electric flows optimisation for Smart Cities

LABELLISE PAR Capenergies 2021

CONSTRUCTION DURABLE & CADRE DE VIE
GRAND PRIX DE L'INNOVATION 2021

Contact:
Pierre Fourlinnie
+33 6 61 72 00 43
pierre.fourlinnie@oghji.com

www.oghji.com

Short break

EU INFODAY
in 10 minutes
(same room)

SUSTAINABLE
PLACES 2022

Sep. 6 - Sep. 9, 2022 | Nice, France