Industrialization of a Novel Lightweight PV Technology Towards IPV Market

Integrated Photovoltaic Conference



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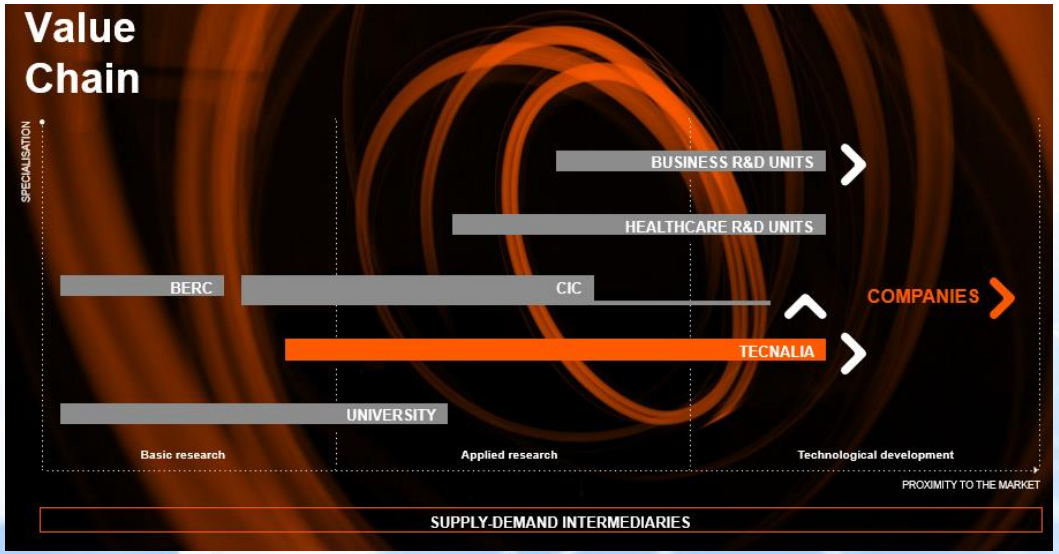
Werther Cambarau

About TECNALIA

TECNALIA

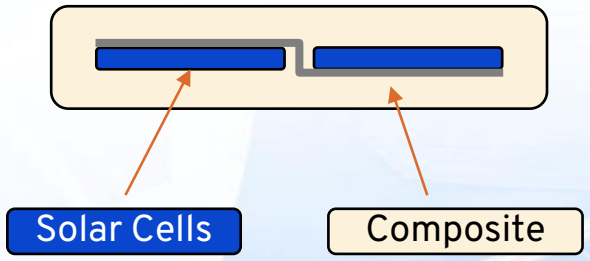
Largest **applied research and technological development center** in Spain, a European benchmark and member of the Basque Research and Technology Alliance (BRTA).



Solarface Technology

Solarface®

PV encapsulation technology developed by TECNALIA that brings together the advantages of composite materials and PV energy production.



DESIGN FLEXIBILITY

LIGHT WEIGHT

solarface energy surface

INTEGRABILITY

EFFICIENCY

COST COMPETITIVENESS

Seamless-PV contributes to the industrialization of Solaface®

Solarface Technology from Lab to Fab

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BRANKA
- SOLUCIONES INDUSTRIALES EN COMPOSITES
- TECNOLOGIA AUTONOMA MARINA

Socios fundadores de Kiro SL

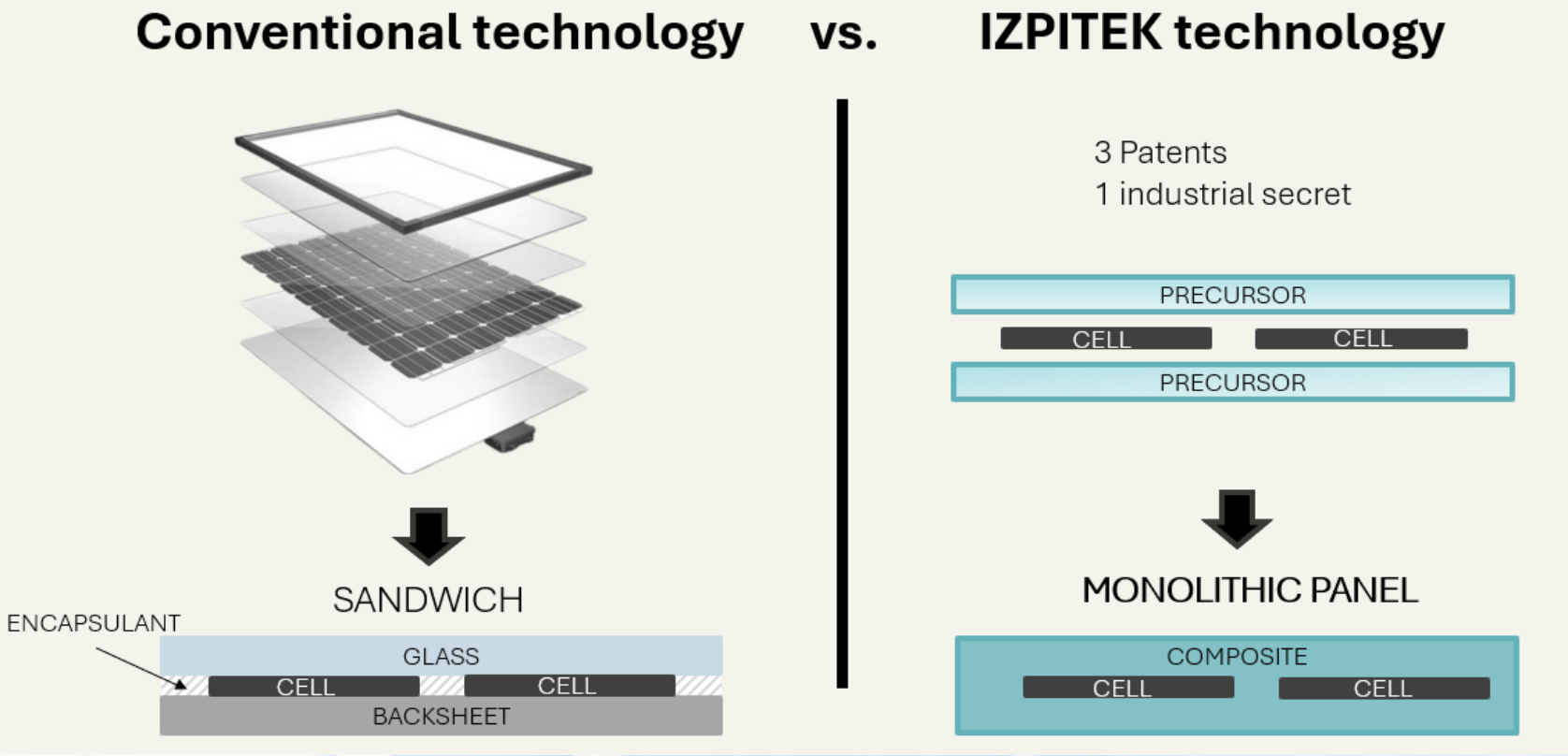
- SOLUCIONES INDUSTRIALES

IZPITEK

IZPITEK SOLAR S.L.

Start-up manufacturer of PV solutions supported on Solarface® technology

Solarface vs Conventional Technology



- ✓ **Design flexibility**: wide range of mechanical characteristics: from ultra-thin flexible panels, to semi-flexible or even rigid self-supporting ones
- ✓ **Lightweight**, 5% to 30% of the weight of equivalent conventional panels
- ✓ **Aesthetic design**: panels can be translucent or opaque, with different background or front colors
- ✓ **Integrability**: easy to install and/or integrate on other base element products (glass, aluminum, ceramics…)
- ✓ **Monolithic product**, less subjected to delamination (first cause of solar PV panel failure)
- ✓ **Performance**: efficiency comparable to standard PV panels

Markets

- Architecture – BIPV
- Urban Furniture
- Sustainable Mobility - VIPV

Architecture – BIPV

Urban Furniture

Sustainable Mobility - VIPV

Challenges and Opportunities

- Growing exigences on efficiency and ESG issues
- Safety requirements
- Architectural considerations
- Public acceptance

Solarface **added value**

- Integration → Not perceived as add-on. Intrinsic part of the architectural proposal
- Adaptability → Geometry, flex-semi-rigid, substrates, colors, surface features
- Light Weight → Easy installation, low structural requirements

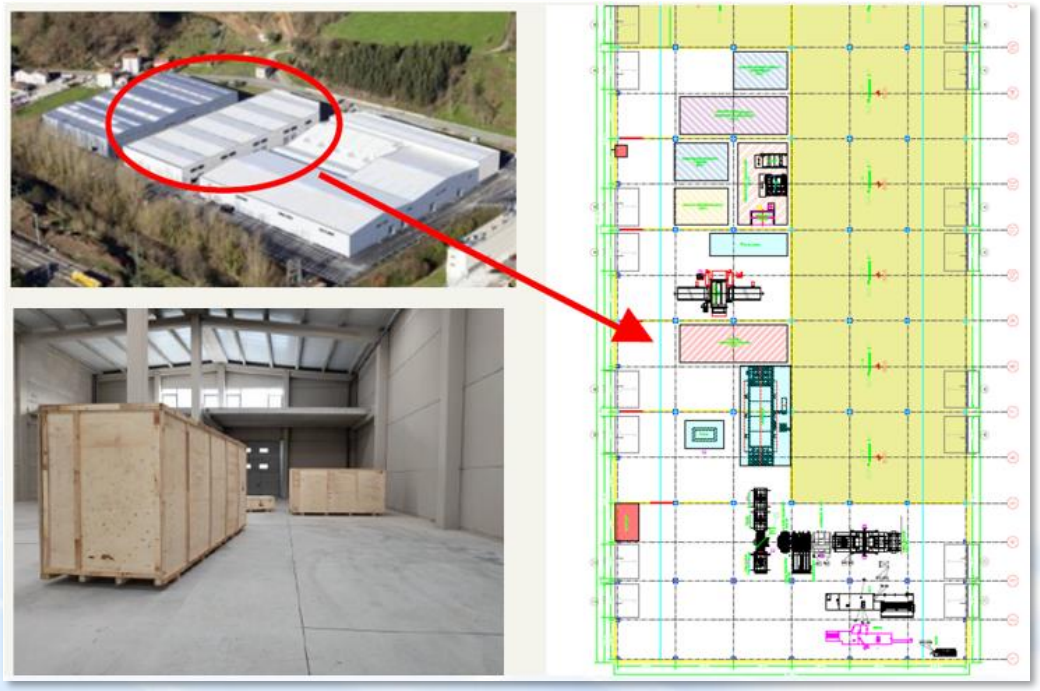
IZPITEK Location and Production capacity

Industrial plant located in Güeñes, Biscay (Spain)

- Total area 2,500 sqm

Production capacity (24/7)

- Starting in January 2025
- 160.000 sqm/year of PV panel
- 25MWp/year approx



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Thank you!

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www.tecnalia.com

www.izpiteksolar.com *(page under development)*

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