

University of Applied Sciences and Arts of Southern Switzerland  
Department for Environment Constructions and Design  
**Institute of Applied Sustainability to the Built Environment**

**SUPSI**

# PV Technology, between Science and Language

**Solar Building Symposium 2025**

Dr. Pierluigi Bonomo

*Head of BIPV Innovative Building Skin team*

SUPSI-ISAAC

9 settembre 2025





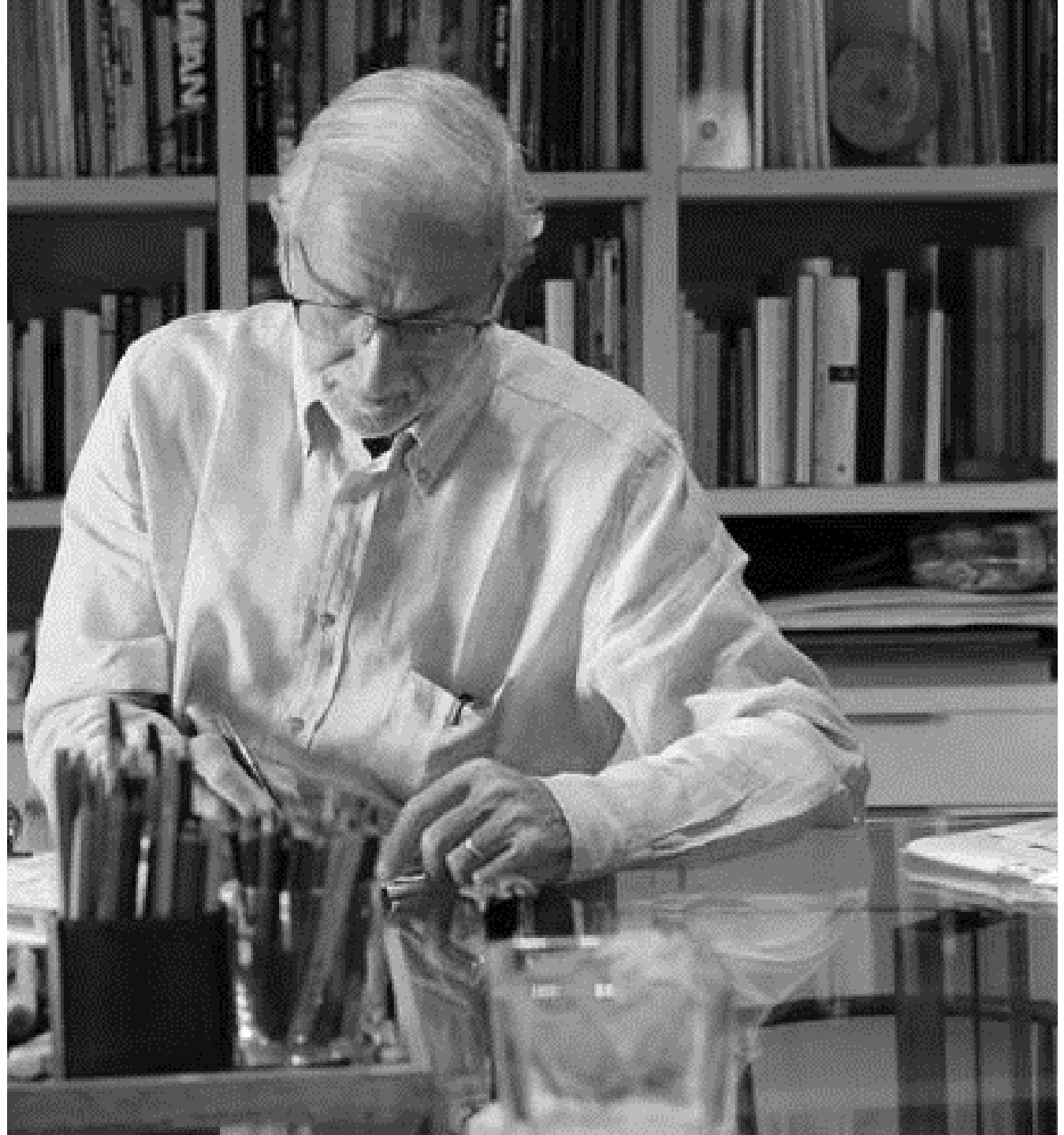


Parete

A

*"The earth is fragile and cities are vulnerable. It is a serious environmental necessity, but also an opportunity for **architecture**. It must not only be a **scientific-technical** discovery, but also an **expressive one**»*

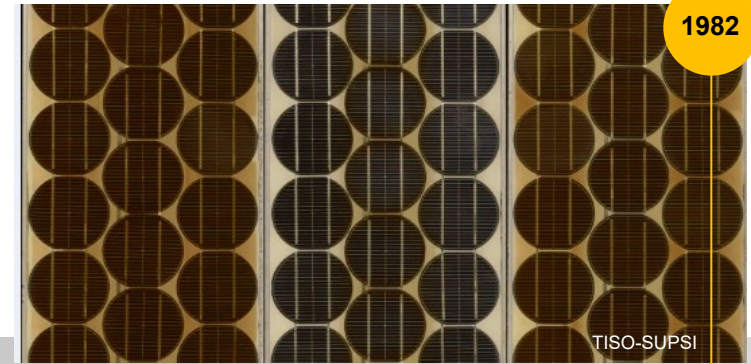
R. PIANO



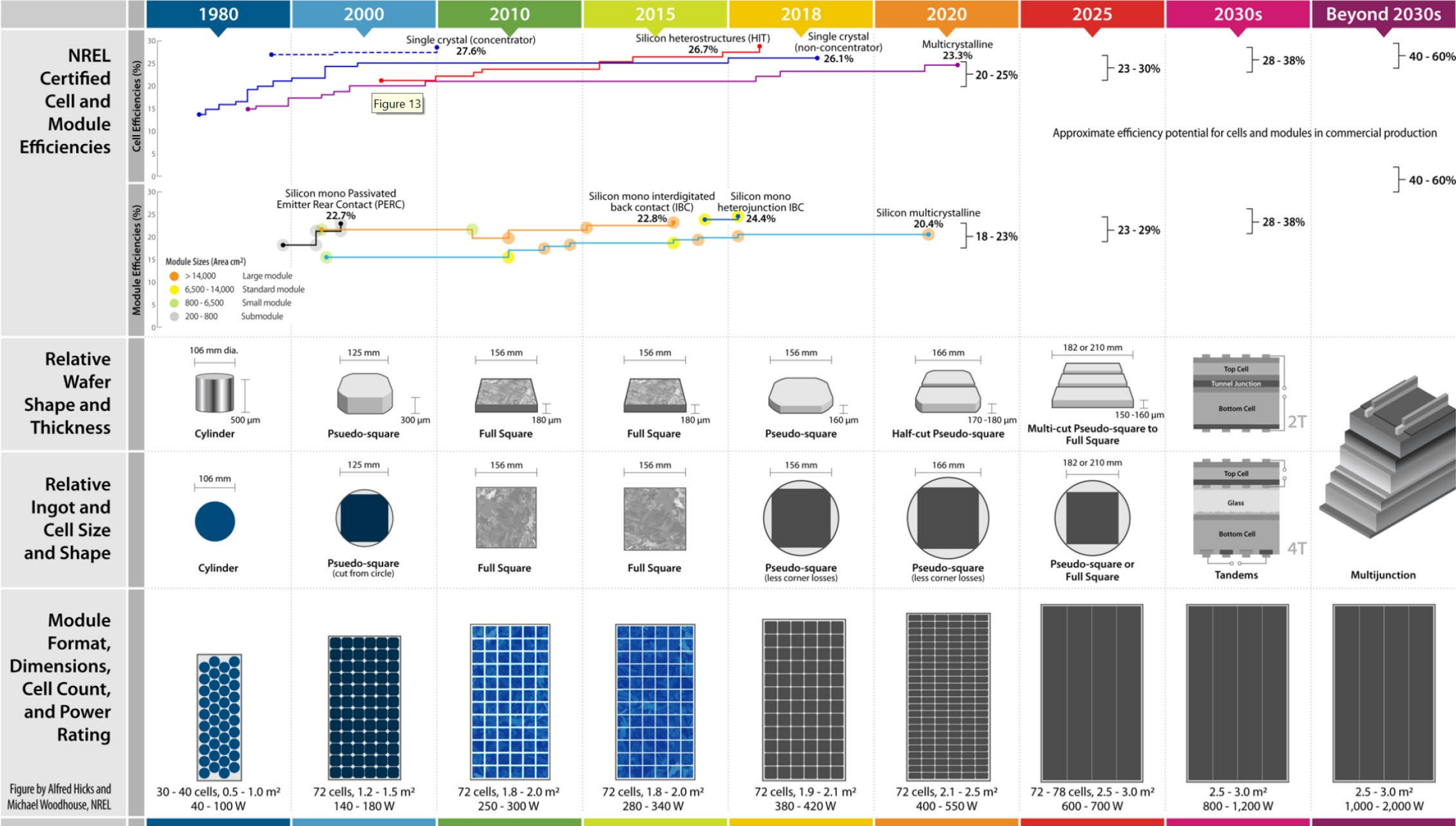
## Solar & Architecture

*“Architects encounter several problems when designing PV buildings. One of the main problems is that PV systems do not correspond with building sizes. ... the **colours and sizes of PV panels are too limited.**”*

Literature survey and analysis of nontechnical problems for the introduction of BIPV,  
Task 7 IEA PVPS, **1999**

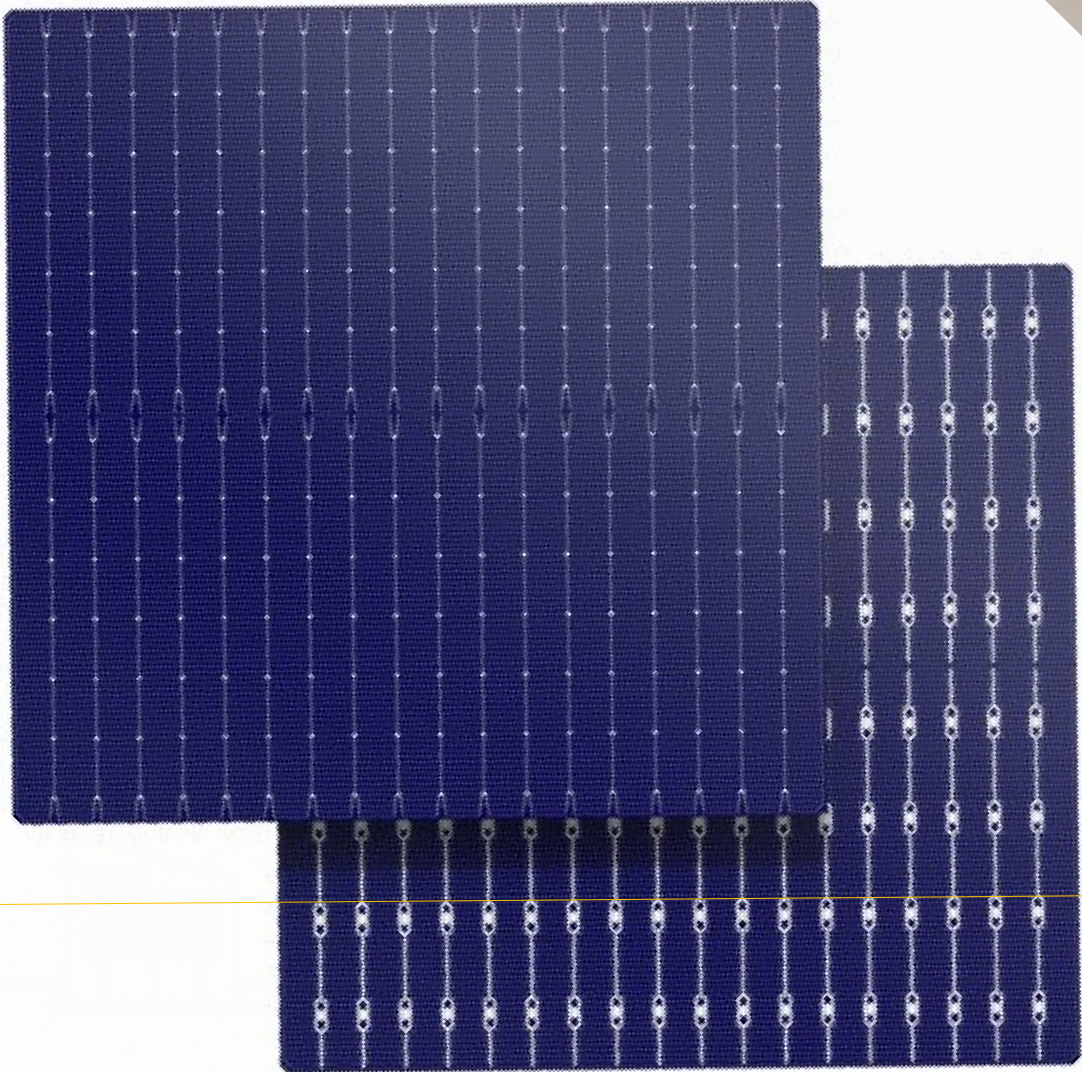
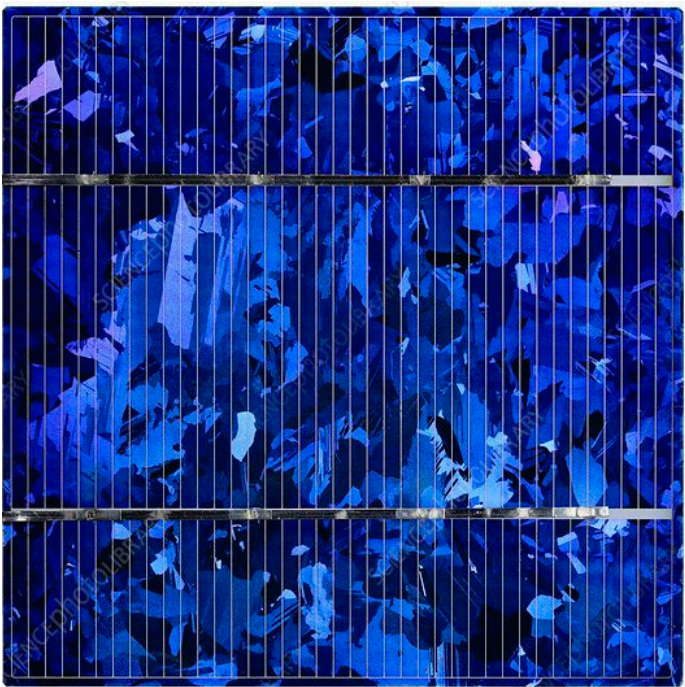








Solar cell



Cell

A

Letter

Word

Technology

Density, size, shape

Wires, contacts

Transparency



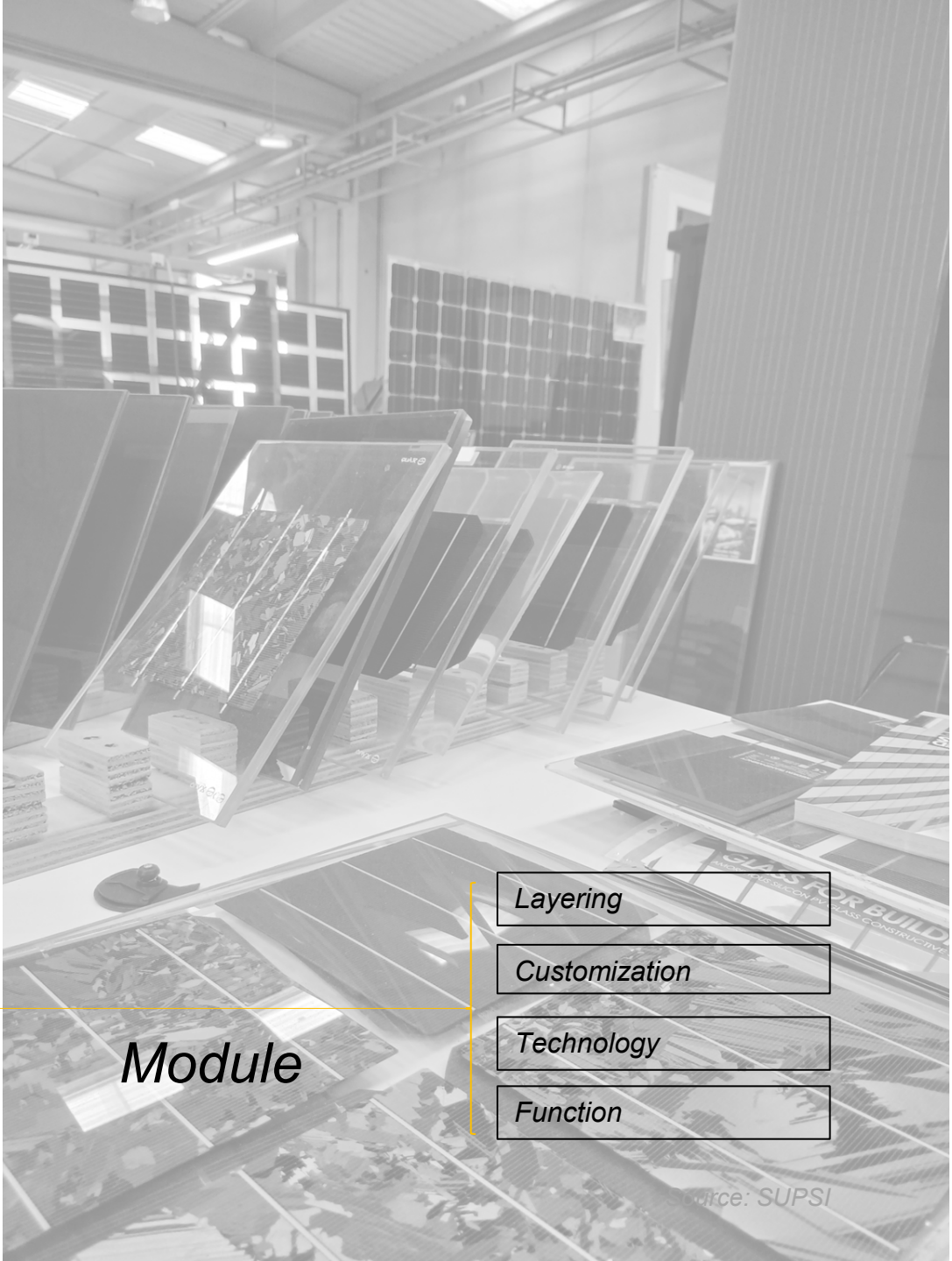
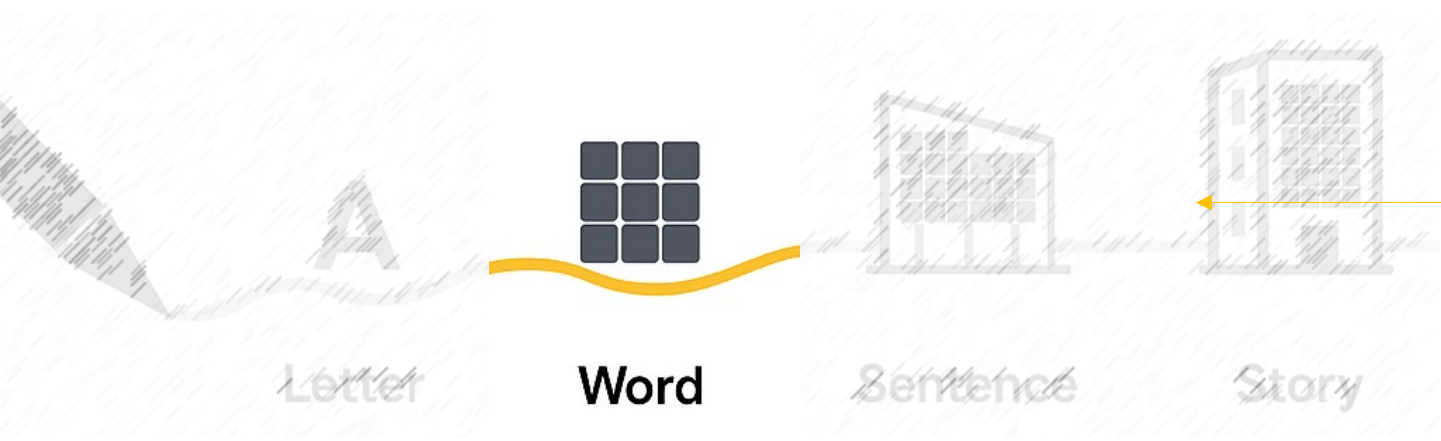








Solar module





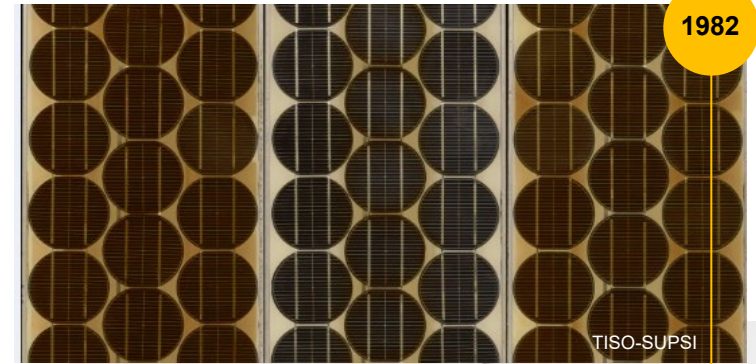




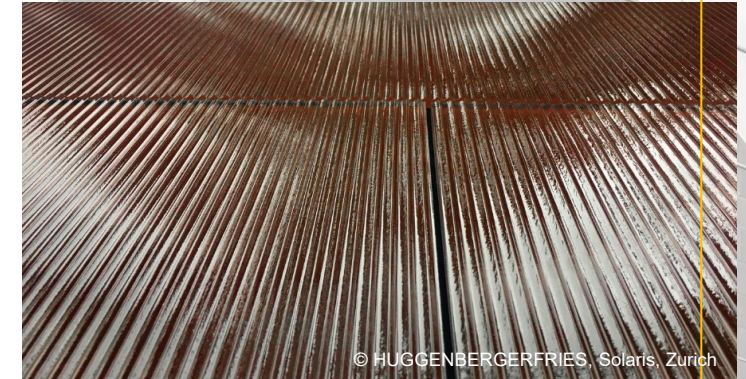




## Solar & Architecture



1982



*“Nobody can know that it is a solar-powered house.”*

Architect Erika Fries, HUGGENBERGERFRIES Architects, **2018**

today



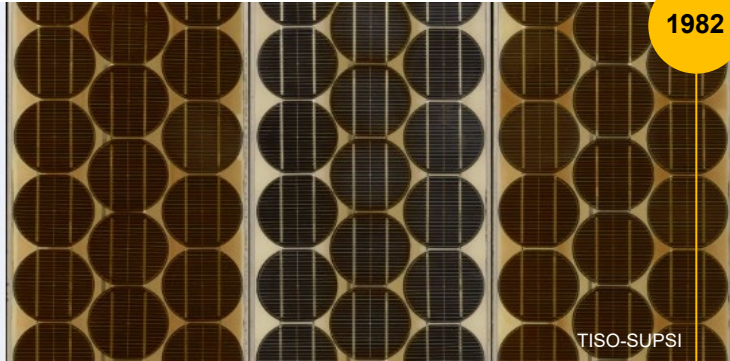




# Solar & Architecture

“ *what’s the next solar architecture?*”

XXXX, 2026



1982



today



tomo  
row



## Language: laboratory and factory





## Language: site and architecture





Language, beyond experts: people



09/09/2025





Different languages, unique solution: design-driven revolution



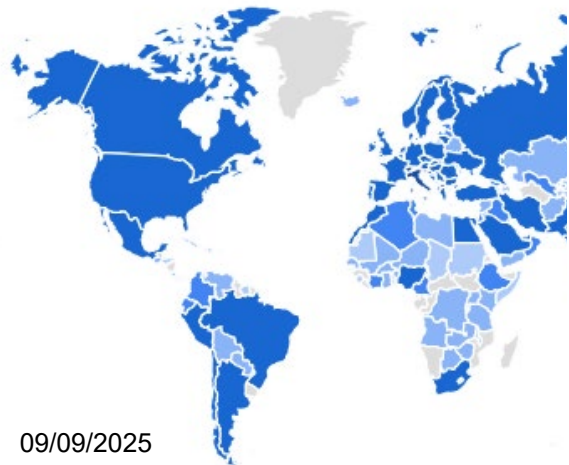


## A mission into a platform: solararchitecture.ch

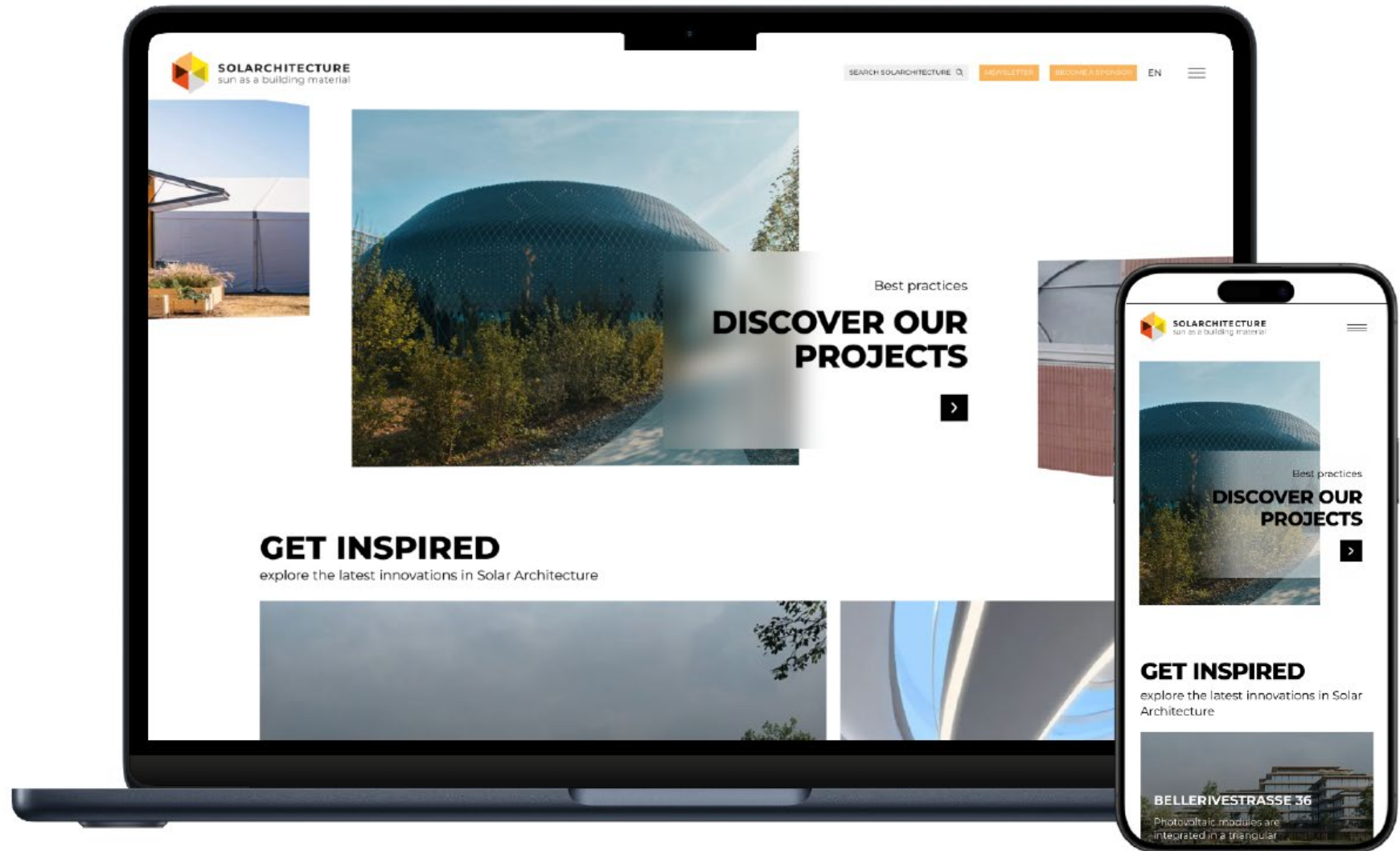
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# Have a nice solar design!



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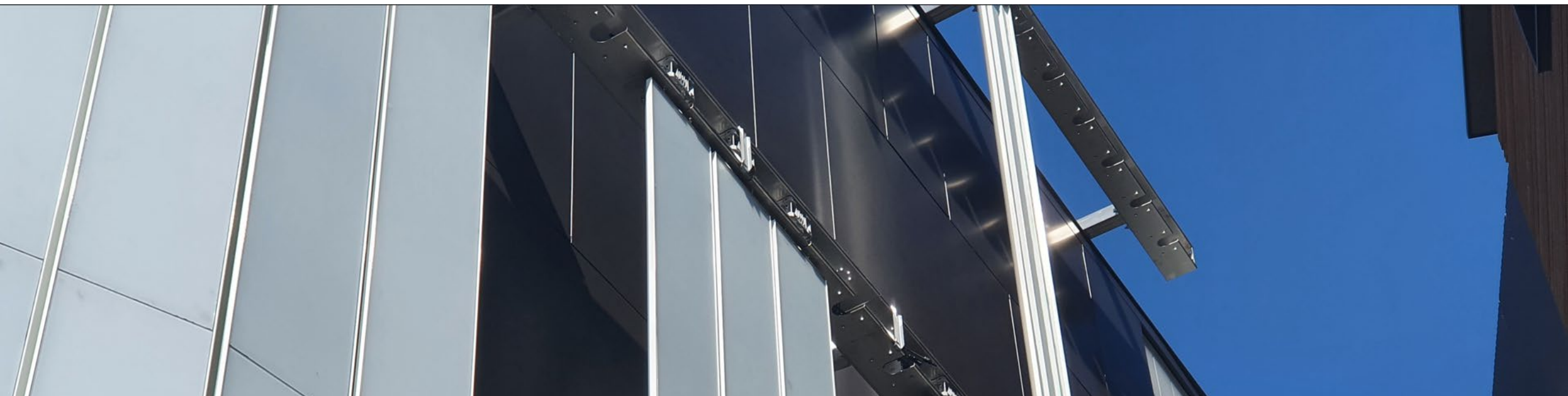


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[www.solararchitecture.ch](http://www.solararchitecture.ch)