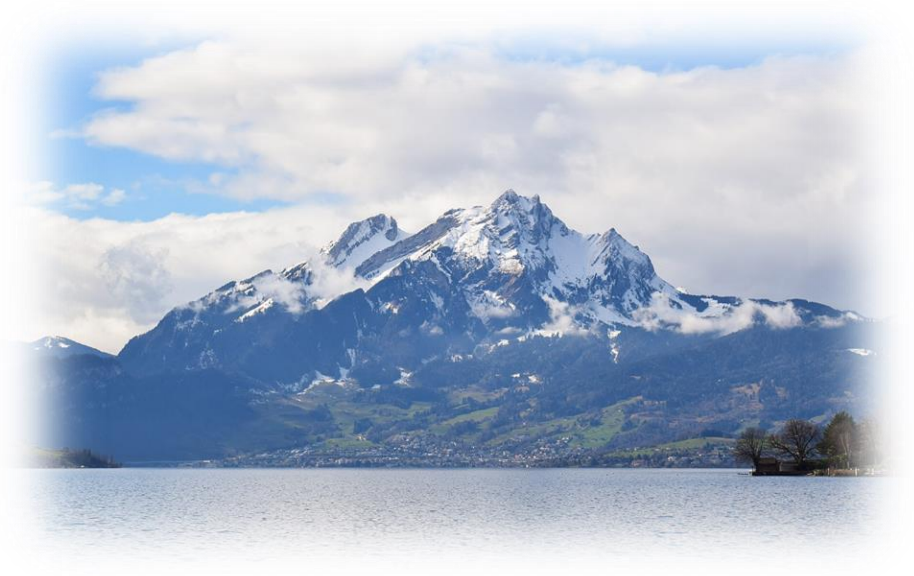
PILATUS

Project introduction

PILATUS

Digitalised pilot lines for silicon heterojunction tunnel interdigitated back contact solar cells and modules



European Commissions' Proposal Evaluation: 14/15

Starting date: 1st of November

Project Duration: 36 months

Coordination Team:

- Uniresearch (Official Coordinator)
- MB-Germany (Technical coordinator)
- CSEM (Scientific coordinator)

Budget:

Total Funding	:	17 999 435	
Funding from EU	:	10 418 076	(58 %)
Funding from CH	:	7 581 358	(42 %)

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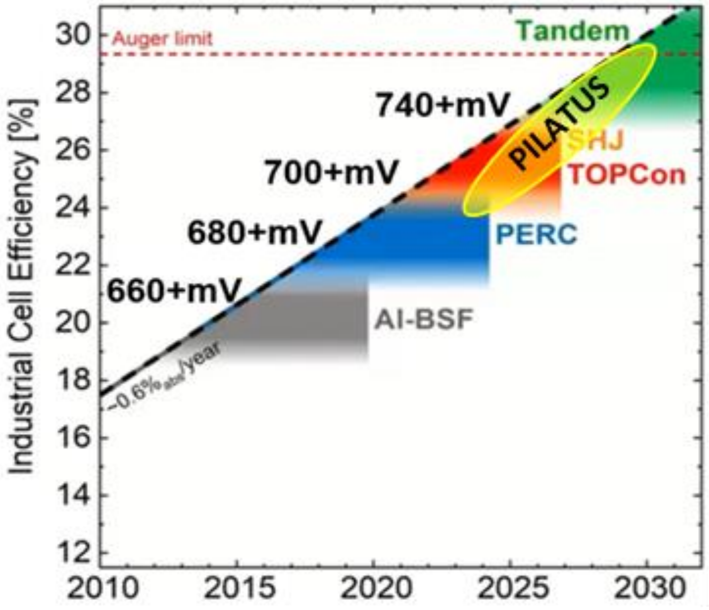
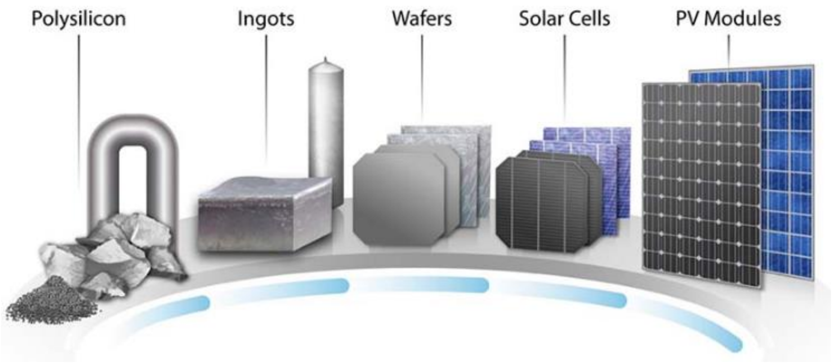
The PILATUS project proposes to prove the scalability of unique technology (EU created and owned) for sustainable, cost-competitive, high-performance solar wafers, cells, and modules. PILATUS will provide energy security and the EU PV supply chain (''made in Europe'' platform); not only for manufacturing but also for novel PV technologies through a program designed to maintain technical leadership and establish an innovation base.



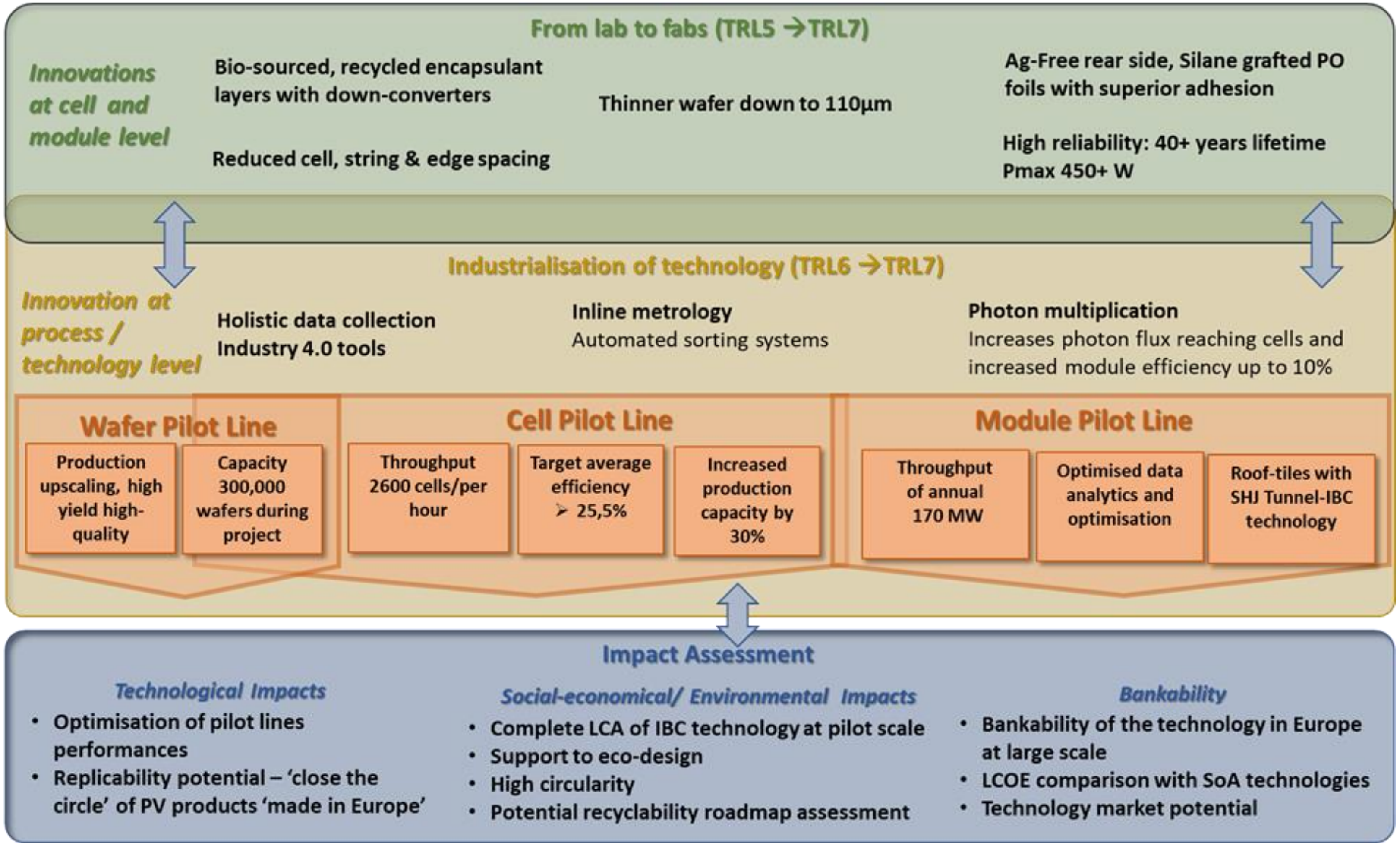
PILATUS Consortium covering the complete PV Value Chain



- Poly-silicon: WACKER
- Wafers: NORWEGIAN CRYSTALS
- PV cell: MEYER BURGER
- Module Integration: csem, MEYER BURGER
- Outdoor performances: EPFL, Pasan, Fraunhofer, eurac research, FZU, ISRA VISION GPsolar
- Industrial Potential & Business Model: csem, MEYER BURGER
- Exploitation activities: UNIRESEARCH, MEYER BURGER
- manufacturing equipment: MEYER BURGER, exateq
- Processing optimisation: ISRA VISION GPsolar, csem, MEYER BURGER
- Advanced materials: padanaplast, CPT Cambridge Photon Technology
- Characterisation & Modelling: EPFL, Fraunhofer, eurac research, FZU, Pasan
- LCA, recyclability, eco-design: Liège université, TNO innovation for life
- Dissemination & Awareness: UNIRESEARCH

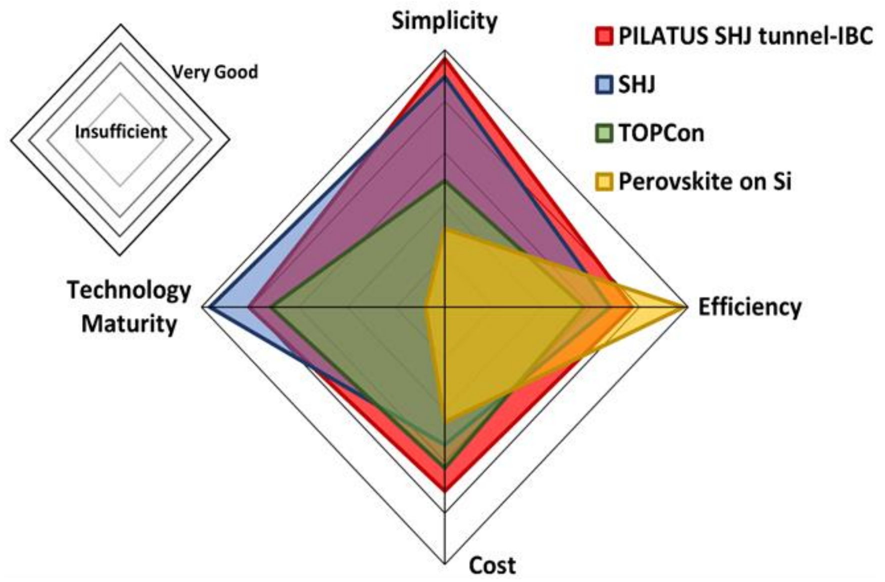
Project Objectives

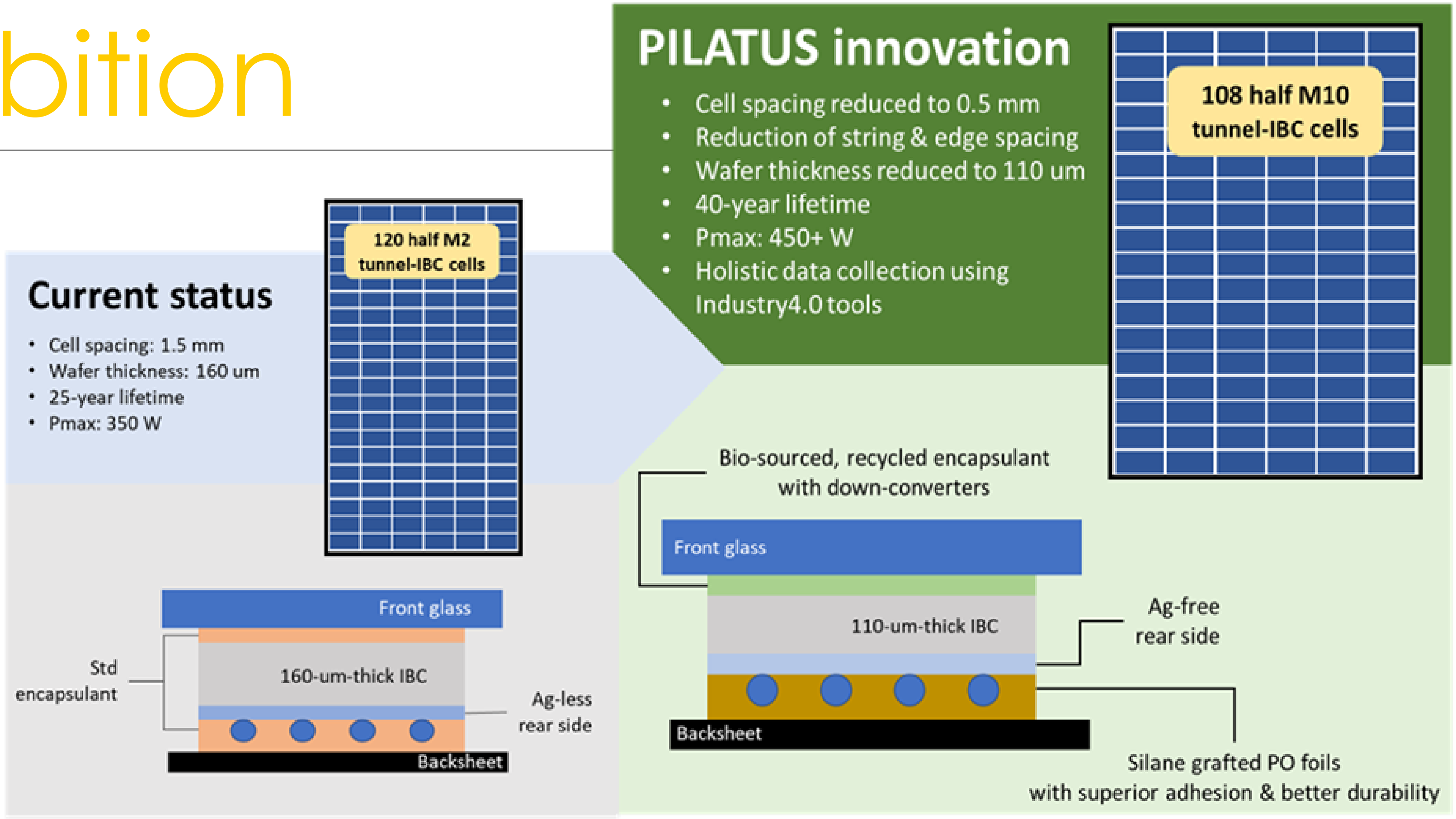
1. Develop and demonstrate the high-volume production of high-efficiency SHJ tunnel-IBC solar cells and modules in pilot-lines equipped with high-level automation.
2. Develop the industrial tools, processes and materials for the SHJ tunnel-IBC pilot lines thereby strengthening the European PV knowledge base and supply chain.
3. Demonstrate good traceability from wafer level to PV module's field installation combined with the automation and feedback loops to pilot lines.
4. Validate the performance of the PV cells and modules from the SHJ tunnel-IBC pilot lines
5. Eco-design of tunnel-IBC PV modules and manufacturing lines toward zero-waste via life-cycle assessments and developing optimisation roadmaps
6. Document and pre-certify the PV cell and module performance to ensure replicability and further scalability of the production capacity.
7. Demonstrate favourable cost/Wp of the SHJ-IBC modules compared to state-of-the-art commercially available PV modules and proof the potential of business cases towards special product applications.



Project Innovations

Project Ambition





Disclaimer

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