APPROACH

Next Generation Photovoltaic technology

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OUTLINE

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The Problem & Opportunity

Rising Energy Demand: IEA estimates renewables must supply 70%+ of electricity by 2050.

Climate Urgency: Net Zero by 2050

Solar PV: Cheapest source of electricity

- >**1 TW installed** capacity
- Heading towards **1 TW/year**!
- History:
  2004: 1 GW/**year**
  2010: 1 GW/**month**
  2016: 1 GW/**week**
  2023: 1 GW/**day**

Cost-optimal path for climate change mitigation:
~50TWp of PV capacity by 2050

Challenges with Existing PV Technology

- **Efficiency Limitations:** Silicon-based solar panels max out at ~25% efficiency.
- **Environmental Impact:** Some PVs use rare, toxic materials; recycling and disposal are energy-intensive.
- **Space & Scalability**: Large solar farms need vast land; urban use is limited by rigid panels.
- **Geopolitics:** China dominates the silicon PV supply and value chain..

Opportunity: Considering the TWh-scale scenario, develop a high-performance, low-cost, highly recyclable, and customizable PV technology made in Europe.

The Solution – Perovskite PV Technology

Perovskite PV technology is the future of solar, offering high performance and seamless integration with existing PV tech for ultra-high efficiency.

Our 30x30 cm² semi-transparent and tandem module: Unparalleled Reliability with Scale

High Performance	**>98% Bifaciality**
Highly Recyclable	**IP Protected Processes**
Excellent Reliability	**Spectrally Adaptable**
Low Carbon footprint	**Integrate with Silicon for Tandem PV**

We have dedicated equipment, specialized processing know-how, and key IP, giving us a unique advantage in R&D; module sampling is already done with leading industrial players.

Impact

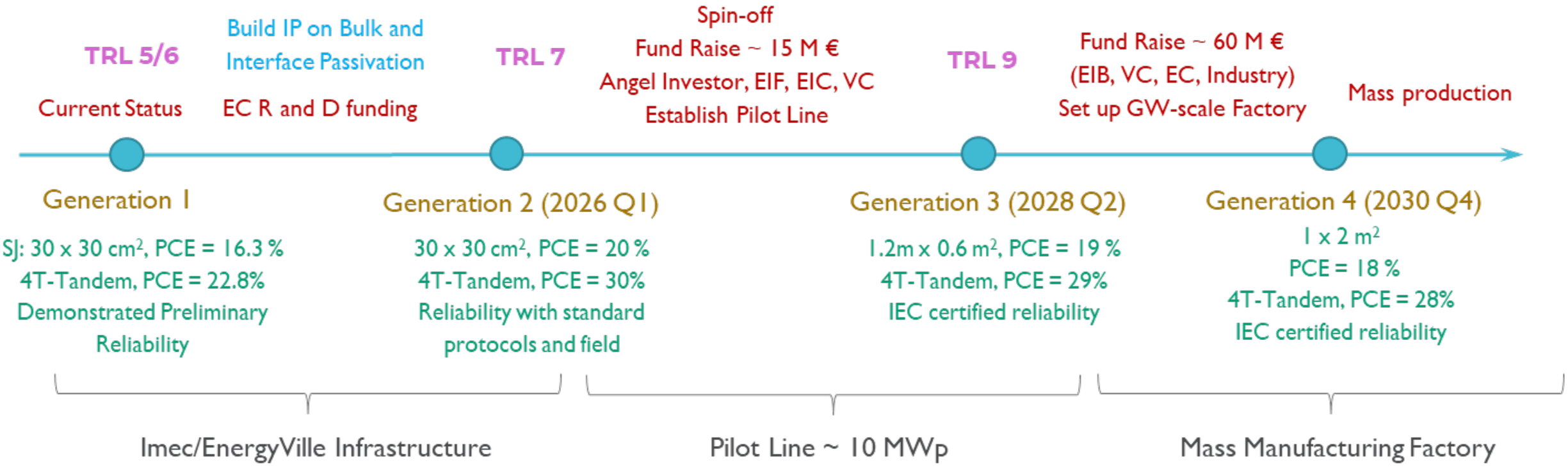
Economical: Transform the EU's clean energy landscape by enabling cost-competitive, GW-scale PV manufacturing in Europe that **cuts LCOE by 20-25%** compared to mainstream solar—paving the way for a **€40-80 billion annual market**.

Value chain and employment: Strengthen the **local value chain** by empowering equipment manufacturers, raw material providers, and automation industries, while creating 50-100 direct jobs and 350-400 indirect jobs per GWp.

Social and environmental impact: Aligned with RePowerEU and the Green Deal, this recyclable technology cuts carbon emissions, advances energy innovation, and supports the EU's 2050 net-zero goal. Emissions: Perovskite PV – ~ **20 gCO_2/kWh**, Silicon PV – ~ **40 gCO_2/kWh**, Coal – ~ **820 gCO_2/kWh**.

Call to Action

Join us in revolutionizing clean energy with perovskite technology!



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THANK YOU

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