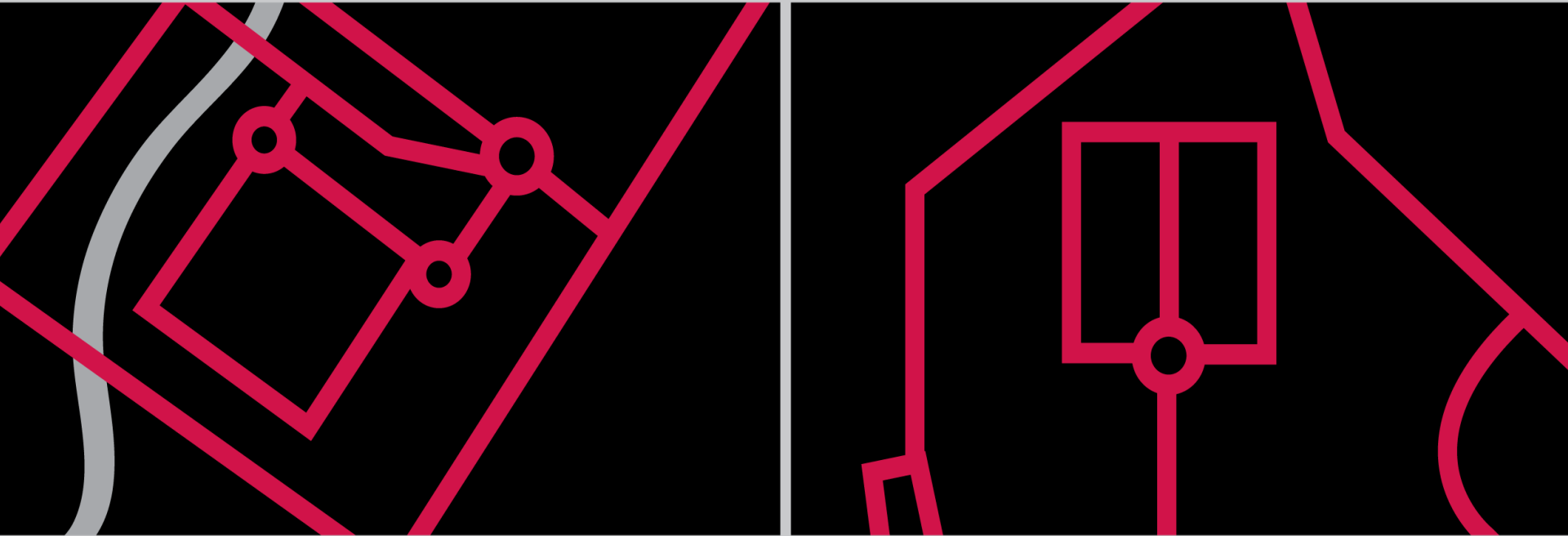


# Technology Strategy Board

Driving Innovation



## Materials and Manufacturing North West Launchpad Showcase

**Directory of projects**

## Teknisolar's core business and mission is to build and sell the highest-performing photovoltaic manufacturing lines in the industry.

### **What is the market opportunity that you have identified?**

Having gained a foothold in the photovoltaic industry, Teknisolar is determined to use its expertise to become a major-league player among the world's solar equipment manufacturers. The core of the proposed new technology is the ROBOSTAK, a multi-stack, membrane-less laminator for highly efficient and high-quality production of thin-film and crystalline solar panels, to be integrated in future in fully automated lines, currently under development by Teknisolar and other industrial partners.

### **What is your business model?**

Teknisolar's objective is to gain a strong competitive advantage by being the first company in the world with such a radically new approach that will have full buy-in from the market. Teknisolar's existing commercial and R&D links in Europe, Asia and North America will contribute to position the company as a key player for fully automated, complete turn-key lines, manufacturing high-quality solar panels at competitive costs.

### **Who is in your team?**

Vittore De Leonibus (chairman): over 34 years' experience in high-capacity processes for glass manufacturing. Ciro Paudice (glass and glazing specialist): senior professional with 34 years' experience leading R&D projects in the field of automotive glass and value-adding technologies. Paolo Boattini (lead scientist): 45+ years' experience in scientific applications for chemical and glass industries. Mariano Fabiani (chief designer): 35+ years' experience in the flat glass industry.

### **What is your funding strategy for growth?**

Teknisolar's funding strategy is mainly based on private investors being willing to share business opportunities coming from the sale of high-value, fully automated manufacturing lines in the field of solar energy. At present, the core technologies have been all identified and are in a final development stage. Technology Strategy Board funding will help to complete a critical development phase of one of these core technologies.

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## **You recently applied for a grant by the Technology Strategy Board. Can you explain the project's aim?**

Our Robostak™, a multi-stack membrane-less laminator, is already one of the best performing PV panel laminators in the global market. We want to further improve its performances, optimizing the vacuum levels, which are essential for good quality products, and reducing the process cycle times for highest production rate.

## **Is the Robostak™ the only recent development of your company?**

Not really. We have some exciting developments in the field of automatic machines for the photovoltaic industry.

Our stringer, for example, can pick up and test 1 to 6 cells simultaneously, before placing them in the layup area and inter-connecting the cells in strings. It 'a very fast machine, able to solder up to 3700 cells / hour. Actually we call it "Multi-Stringer".

## **What are the basic principles of your design philosophy ?**

We want to build very compact and efficient lines at competitive prices.

Our lines are only 65 meters long for a 150MW yearly capacity. Fully automated, they require only 13 people per shift. Furthermore they are modular. We can double, triple or quadruple the process capacity without changing the layout, but only adding more levels to the Robostak laminator or upgrading the Multi-Stringer.

## **When will you be ready for the market?**

Thanks to the TSB, we believe that at the end of 2015 our main piece of equipment will become the fastest and most efficient laminator in the market.

In the same time frame, most of our recent developments will be ready. They include also a bus bar Soldering Machine, also very fast and efficient, a patented Junction Box with the highest insulation degree in the market (IP68) and a robotized Solar Simulator able to test and sort the PV panels in 3 different racks.

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*The Technology Strategy Board is a business-led executive non-departmental public body, established by the Government. Its role is to promote and support research into, and development and exploitation of, technology and innovation for the benefit of UK business, in order to increase economic growth and improve quality of life.*

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