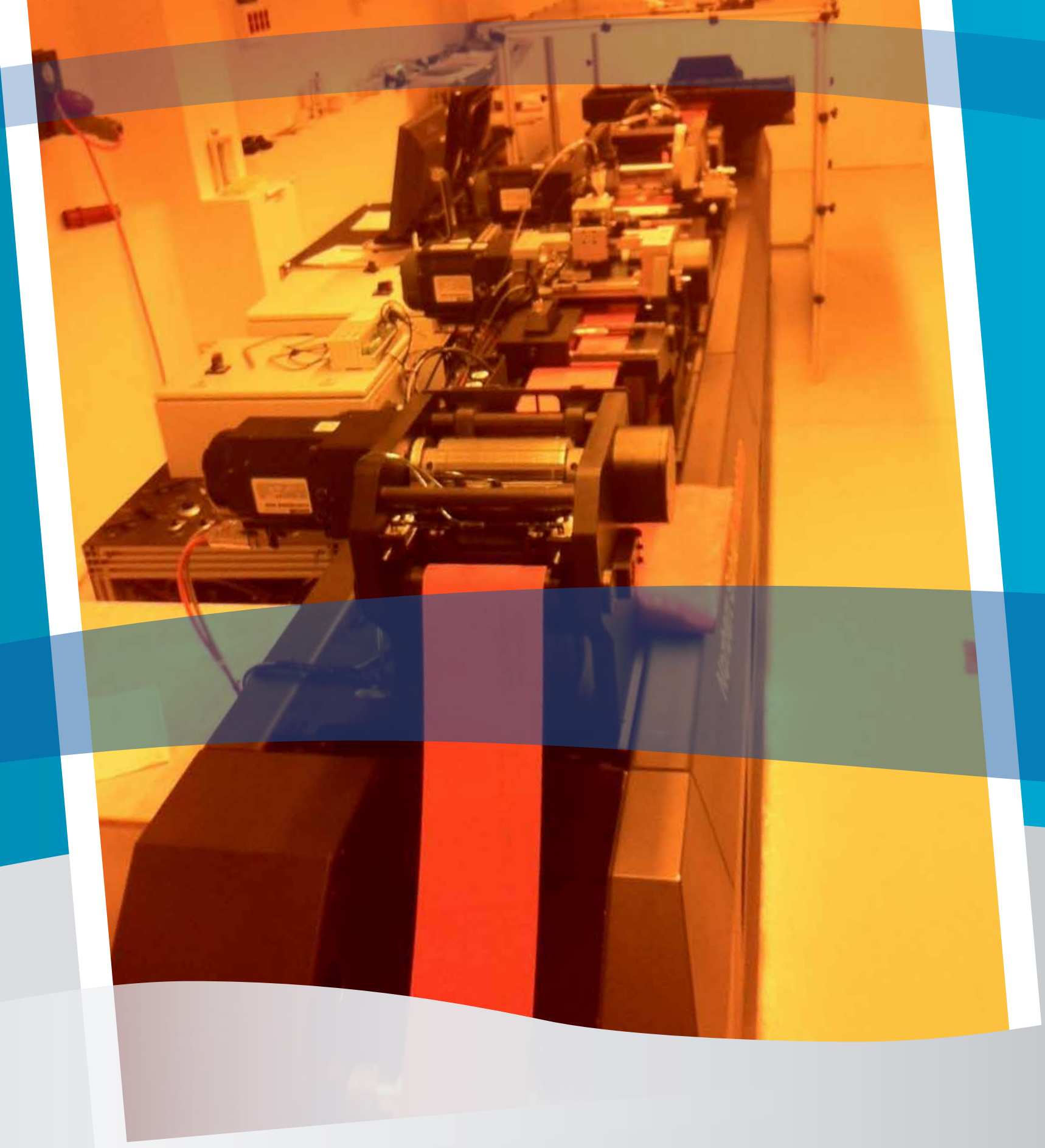
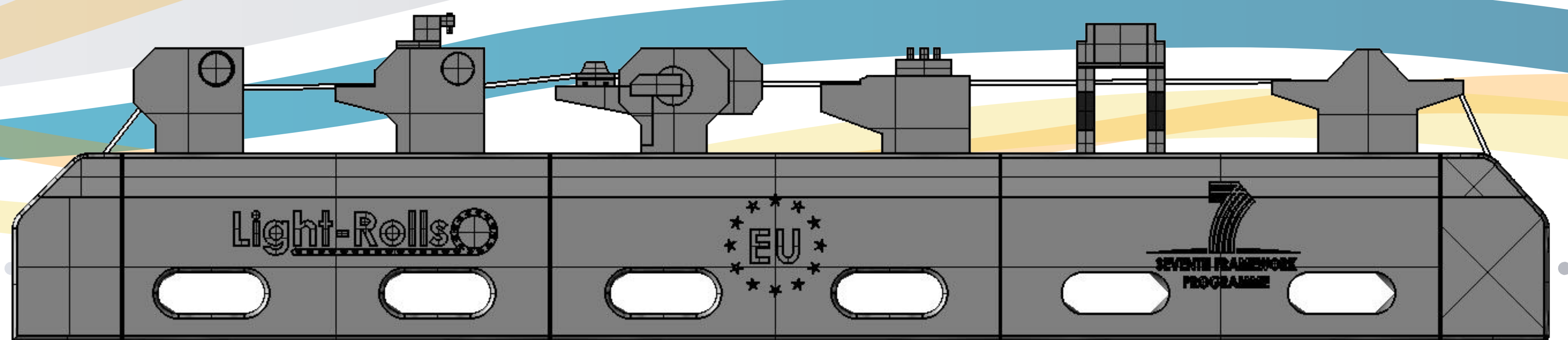


LIGHT-ROLLS: An innovative pilot line for the manufacturing of high added value products



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RMPD® ROTATION TECHNOLOGY:

a patented process technology to generate polymer structures based on a fast generative manufacturing approach.

SELF-ASSEMBLY:

of micro-components based on capillary and adhesive forces.

INKJECT PRINTING:

more flexible product design (crossover and multilayer structuring) allows design changes on production line.

ROLL-TO-ROLL MANUFACTURING:

allows low cost production of flexible products.

PRODUCTION IT:

to monitor and control the overall production line.

ABSTRACT

Micro-products have become increasingly important in the medical, biotechnology, consumer and automotive sectors. However, products in these sectors such as innovative display solutions and light emitting panels require the integration of different functionalities and demand new mass manufacturing methods and technologies.

Light-Rolls is a **novel manufacturing technology pilot line**, integrating highly innovative production modules, based on a roll-to-roll manufacturing concept (process of creating electronic devices on a roll of flexible plastic or metal foil) for the **seamless, high throughput manufacture of micro-structured systems**.

IMPACT

The potential impact of such a project is very large and is related to domains as diverse as **technology, markets** (consumer, bio, health...) **and societal issues**. More generally, Light-Rolls is believed to enable Europe to be a step ahead of leading competitors in the field of micro-manufacturing and its various applications. This will definitely be an important step to **increase European competitiveness** in KET's such as **Advanced Manufacturing, Photonics, Information and Communication Technologies and Nanotechnology** to achieve world class performance in research and innovation.

PRACTICAL APPLICATION

Light emitting panels

Flexible active RFID tags

Smart furniture

Lab-on-a-chip systems

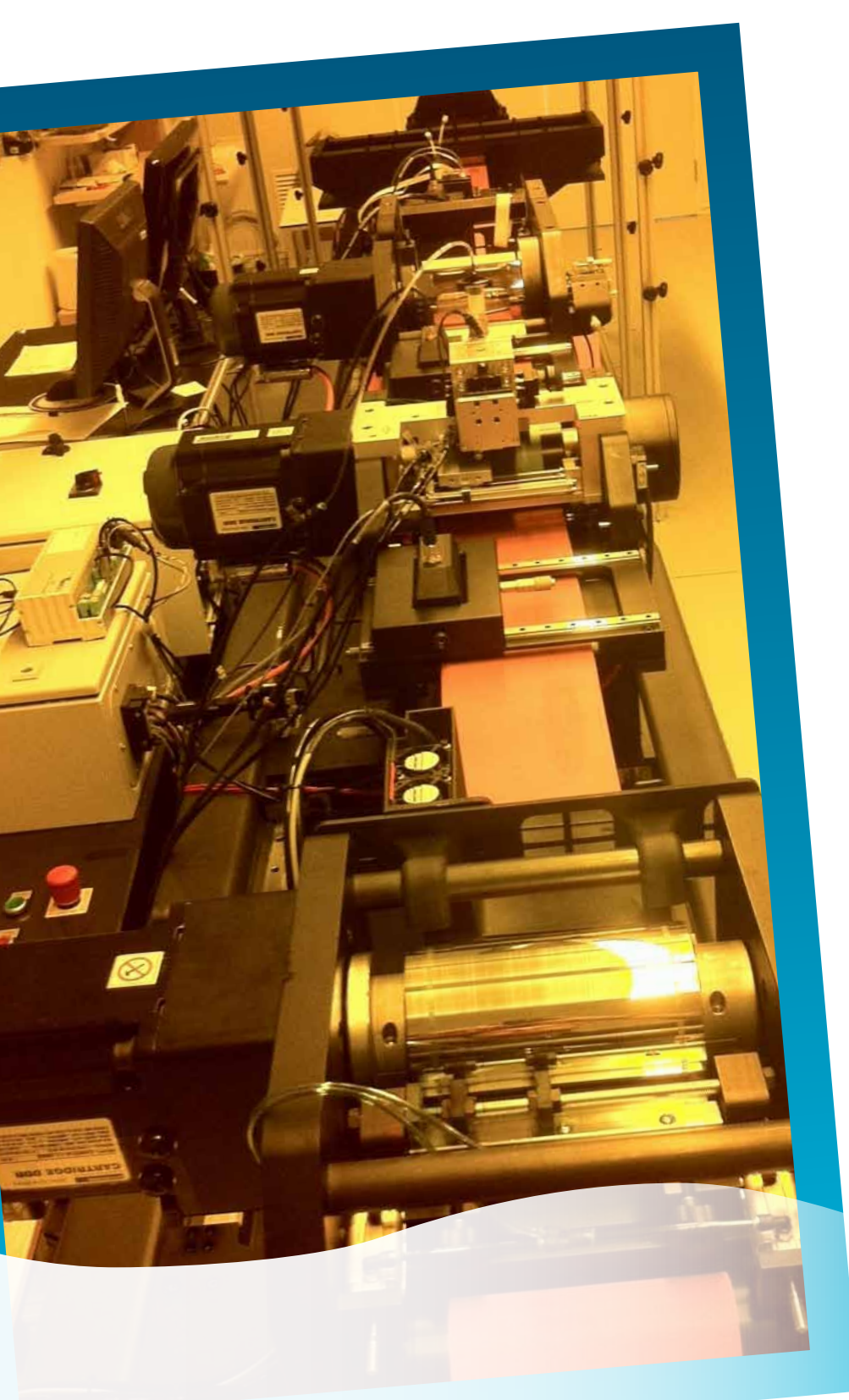
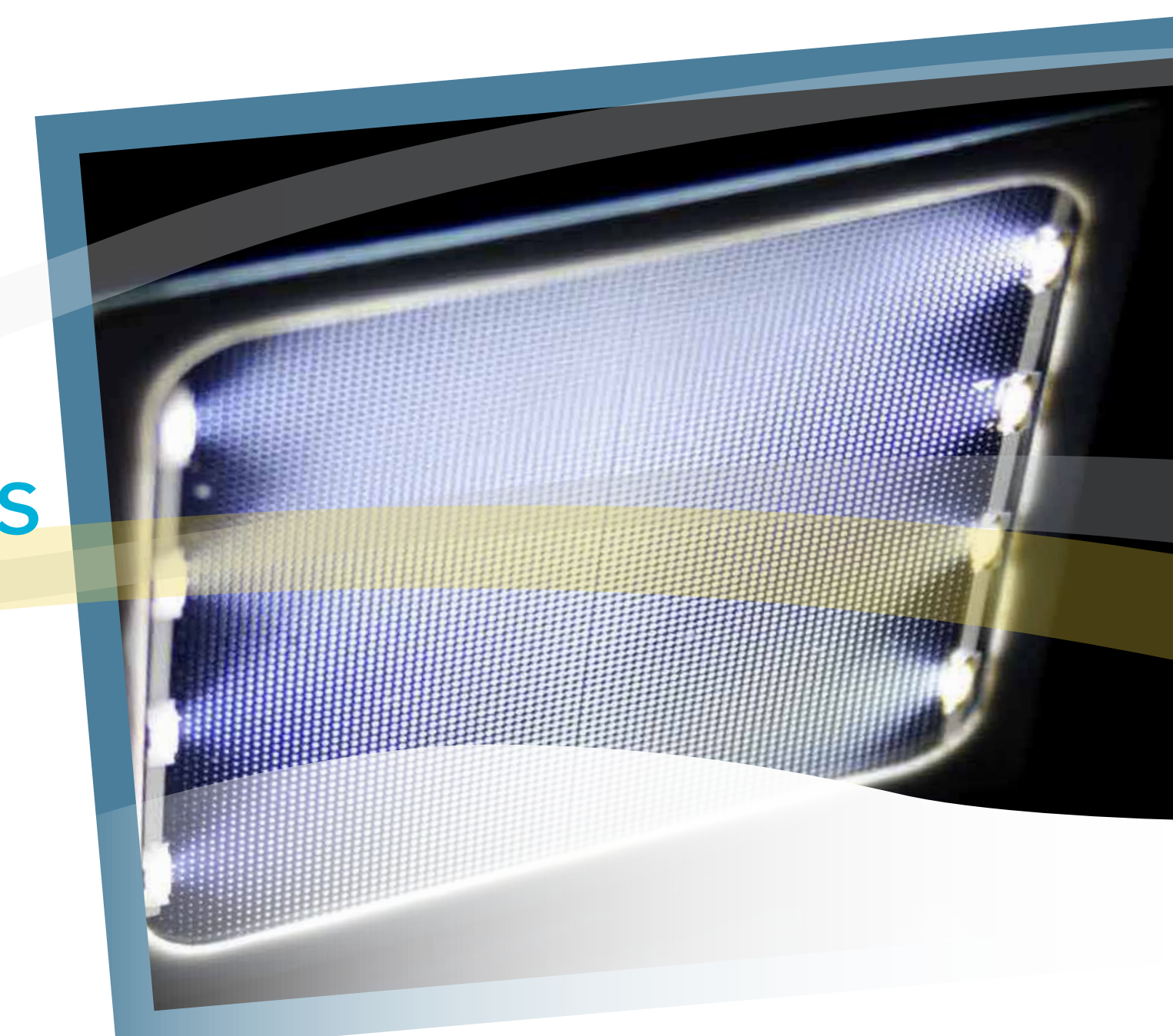
Flexible solar cells, batteries and other micro-energy supplies

Lighter screens and displays

Organic Solar Cell with complex geometries

Smart packaging

Textile-based electronic devices



Light-Rolls

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