



### Flisom's development timeline for technology transfer to production

Roll-to-Roll manufacturing of high efficiency flexible lightweight solar modules

**ETH-Spin-off company** Angel seed investment 1st investment round **Strategic investor: Tata** 

2<sup>nd</sup> investment round **Strategic and Financial investors** 

3<sup>rd</sup> investment round!!

group company

Innovative manufacturing equipment and processes

Installations at new production site: Niederhasli



2007

2009

2011

2013

2015









**ZKB-Technopark Pioneer prize** 

**R&D** and Pilot Line on **EMPA** campus

Scale-up plan 15 MW capacity production plant

Module production **Industrial** scale-up

**R&D** partnership: **EMPA** 



World record efficiency improvements of flexible CIGS solar cells on plastic in Empa's lab

17.8%

18.7%

20.4%



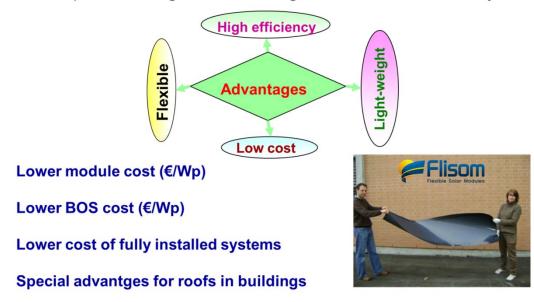




## Unique proprietary technology for multi billion euro market

#### High efficiency flexible CIGS thin film solar modules

Multiple advantages for enabling low cost solar electricity



Global PV market for buildings to grow from 23 GW in 2013 to 35 GW by 2018 and an additional huge untapped market for Flisom's solar modules





## Unique company for low cost and high performance

### Lowest production cost potential:

- > Roll-to-roll manufacturing
- > Compact machine size
- > High speed processing
- > Lower energy consumption

Roll-to-roll coating technology has revolutionised the food packaging industry with very cheap packaging foils

- Flisom- a unique company in the world has developed proprietary components and machines with processes for low cost high performance
- > No company in the world provides manufacturing plant with process know-how for flexible CIGS modules
- ➤ Flisom has unmatched experience and credibility team members holding world records and global leadership











# Flisom's solar modules suitable for diverse applications









Roll-able, laminated on metal sheet, bonded on curved metal sheet, solar roof (integrated on metal sheet) for buildings





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