

# EUROPEAN ENERGY VENTURE FAIR 2005



**flexcell**

smart power. brilliant solutions.

## VHF-Technologies SA

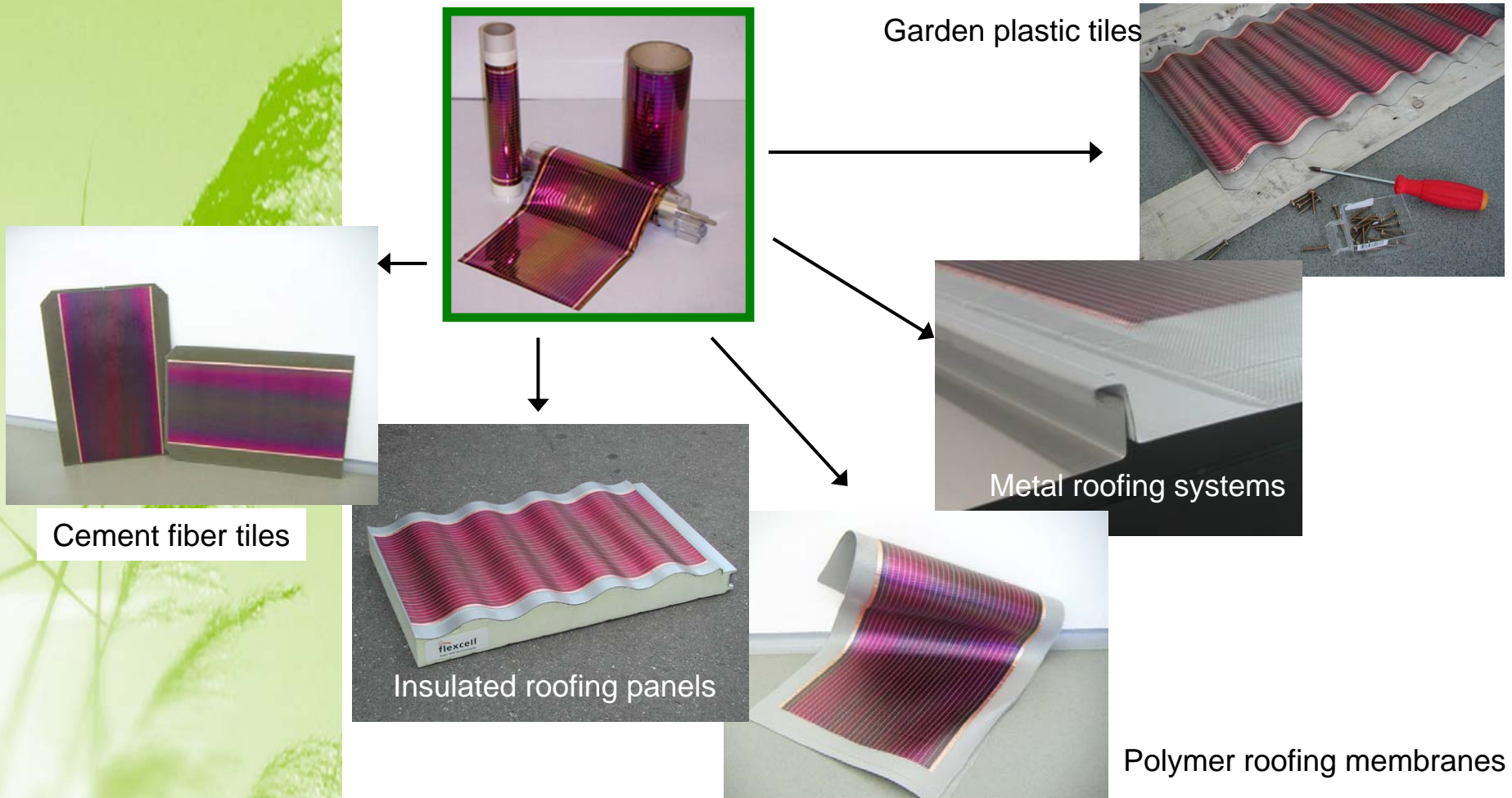
The most innovative photovoltaic company

Alexandre Closset (CEO)

**The European Energy  
Venture Fair 2005**

**September 27th 2005  
Zurich, Switzerland**

# Total merger of PV with roofing components



**VHF is able to realize the aesthetic merger of photovoltaic modules and building components in a cost effective manner**

# Direct cost savings on PV systems



## Today's best PV system price:

Solar module	€3/W <sub>p</sub>
Sub-structure	€1/W <sub>p</sub>
Inverter & cabling	€1/W <sub>p</sub>
<u>Mounting</u>	<u>€1/W<sub>p</sub></u>
<b>Total</b>	<b>€6/W<sub>p</sub></b>

## VHF's price forecast:

Solar module	€3/W <sub>p</sub>
Sub-structure	€0/W <sub>p</sub>
Inverter & cabling	€1/W <sub>p</sub>
<u>Mounting</u>	<u>€0/W<sub>p</sub></u>
<b>Total</b>	<b>€4/W<sub>p</sub></b>

# Existing BIPV demonstration sites (on-grid monitoring)



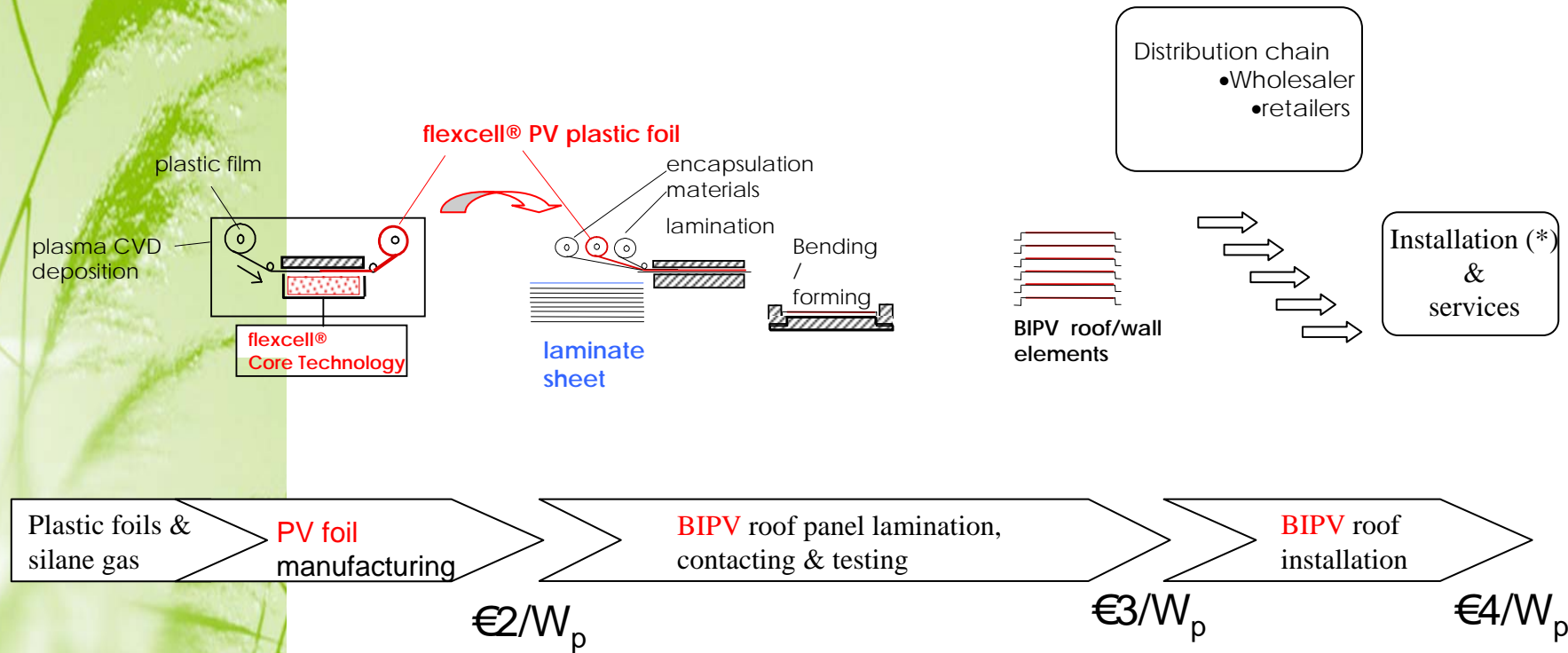
**Exclusive contract just signed with a big solar awning company worth CHF3m over three years!**



# Market segments and value chain

Targeted market segments:

- 1) Ceramic tiles;
- 2) Cement fiber roofing elements;
- 3) Polymer roofing membrane;
- 4) Metal roofing and cladding;
- 5) Rollable solar awning systems

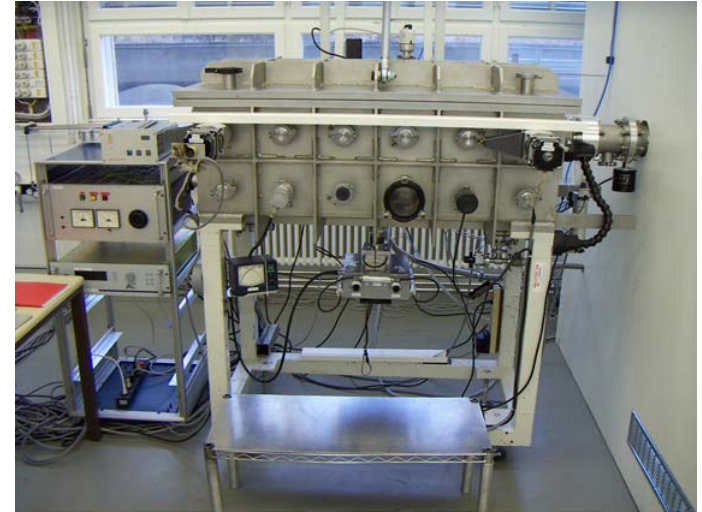


# Manufacturing

Metal & TCO  
electrodes by roll-  
to-roll PVD

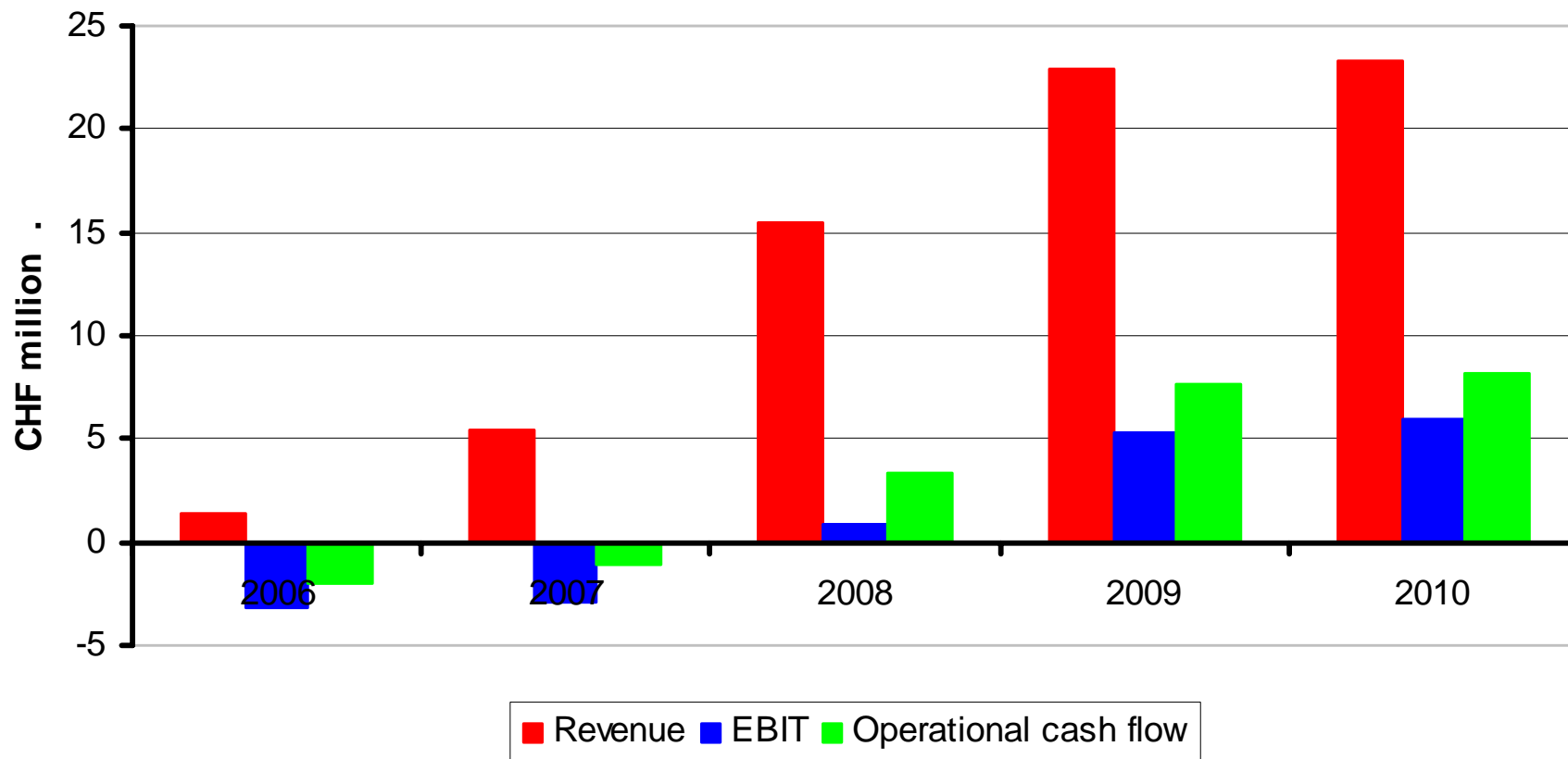
a-Si:H cells by roll-  
to-roll  
VHF-PECVD

Roll-to-roll series  
connection &  
current collection



**Very low material costs, roll-to-roll production, and ease of integration will decrease the BIPV manufacturing costs to  $\text{€}75/\text{m}^2 = \text{€}1.5/\text{W}_p!$  (@ 5MW capacity)**

## Revenue, cash flow and earnings forecast



**Break-even in 2008 and more than CHF20m revenue in 2009**



# Innovative consumer products

***sunpack***



**rollable**



**do not fold**



**weatherproof**



**THANK YOU FOR YOUR ATTENTION**