



BE SMART

Together for Active and Efficient Buildings



The Be-Smart project has received funding from The European Union's Horizon 2020 research and innovation programme under grant agreement No 818009.

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Let's be smart together



2

« Le rôle de la Suisse dans le développement d'une nouvelle industrie BIPV en Europe »

17^e Congrès photovoltaïque national, 26-27 mars 2019, Kursaal Berne

Laure-Emmanuelle Perret-Aebi

Coordinator

Senior Scientist, PV-Lab, EPFL



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Solar-Terra

by Issol

Château d'Auvernier (NE)



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White Solar

by Solaxess

Boudry (NE)



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Project Objectives

The unique and multi-disciplinary consortium of Be-Smart will help break through barriers that have previously held back BIPV implementation by:

- supporting the industrialisation of new materials and processes for the manufacturing of multi-functional BIPV elements by:
 - focusing on cost effective solutions,
 - developing break-through transformative approaches to achieve aesthetic modules,
 - improving manufacturing processes to facilitate targeted cost reductions.
- promoting a stronger market deployment of the new technologies by:
 - developing a business model and exploitation strategy for each key stakeholder of the whole value chain,
 - improving awareness and coordination among the multiple stakeholders involved in a building/renovation process,
 - demonstrating the results of the project through high profile, replicable demonstrators and through the implementation of an innovative communication plan dedicated to experts, such as architects and builders, as well as to a large public audience.



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EPoG - Energy Positive Glazing

A new reference to replace the current BIPV word currently perceived as PV products dominated by low cost Asian manufacturers



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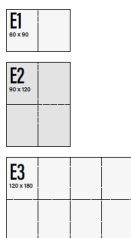
Cost reduction

€/ m²

Up to 50% by 2020

Up to 75% by 2030

(compared to 2015)



Allow a cost reduction of the installed functional EPoG by optimizing:

- ✓ Industrialization process
- ✓ System modularity
- ✓ Technical process
- ✓ Business model
- ✓ etc



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An EPoG is an active element , it creates value!

≠ passiv element

From BIPV to Energy Positive Glazing **EPoG**

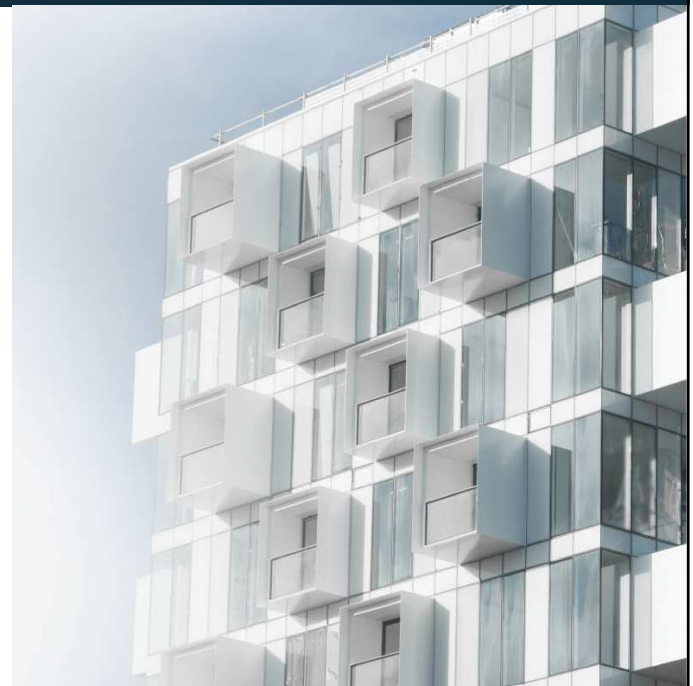


From traditional PV...

to BIPV as Building Envelope Construction Material



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Creation of value

EPoG generates profit:

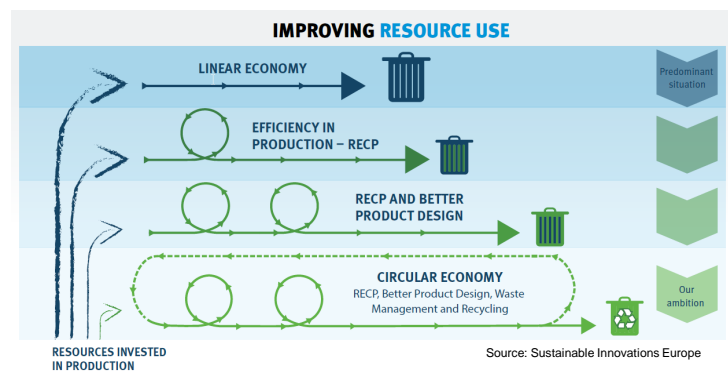
- ✓ as a constructive material (e.g. replacing tiles)
- ✓ as an energy producer (electricity, thermal, accoustic properties)
- ✓ ...

Value means also pay back for the end user:

Situation of today:

- 100% cost for a pay back value define at 10-20 years

- ✓ Supply chain optimisation
- ✓ Efficiency (17% to 25%)
- ✓ Reliability (25 years to 40 years)
- ✓ ...



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Creation of value

Political and legal challenges

- Selling price in the hands of the end user
- Flexibility in the use of the electricity produced
- ...

**Market will change if laws change,
laws will change because the ecosystem changes.**



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EPoG's Benefits

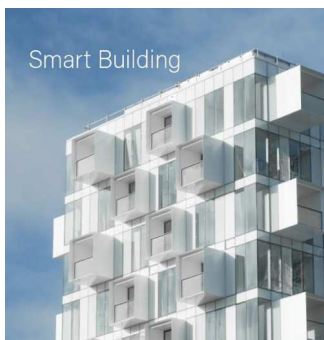
For cities

Through standardising EPoG technologies and offering cost effective solutions, Be-Smart aims to bring PV into the mainstream conscience of policy makers and stakeholders to effectively leverage a reindustrialization of cities across Europe.



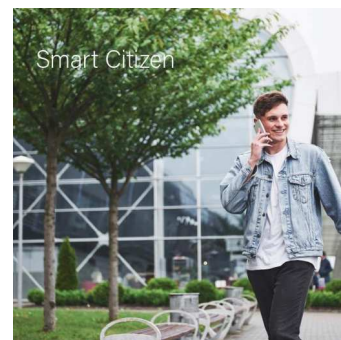
For buildings

By offering substitutes to traditional building materials and performance-enhanced design features, EPoG technology not only offers competitive manufacturing conditions, but an additional and significant ROI through the generation and storage of clean electrical energy once a building is in operation.



For citizen

From building smart cities and buildings to building smart citizens – this is the ultimate shift in consciousness the Be-Smart project hopes to achieve. EPoG will become an integral part of the smart citizen's conscious choice of materials, thereby advancing individual wellbeing and promoting sustainable living in the future.



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kaleo technology by CSEM

Quand l'image
produit de l'énergie

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The Be-Smart Horizon 2020 No 818009.

© Brief communication


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Quand l'image produit de l'énergie


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Be-Smart consortium






















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www.besmartproject.eu

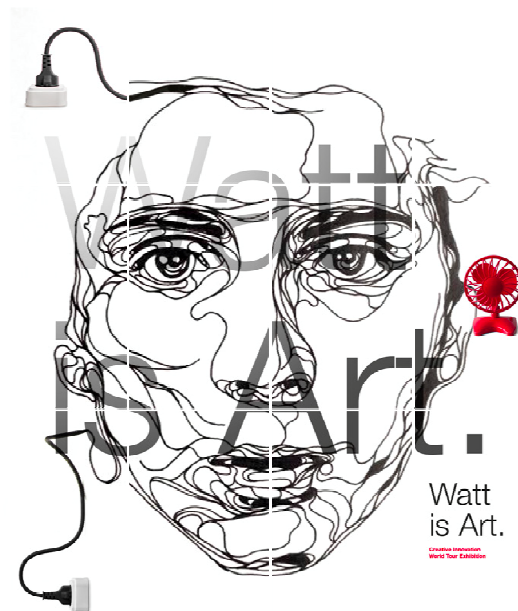
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**Thank you
for your attention.**



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18