



Assessment and Demonstration 5.4

How can we improve the knowledge and technology transfer?

BIPV technology suffers from a lack of visibility and knowledge among the broad public, but also among professionals in the construction field [1]. It is therefore important to raise awareness of the existence and feasibility of BIPV solutions, to create synergies between construction and BIPV stakeholders, and to train architects and engineers on the BIPV theme so they can advise their customers on this yet unknown technology.

Several communication vectors have been set up in recent years as part of the ACTIVE INTERFACES project in order to improve knowledge and technology transfer. This knowledge transfer must be done with the stakeholders of the building industry, so they can deal with this new technology, but also so that suppliers can offer them the most adapted solutions.

Keywords: Communication; Education program; Public event; Press release.

Target audience: Regulation makers; Owners & other decision makers; Architects & engineers; Suppliers & companies; Broader public.

Major stakeholders and communication vectors

The knowledge and technology transfer is targeted towards 6 major stakeholder groups:

- Legislation and regulation makers at federal, cantonal and communal level;
- Owners and other decision makers along the value chain;
- Architects, engineering offices;
- Suppliers, integrators, construction companies;
- Scientists and researchers in the concerned fields; and
- The broader public.

In order to optimize communication strategy impact, different types of communication vectors are activated for each group: open access website, public event and written publications (Fig. 1).

Vector	Legislations, regulations makers	Owners and other decision makers	Architects, engineering offices	Suppliers, integrators, companies	Broader public
1. Open access website	♦	♦	◆	◆	♦
2. Public events					
a) Conferences			◆	◆	
b) Knowledge Transfer Platform			◆	◆	
c) Higher and Continuing education			◆	♦	
3. Written publications					
a) Scientific publications			◆	♦	
b) Printed version of results	◆	♦	◆	♦	
c) Professional press releases	♦	♦	◆	◆	
d) Non-specialized press releases	◆	◆	♦	♦	◆

Fig. 1 Types of vectors activated for each group ◆ Major target group ♦ Secondary target group (©EPFL-LAST).

Regional public events & conferences

In the last few years, partners of the ACTIVE INTERFACES project have organized events with the aim of presenting research on new BIPV technologies, but also on BIPV architectural integration strategies and market studies:

- Abend der Wirtschaft 2014 Das solare Gebäude im System, Lucerne (LU), 2014
- Workshop Lifetime and Reliability issues in PV, Manno (TI), 2015
- 3ème Conférence Zéro Carbone, Fribourg (FR), 2015
- 17ème Forum Ecoparc, Neuchâtel (NE), 2017
- Workshop "Community Solar as a Business Opportunity for Municipal Utilities", St. Gallen (SG), 2018.

The progress of research work around BIPV is frequently presented at regional or national conferences, such as : National Photovoltaic Congress, Advanced Building Skin Conference, CISBAT Conference, Bau+Energie Messe and International Sustainable Built Environment (SBE) series Conference.

Working group on BIPV

A working group on the BIPV theme has been set up as part of the activities of the Building Innovation Cluster in Fribourg [2]. This initiative allows professionals in the fields of construction and BIPV to connect, in order to increase participants' visibility with potential customers or partners and create a dialogue between construction stakeholders and BIPV suppliers so that the latter can assess constraints and challenges and propose the most appropriate solutions for the market. These meetings are also an opportunity to introduce participants to some BIPV installations during site visits and thus promote the dissemination of BIPV through examples.

Technology transfer and product development with industry

A collaboration with Glas Trösch, the Swiss leader in glass processing, has led to the development of a new product, called Swisspanel Solar. This is a digital printing glass optimized for PV applications that can be supplied to any PV module manufacturer. Full commercial application has been allowed through the support of the Technology Transfer company ÜserHuus. This product used was publicly launched during SWISSBAU 2018, the largest building fair in Switzerland [3], accompanied by a press release [4]. In parallel, testing for international certification is underway, financially supported by ÜserHuus and following our research partner SUPSI's research findings on compliance with the latest technological standards.

Professional education program

Architects, PV manufacturers and planners who want to learn to create colored PV modules can attend a new professional education course at HSLU [5]. They learn about the meta-c-print method, experiences shared from Swiss research colleagues, product developers, and makers of pilot and demonstration projects, and can manufacture their own PV module at CSEM/EPFL labs. The course is supported by EnergieSchweiz and integrated into the Swissolar/SIA course system.

Summary sheets

The present summary sheets have been written with the aim of synthesizing and structuring the results of the research carried out by all partners in the project. They are intended for different target audiences, depending on their topic and level of detail, and guide the interested reader to more specific content or contact persons.

References

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- [2] Building Innovation Cluster website: <http://energie-batiment.ch/>
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- [4] Photovoltaik wird bunt. SWISSPANEL SOLAR: Mehrfarbiger Digitaldruck auf Photovoltaik Glas. <https://www.glastroesch.ch/swissbau-2018/pressemitteilungen/pressemitteilung-swisspanel.html>
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Contact person

Stephen Wittkopf | HSLU-CC-EASE | stephen.wittkopf@hslu.ch