## NRP 70

# **Building and settlement**

## Joint project: Building integrated photovoltaics | ACTIVE INTERFACES

## Overview

Holistic operational strategies crossing over the obstacles for large-scale PV integration into urban renewal processes

		U1 period A		
Identification of obstacles		owner D fabric G 	U2 period B owner E	U3
	J			period C owner F fabric I

	Urban context		
	U1	U2	U3
m (			



Bringing changes into practice

DETAILED

RECOMMENDATIONS

BLOG



#### **Background and objectives**

In spite of technological advances and economic developments of photovoltaic products, only a small portion of the solar electricity potential is currently being exploited in urban areas. Only a clear identification of the operational barriers restricting the implementation of Building Integrated Photovoltaics (BIPV) into renewal processes and the development of holistic strategies can lead to a relevant contribution and a precise prioritisation of the efforts. The main objectives include:

- Identification of the technological, architectural, socio-economic and legal barriers
- Development of alternative and innovative approaches in line with

#### Main partners



coherent holistic strategies – from industrial production to implementation by end users

 Formulation and implementation of concrete recommendations addressed to 1) legislators and regulators, 2) owners and other decision-makers along the value chain 3) architects, engineering offices, 4) suppliers, integrators, construction companies.

## Subprojects

COODINATION AND MANAGEMENT	Umbrella Project   Holistic operational strategies crossing over the obstacles for a large-scale advanced PV integration into urban renewal processes <b>LAST - Emmanuel REY</b>				
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	Project 01   Holistic strategy for PV adapted solutions embracing the key technological issues <b>PV-Lab</b> , CSEM, SUPSI, HSLU Christophe BALLIF	Project 02   Holistic strategy for BIPV adapted solutions in urban renewal design processes LAST, LIPID, PV-Lab, CSEM Emmanuel REY	Project 03   Holistic strategy to identify the real operational obstacles for a large use of BIPV in the Swiss urban context <b>IWÖ</b> , LAST, PV-Lab Rolf WUESTENHAGEN		
DISSECTING OPERATIONAL ISSUES	Technological issues	Spatial issues ↓	Socio-economic issues ↓		
ARCHETYPAL SITUATIONS + IN-DEPTH CASE STUDIES	Technological solutions	Spatial solutions	Socio-economic solutions URBAN CONTEXT: NEUCHÂTEL		
	$\downarrow$	$\downarrow$	$\downarrow$		
ASSESSMENT	Project 04   Holistic strategy to simplify assessment, norms, standards and certifications for BIPV elements <b>CC EASE</b> , LIPID, SUPSI, ETH IBI, econcept AG - Stephen WITTKOPF				





## **Energy Turnaround**

The ambition of the ACTIVE INTERFACES project is to bring a relevant contribution to the "Energy Strategy 2050". To reach the energy vision of the Confederation, 10 GW of PV is required. In that perspective, through a holistic approach - from industrial production of photovoltaic building elements to implementation by the end users (house owners, architects, public authorities) - the project will develop operational strategies crossing over obstacles for large-scale advanced BIPV integration into urban renewal processes.

Urban renewal in Swiss cities and urban agglomerations simultaneously reduces end energy consumption, promotes the use of renewable energy and cuts CO2 emissions.



BIPV will directly help to offset the loss in electricity production from nuclear energy by increasing the use of renewable energy while maintaining an acceptable balance between the conservation and use of financial resources. It has attractive potential in terms of transferability and could have positive repercussions for urban, architectural and constructive design practices.

### Contact

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National Research Programmes NRP 70 «Energy Turnaround» and NRP 71 «Managing Energy Consumption» | Kick-off Meeting Luzern, 24 April 2015