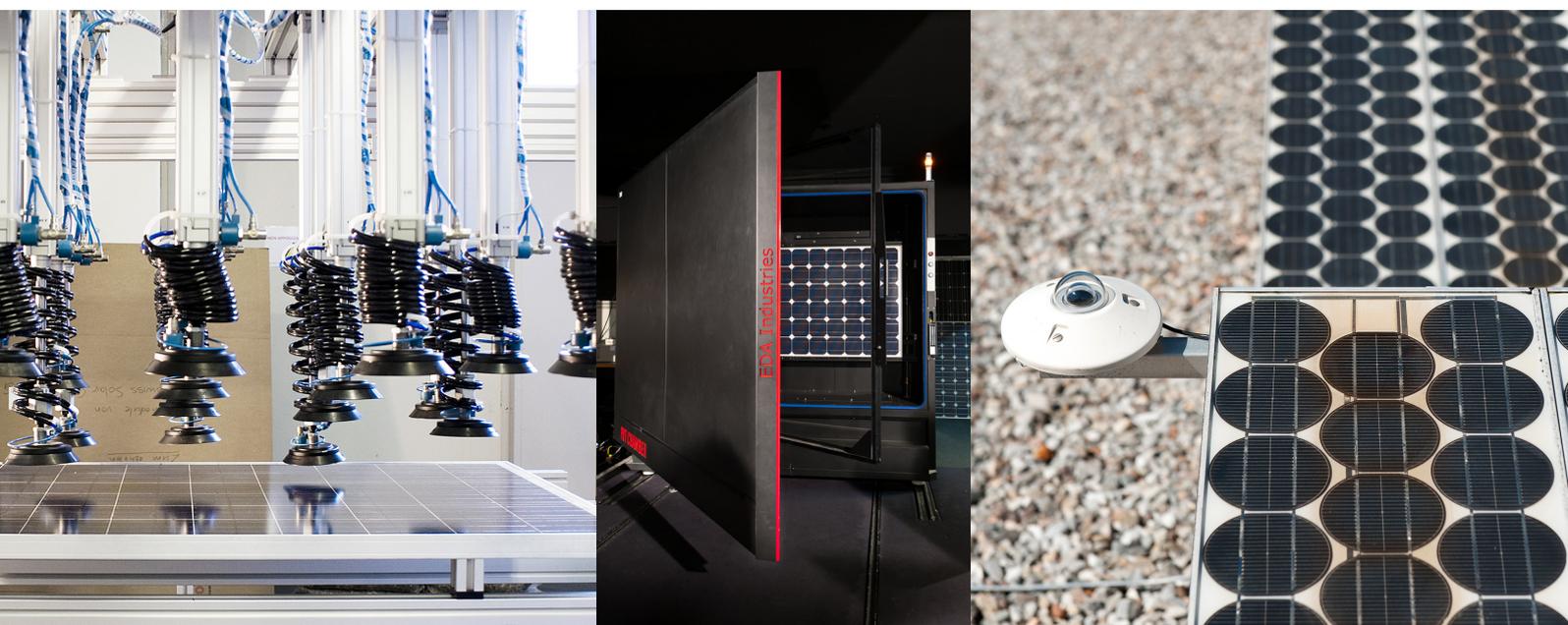


SUPSI

# We support you with quality



Your partner to guide  
you through all the  
PV project phases

# 30 years of photovoltaics history in Switzerland

From the first grid connected PV Plant in Europe to the Swiss test laboratory for photovoltaic modules and the BIPV Competence Centre.



Photovoltaic research at the Institute for Applied Sustainability to the Built Environment (ISAAC) started more than 30 years ago with the installation of the first grid connected photovoltaic plant in Europe. From the passionate work of few researchers a modern and international institute has grown.

Research is a main topic for ISAAC: the cooperation with national and international institutes and industry partnership puts the basis for the continuous improvement in know how.

The PV area is organized in 2 branches: the PV modules group (which includes the ISO 17025 accredited Swiss PV Module Test Centre) takes care of all the needs of customers in terms of PV-module testing, from quality checks to complete IEC certifications, the PV systems group (which hosts the BIPV competence centre) is focused on system level and supports customers through all the phases of a PV project, with particular emphasis to architectural integration.

## PV modules Swiss PV Module Test Centre

The SWISS PV Module Test Centre offers a wide range of services for R&D. Activities on PV modules have developed continuously starting with the TISO plant in 1982 and reaching in 2001 the important milestone of ISO 17025 accreditation for indoor measurement. In 2010 the accreditation was extended to the complete IEC 61215/61646/61730 sequence with the Swiss PV Module Test Centre, founded to support the growing photovoltaic industry with the most up to date instruments, to fulfill both R&D and market needs.

### We offer:

#### - Indoor testing:

- Power measurement (Class A+ flasher)
- Spectral response measurement
- Temperature coefficients determination
- Power determination under different irradiances
- Controlled light soaking (steady state simulator)

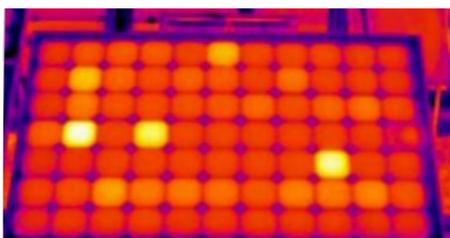
#### - Outdoor testing:

- Energy yield measurement
- Nominal Operating Cell Temperature (NOCT) determination
- Light soaking under real operating conditions

#### - Reliability Testing:

- Mechanical load test for wind load and snow load verification up to 10000 Pa
- Hail test up to 50mm/110kmph
- Environmental testing: thermal cycling, Humidity and Freeze test, Damp Heat test, UV test
- Electroluminescence and IR photography

The SPVMTC is an ISO 17025 accredited laboratory and IECCE Certification Body Test Laboratory for Electrosuisse, the Swiss National Certified Body.



# PV systems

## BIPV Competence Centre

The Swiss BiPV Competence Centre was created in 2005 within the Institute for Applied Sustainability to the Built Environment (ISAAC).

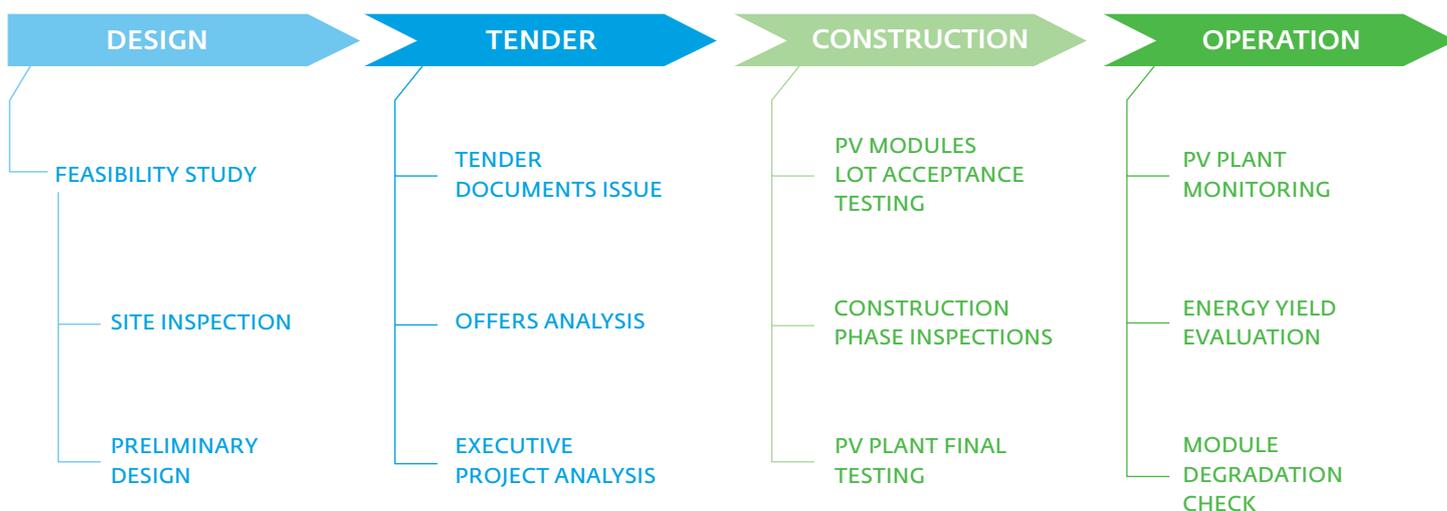
It aims to combine the competences of the department of Architecture of the University of Applied Sciences and Arts of Southern Switzerland (SUPSI) with those of ISAAC, offering a new and appropriate approach to photovoltaics for architects. Applied research, training and professional advice are the pillars on which founds its activities.

The [www.bipv.ch](http://www.bipv.ch) website is one of the communication means of the Swiss BiPV Competence Centre. Here you find essential information concerning PV technology integration in buildings and project examples both in Switzerland and abroad. Moreover, you can consult the official list of PV modules and fastening systems that allow the setting up of an integrated PV plant.

### We offer

- Planning and advice for PV systems
- Feasibility studies with latest simulation software
- Outdoor measurements (energy output, thermal characterization)
- PV modelling
- Support for the development of new BIPV products
- Project planning and support for all the project phases: see graph below.

Project planning and support for all the project phases



BIPV systems planning and feasibility study



CAD tools for architects and designers



Water resistance test for roof elements

# SUPSI – Electrosuisse: Swiss PV Quality certified

Scuola universitaria professionale  
della Svizzera italiana

## SUPSI

electrosuisse >>>

SUPSI has always been distinguished by an enthusiastic team with passion for new challenges, leading to several accomplishments. Winner of the Swiss Solar Prize in 2001 and 2005 with pioneer PV technology plants and of the Solar Industry Award in 2012 for the development of the DragonBack® measurement method in cooperation with Meyer Burger, SUPSI has extended its experience thanks to partnerships with the most important European laboratories.

The R&D activities range from module technology to system level, passing by sustainable mobility and smart grid applications.

Electrosuisse is an association founded in 1889 representing Swiss economy in the field of electrical engineering, in the international standardisation and certification bodies. It runs the ESTI Federal Inspectorate for Heavy Current Installations on behalf of the Federal government.

SUPSI and Electrosuisse have signed a common agreement to cooperate in the field of Photovoltaics: Electrosuisse will extend the National Certification Body scope to photovoltaics (IEC 61215, 61646, 61730-1/2), SUPSI will become the Electrosuisse Certification Body Test Laboratory with the Swiss PV Module Test Centre.

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