





Organized by US DOE:  
2002/2011 in Washington DC  
in Irvine CA in 2013/2015



Organized in Datong China in  
2013 & 2015  
In Cali Colombia in 2015



SOLAR DECATHLON  
LATIN AMERICA & CARIBBEAN 2015  
CALI - DECEMBER

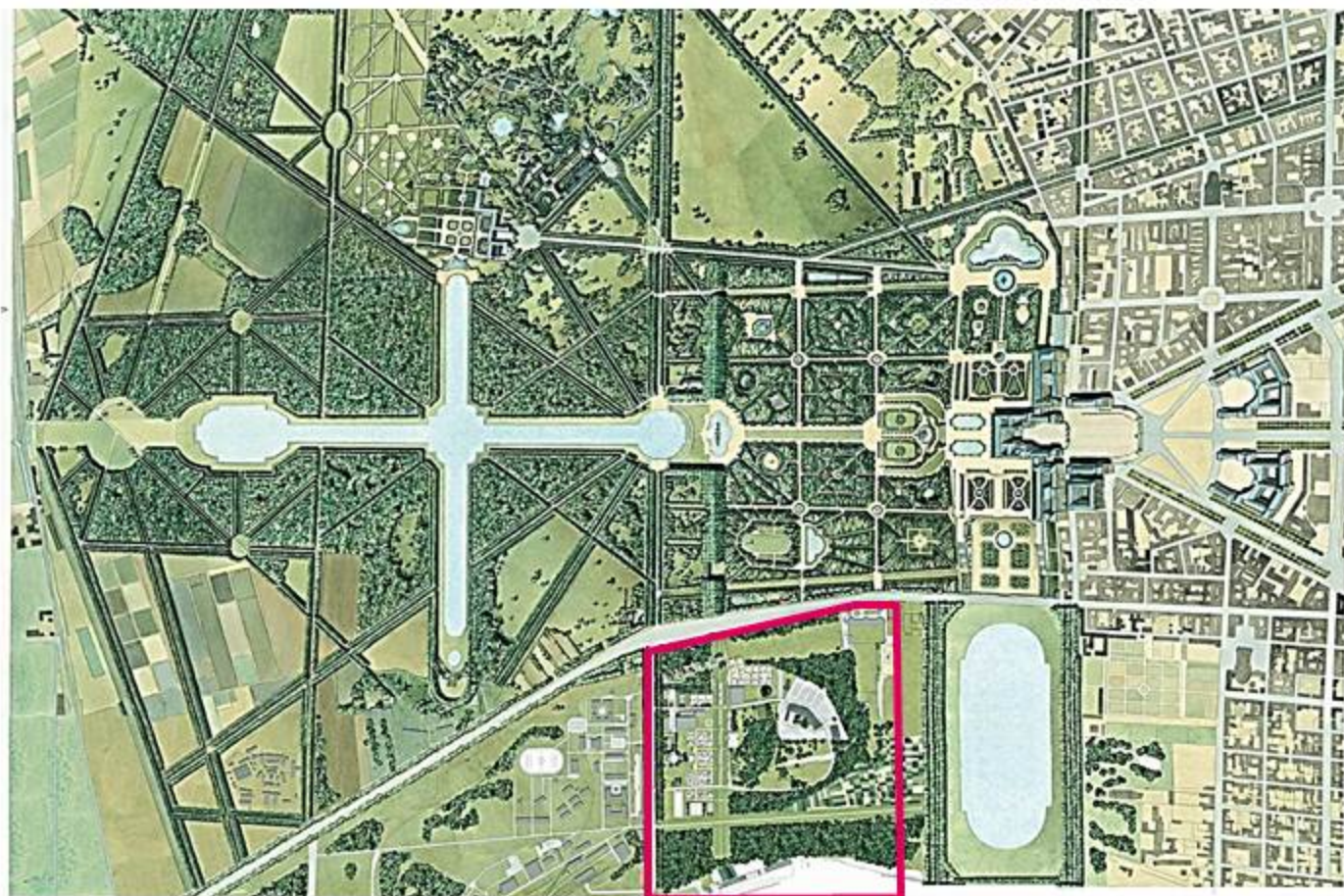




SDE 2010 & SDE 2012  
organized by the Spanish  
Government  
& University of Madrid  
(UPM)







SDE 2014 en France  
Organized by the French  
Government & CSTB.

Ministry of Housing  
Ministry of Environment, Sustainable  
Development & Energy  
Ministry of Culture  
Ministry of Higher Education &  
Research



## CSTB: A COLLABORATIVE PLATFORM FOR INNOVATION IN SUSTAINABLE CONSTRUCTION

### 4 key activities

Scientific excellence  
at the European  
and international level.



Scientific and technical  
expertise in the field  
of innovation  
and prospective.

Supporting the professionals  
through knowledge  
dissemination  
and training.

The impartiality of CSTB  
makes it a reliable partner  
for economic players and  
public authorities.

### key figures

A group of  
**1,000**  
staff

Over  
**3,000**  
associated  
experts

**M€ 105**  
turnover



**CSTB: PARTNER OF THE EUROPEAN RESEARCH NETWORKS**

Bringing together 210 public and private organisations, CSTB acts as Secretariat General for :

- **ECTP** - European Construction Technology Platform
- **E2BA** - Energy Efficient Buildings Association

ECTP and E2BA develop roadmaps for European research in construction and energy efficiency



2 news feeds :

- European Construction : <http://www.ectp.org/enewsportal>
- Call for proposals : <http://euro-rdt.cstb.fr/gb/>



VERSAILLES  
SOLAR DECATHLON  
EUROPE 2014

La Cité du Soleil®:

27 solar prototypes

- 20 in competition
- 2 in exhibition
- 5 in demonstration

Electrical energy balance of the  
competition quarter from June 30-  
204 to July 11-2014:

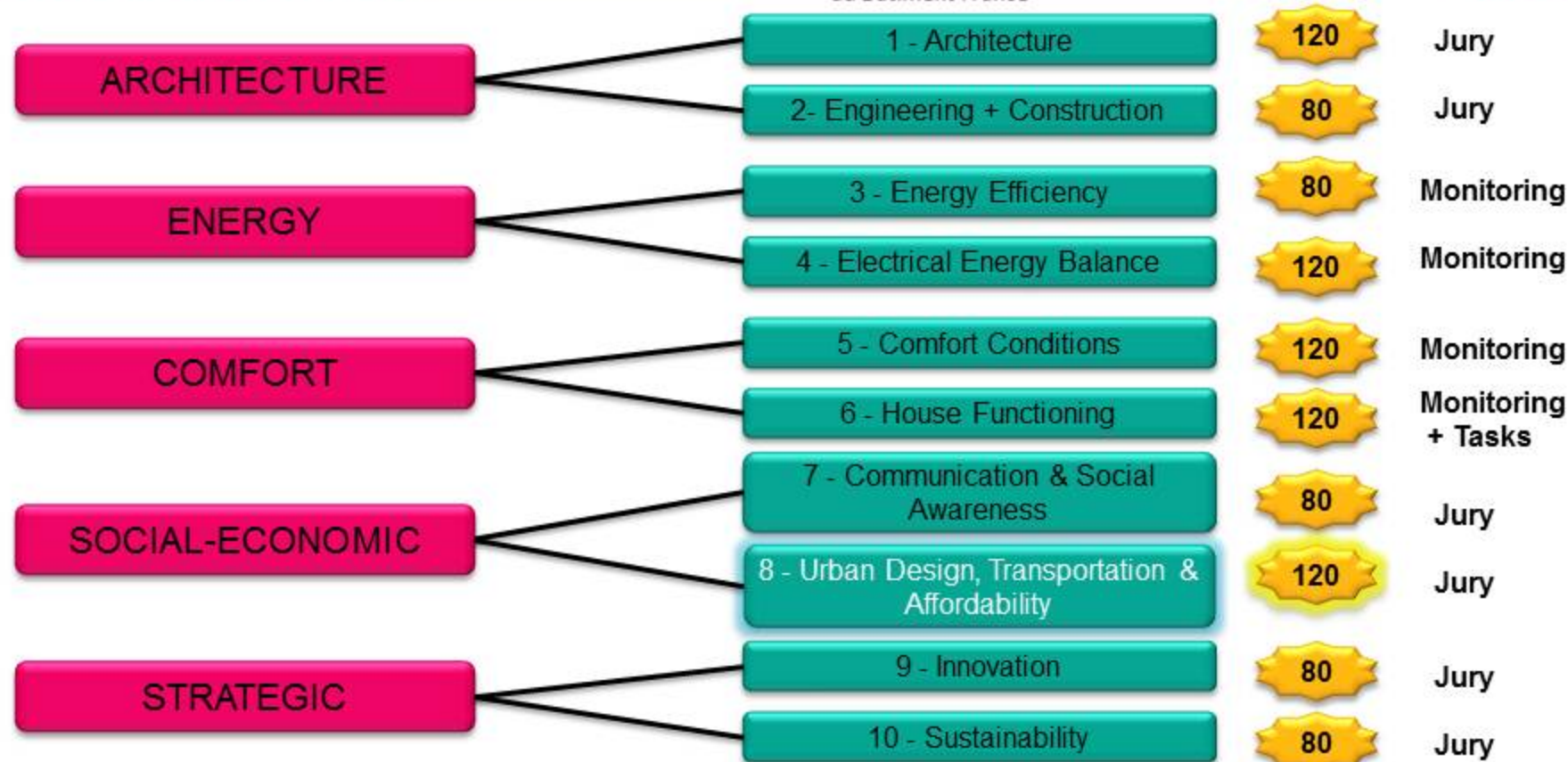
981,76 kWh

With each new edition, an evolution in the regulations helps refining the requirements that must be met by the projects.

The rules of Solar Decathlon Europe 2014 addressed the following themes:

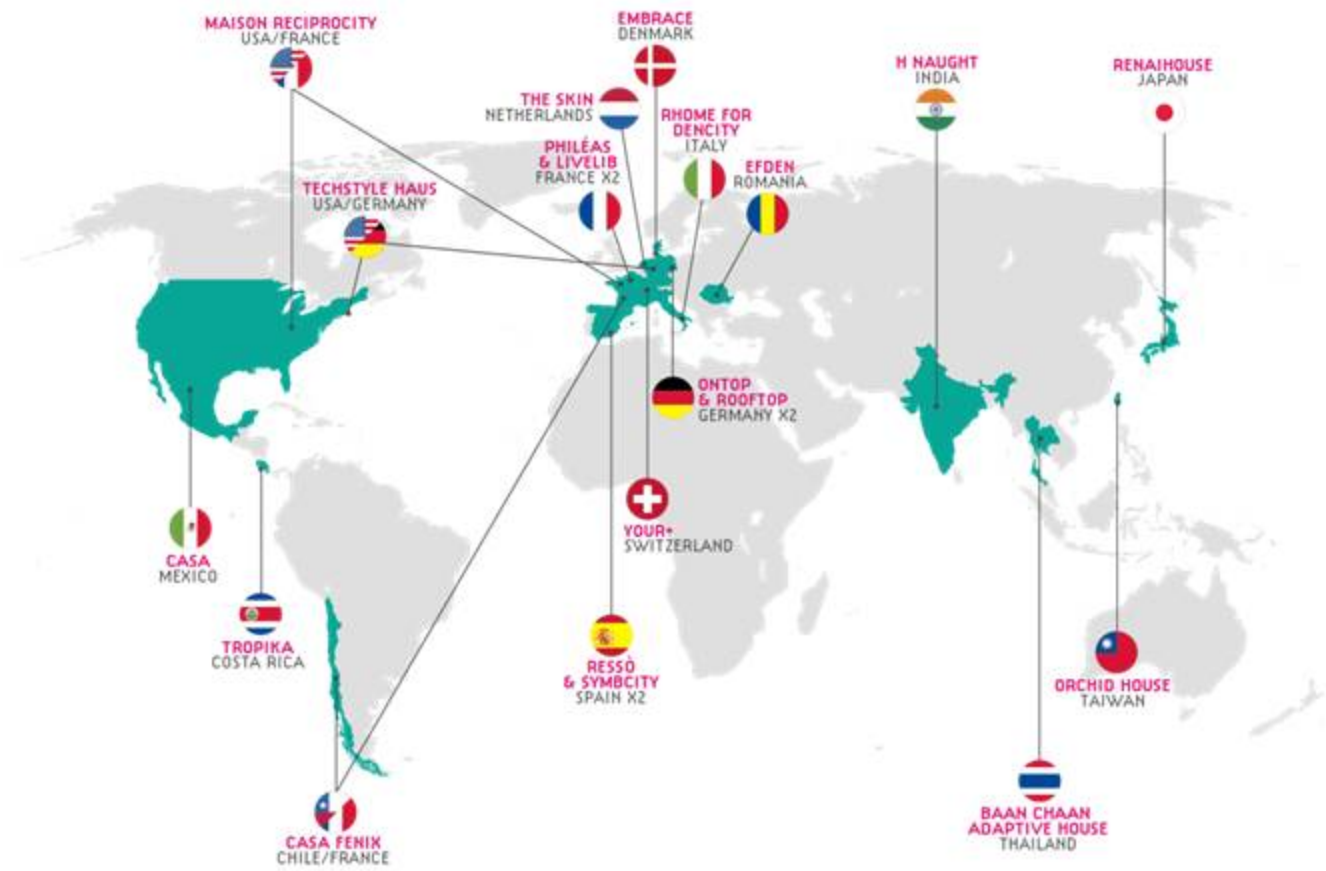
- 1 Density
- 2 Mobility
- 3 Sobriety
- 4 Innovation
- 5 Affordability
- 6 The project in its environment





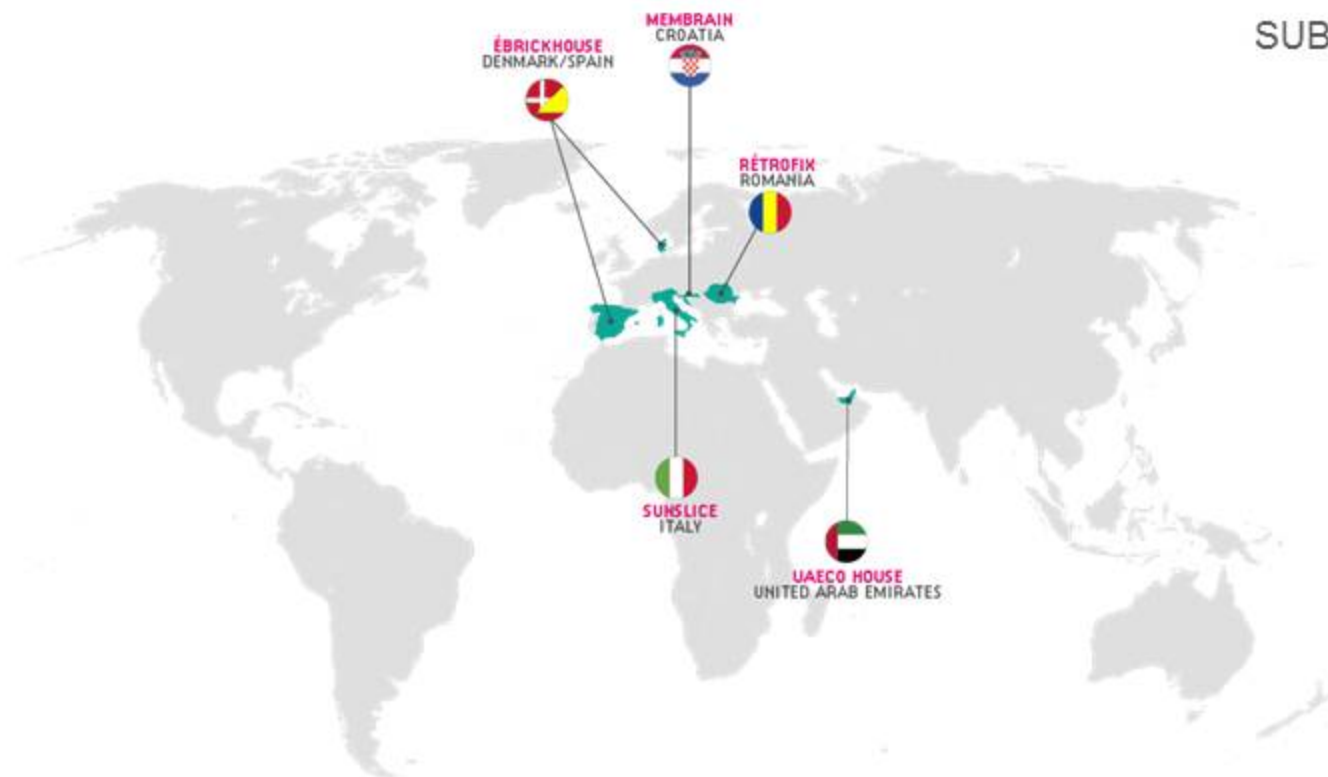
1000 pts

OFFICIAL  
TEAMS





## SUBSTITUTE TEAMS



## Facing major natural threats

floods, typhoons,  
earthquakes

[KMU]



[FNX]



[CUJ]

[MEX  
]tsunamis  
drought & water shortage

## Facing human contemporary evolutions

demographic  
expansion & urban  
high density,  
aging population

[TEC]



[SHU]



[UNI]

[MEX  
]colonizing new  
territories,  
urban sprawl

building on top, innovation

## Re-energizing Old Europe

sharing, community



[REC]



[DTU]



[DEL]



[ROF]



[OTP]



[ATC]



[ROME]

[BUC  
][PLT  
]

[BAR]



[LUC]

sustainable tent,  
passive & selective  
membrane

## Inventing new housing typologies

reinterpreted row houses,  
plug-in city

[INS]



[REC]



[PAR]



[UZG]



[EVU]



# General Scoring





Università de Roma III - Italia  
Rhome for Dencity in Roma

Proposal for new collective buildings in Tore  
Fiscale District (South-East of Rome). The  
prototype represents an apartment on the  
top floor.

1<sup>st</sup> Prize overall ranking- 840,64

- 1<sup>st</sup> Prize House Functioning
- 2<sup>nd</sup> Prize in Architecture
- 3<sup>rd</sup> Prize in Innovation
- 5<sup>th</sup> Prize in Sustainability
- 5<sup>th</sup> Prize in Comfort Conditions
- 7<sup>th</sup> Prize in Energy Efficiency
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- 11<sup>th</sup> Prize in Urban Design (UDTA)
- 13<sup>th</sup> Prize in Electrical Energy Balance







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### Atlantic Challenge. France Phileas in Nantes

Proposal for the retrofitting of Cap 44, an historical Landmark on the Loire River bank, within an urban renewal project based on urban agriculture. The prototype represents an apartment + greenhouses on the top floor.

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Fig 45. Phileas sequence





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University of Delft, Netherlands  
House with a skin - Honselersdijk

Proposal for the retrofitting of a typical Dutch row house. The prototype represents Dennis house (member of the team).

3<sup>rd</sup> Prize overall ranking – 837,87

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University of  
Berlin, Germany  
Roof Top in  
Berlin

Proposal for the  
retro fitting of a typical  
roof top in Berlin. The  
prototype represents  
an additional module  
set on top of an  
existing building. The  
Roof Top module  
provides a penthouse  
with a view on Berlin  
roofs.

4<sup>th</sup> Prize overall  
ranking – 823,42





University of Applied Sciences & Arts  
Lucerne, Switzerland  
"Your+" in Lucerne

Proposal for a new housing type in a collective  
building in Lucerne. The prototype is a  
manifesto pavilion about SHARING as a  
solution for sustainability in Switzerland

5<sup>th</sup> Prize overall ranking – 804,75





Universidad técnica Federico Santa  
María de Valparaíso + Université de  
La Rochelle.  
Chili/France  
Casa Fénix- Emergency House

Proposal for a positive energy post-earthquake  
house implemented in three phases:

- 3 days: emergency module
- 3 months: comfort module
- 3 years: completed house + Villa Fénix

6<sup>th</sup> Prize overall ranking – 802,42

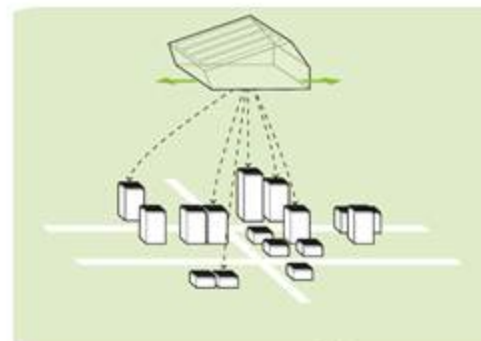




University of Applied Sciences  
Francfurt. Germany  
On Top in Stuttgart

Proposal for the retrofitting of a typical existing  
collective building on Mouson Strasse in  
Stuttgart. The prototype represents an  
additional module set on top of the existing  
building. The OnTop module works as a  
symbiote with the existing building.

7<sup>th</sup> Prize overall ranking – 793,71





## Chiba University, Japan Renaihouse in RikuzenTakata

Post-disaster proposal for the Fukushima area hit by Oct 11-2011 tsunami. The prototype represents a minimal house made of three "urban seeds" prefab modules.

11<sup>th</sup> Prize overall ranking – 774,09



**SWISS** - set "Urban Seeds"

concept of "Urban Seeds" consists of three modules with an integrated heating system. Japanese, Swiss, Swedish, garage to have arranged situation in **horizontal** way.

**FINLAND** - expand "Urban Seeds"

change its structure as to create further the variety of modules in high and low. **Swedish** space as well as **Swedish** light connected to other urban **modularity**.

**INDIA** - connect "Urban Seeds"

continue being in **vertical** efficient city which creates social grouping in **horizontal**, building community and opening heating program.







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11<sup>th</sup> Prize overall ranking – 774,09





Rhodes Island School of Design +  
Brown University, USA  
+ Fachhochschule Erfurt, Germany  
TexStyleHouse in Bois-Buchet

Proposal for a new type of students sustainable  
housing made of textile for the Domaine de  
Bois-Buchet in France

14<sup>th</sup> Prize overall ranking – 657,46



## FOSTERING INTERNATIONAL YOUNG TALENTS

CSTB  
SOLARSOLAR  
VERSAILLES  
SOLAR DECATHLON  
EUROPE 2014

## Solar Decathlon 2014

An annual competition challenging universities from all over the world to design, build and operate sustainable buildings

<http://vimeo.com/105108008>

The winner : Università de Roma III, Italia Rhome for Density in Roma.

