

## Triangulum

**Project ID:** 646578

**Funded under:** H2020-EU.3.3.1.3. - Foster European Smart cities and Communities

### Triangulum: The Three Point Project / Demonstrate. Disseminate. Replicate.

**From** 2015-02-01 **to** 2020-01-31, ongoing project

#### Project details

<b>Total cost:</b> EUR 29 501 430,98	<b>Topic(s):</b> SCC-01-2014 - Smart Cities and Communities solutions integrating energy, transport, ICT sectors through lighthouse (large scale demonstration - first of the kind) projects
<b>EU contribution:</b> EUR 25 420 602,30	<b>Call for proposal:</b> H2020-SCC-2014 <a href="#">See other projects for this call</a>
<b>Coordinated in:</b> Germany	<b>Funding scheme:</b> IA - Innovation action

#### Objective

The Triangulum project will demonstrate how a systems innovation approach based around the European Commission's SCC Strategic Implementation Plan can drive dynamic smart city development. We will test the SIP across three lighthouse cities: Manchester, Eindhoven and Stavanger, which represent the main typologies of European cities. They will be complemented by our follower cities Prague, Leipzig and Sabadell. This powerful combination reflects an urban population of between 100k and 1,2m inhabitants across six different countries, allowing us to demonstrate successful replication across a wide range of typical urban areas in Europe. Each city has already made significant progress towards the transition of becoming a smart city; developing their own individual approach reflecting specific local circumstances. These inherent strengths will now serve to accelerate the smart city development across proposed demonstration sites within Triangulum. The suite of projects developed will be based around zero/low energy districts, integrated infrastructures and sustainable urban mobility designed to deliver a range of cross-cutting outcomes across different sectors and stakeholders. This will provide the basis to 'road test' the SIP and provide recommendations to the Commission on how it could be improved to facilitate wider replication. The Triangulum goals target a series of direct impacts around; reduced energy consumption of buildings, increased use of renewable energies, increased utilisation of electric vehicles, deployment of intelligent energy management technologies and the deployment of an adaptive and dynamic ICT data hub. The design and implementation of innovative Business Models and the activation of citizens as co-creators are core cross-cutting elements to base the technologies in real-world city environments and facilitate replication.

#### Related information

<b>Report Summaries</b>	<a href="#">Periodic Reporting for period 1 - Triangulum (Triangulum: The Three Point Project / Demonstrate. Disseminate. Replicate.)</a>
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## Coordinator

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FRAUNHOFER GESELLSCHAFT ZUR FOERDERUNG DER ANGEWANDTEN FORSCHUNG E.V.  
HANSASTRASSE 27C  
80686 MUNCHEN  
Germany

Germany

**EU contribution:** EUR 1 159  
307,19

**Activity type:** Research Organisations

[Contact the organisation](#)

## Participants

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STEINBEIS INNOVATION GGMBH  
WILLI BLEICHER STRASSE 19  
70174 STUTTGART  
Germany

Germany

**EU contribution:** EUR 608 625

**Activity type:** Research Organisations

[Contact the organisation](#)

UNIVERSITAET STUTTGART  
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70174 STUTTGART  
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Germany

**EU contribution:** EUR 503 125

**Activity type:** Higher or Secondary Education Establishments

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MANCHESTER CITY COUNCIL  
ALBERT SQUARE  
M60 2LA MANCHESTER  
United Kingdom

United Kingdom

**EU contribution:** EUR 1 013  
733,50

**Activity type:** Public bodies (excluding Research Organisations and Secondary or Higher Education Establishments)

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THE MANCHESTER METROPOLITAN UNIVERSITY  
OXFORD ROAD ALL SAINTS BUILDING  
M15 6BH MANCHESTER  
United Kingdom

United Kingdom

**EU contribution:** EUR 291  
471,88

**Activity type:** Higher or Secondary Education Establishments

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THE UNIVERSITY OF MANCHESTER  
OXFORD ROAD  
M13 9PL MANCHESTER  
United Kingdom

United Kingdom

**EU contribution:** EUR 965  
951,56

**Activity type:** Higher or Secondary Education Establishments

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SIEMENS PLC  
SIR WILLIAM SIEMENS SQUARE FARADAY HOUSE FRIMLEY  
GU168QD CAMBERLEY  
United Kingdom

United Kingdom

**EU contribution:** EUR 4 189  
725,40

**Activity type:** Private for-profit entities (excluding Higher or Secondary Education Establishments)

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CLICKS AND LINKS LTD  
MOSS ROAD 28  
SK9 7HZ Alderley Edge  
United Kingdom

United Kingdom

**EU contribution:** EUR 399  
551,25

**Activity type:** Private for-profit entities (excluding Higher or Secondary Education Establishments)

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GEMEENTE EINDHOVEN  
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5600 EINDHOVEN  
Netherlands

Netherlands

**EU contribution:** EUR 1 526  
739,42

**Activity type:** Public bodies (excluding Research Organisations and Secondary or Higher Education Establishments)

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STICHTING WOONBEDRIJF SWS HHVL  
WAL 2  
5611 HD EINDHOVEN  
Netherlands

Netherlands

**EU contribution:** EUR 1 941 975

**Activity type:** Other

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TECHNISCHE UNIVERSITEIT EINDHOVEN  
GROENE LOPER 5  
5612 EINDHOVEN  
Netherlands

Netherlands

**EU contribution:** EUR 577  
756,25

**Activity type:** Higher or Secondary Education Establishments

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STRIJP S ONTWIKKELING BV  
REGGESINGEL 4  
7461 BA RIJSSEN  
Netherlands

Netherlands

**EU contribution:** EUR 2 541  
561,05

**Activity type:** Private for-profit entities (excluding Higher or Secondary Education Establishments)

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Koninklijke KPN NV  
MAANPLEIN 55  
2516 The Hague  
Netherlands

Netherlands

**EU contribution:** EUR 525 770

**Activity type:** Private for-profit entities (excluding Higher or Secondary Education Establishments)

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Stavanger kommune  
Olav Kyrresgate 23  
4068 Stavanger  
Norway

Norway

**EU contribution:** EUR 3 343  
702,50

[See on map](#)

**Activity type:** Public bodies (excluding Research Organisations and Secondary or Higher Education Establishments)

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GREATER STAVANGER ECONOMIC DEVELOPMENT AS  
PROFESSOR OLAV HANSENS VEI 7A  
4068 STAVANGER  
Norway

Norway

**EU contribution:** EUR 300  
129,38

**Activity type:** Private for-profit entities (excluding Higher or Secondary Education Establishments)

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ROGALAND FYLKESKOMMUNE  
ARKITEKT ECKHOFFS GATE 1  
4001 STAVANGER  
Norway

Norway

**EU contribution:** EUR 1 312  
037,50

**Activity type:** Public bodies (excluding Research Organisations and Secondary or Higher Education Establishments)

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UNIVERSITETET I STAVANGER  
KJELL ARHOLMS GATE 41  
4021 STAVANGER  
Norway

Norway

**EU contribution:** EUR 1 475  
006,25

**Activity type:** Higher or Secondary Education Establishments

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LYSE AS  
BREIFLATVEIEN 18  
4017 STAVANGER  
Norway

Norway

**EU contribution:** EUR 1 313  
010,51

**Activity type:** Private for-profit entities (excluding Higher or Secondary Education Establishments)

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INSTITUT PLANOVANI A ROZVOJE HLAVNIHO MESTA PRAHY  
VYSEHRADSKA 57/2077  
128 00 PRAHA  
Czech Republic

Czech



**EU contribution:** EUR 355  
193,75

**Activity type:** Public bodies (excluding Research Organisations and Secondary or Higher Education Establishments)

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AJUNTAMENT DE SABADELL  
PL. SANT ROC 1  
08201 SABADELL  
Spain

Spain

**EU contribution:** EUR 392  
576,79

**Activity type:** Public bodies (excluding Research Organisations and Secondary or Higher Education Establishments)

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STADT LEIPZIG  
NEUES RATHAUS  
04109 LEIPZIG  
Germany

Germany

**EU contribution:** EUR 485  
662,50

**Activity type:** Public bodies (excluding Research Organisations and Secondary or Higher Education Establishments)

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TUV SUD IMMOWERT GMBH  
WESTENDSTRASSE 199  
80686 MUNCHEN  
Germany

Germany

**EU contribution:** EUR 197  
990,62

**Activity type:** Private for-profit entities (excluding Higher or Secondary Education Establishments)

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