

Systemic Seismic Vulnerability and Risk Analysis for Buildings, Lifeline Networks and Infrastructures Safety Gain

Fact Sheet

Project Information

SYNER-G

Grant agreement ID: 244061

Status
Closed project

Start date
1 November 2009

End date
31 March 2013

Funded under
FP7-ENVIRONMENT

Overall budget
€ 4 784 534,55

EU contribution
€ 3 500 000

Coordinated by
ARISTOTELIO PANEPISTIMIO
THESSALONIKIS
 Greece

Objective

SYNER-G is research project which has the following main goals: (1) To elaborate appropriate, in the European context, fragility relationships for the vulnerability analysis and loss estimation of all elements at risk, for buildings, building aggregates, utility networks (water, waste water, energy, gas), transportation systems (road, railways, harbors) as well as complex medical care facilities (hospitals) and fire-fighting systems. (2) To develop social and economic vulnerability relationships for quantifying the impact of earthquakes. (3) To develop a unified methodology, and tools, for systemic vulnerability assessment accounting for all components (structural and socio-economic) exposed to seismic hazard, considering interdependencies within a system unit and between systems, in order to capture the increased loss impact due to the interdependencies and the interactions among systems and systems of systems. The methodology and the proposed fragility functions will be validated in selected sites (urban scale) and systems and it will implemented in an

validated in selected sites (urban scale) and systems and it will implemented in an appropriate open source and unrestricted access software tool. Guidelines will be prepared and the results and outputs will be disseminated in Europe and world wide with appropriate dissemination schemes. SYNER-G is integrated across different disciplines with an internationally recognized partnership from Europe, USA and Japan. The objectives and the deliverables are focused to the needs of the administration and local authorities, which are responsible for the management of seismic risk, as well as the needs of the construction and insurance industry. URL: <http://www.vce.at/SYNER-G>

Field of science

/engineering and technology/civil engineering/structural engineering/earthquake engineering

Programme(s)

Topic(s)

Call for proposal

FP7-ENV-2009-1

Funding Scheme

CP-FP - Small or medium-scale focused research project

Coordinator



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Activity type

**Higher or Secondary
Education Establishments**

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EU contribution

€ 570 200

Administrative Contact

Georgia Petridou (Ms.)

Participants (13)



VCE Holding GmbH

 Austria

EU contribution

€ 450 000

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1140 Wien**

Activity type

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

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BUREAU DE RECHERCHES GEOLOGIQUES ET MINIERES

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€ 330 700

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Activity type

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JRC -JOINT RESEARCH CENTRE- EUROPEAN COMMISSION

 Belgium

EU contribution

€ 340 000

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Activity type

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STIFTELSEN NORGES GEOTEKNISKE INSTITUTT

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AMRA - ANALISI E MONITORAGGIO DEL RISCHIO AMBIENTALE SCARL

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EU contribution

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€ 200 000

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