CITIES OF THE FUTURE
ISTANBUL 2016

University of Latvia

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Description of the Organization

Association FOTONIKA-LV at the University of Latvia implemented succesfully the project during the years 2012-2015 :

The FP7-REGPOT-2011-1, Nr. 285912 project FOTONIKA-LV
"Unlocking and Boosting Research Potential for Photonics in Latvia – Towards Effective Integration in the European Research Area")

Among the task and outcomes of the project three are directly targeting the domains concerning «Cities of the future»:

- ***Riga Photonics Centre (RFC) was created in the downtown of Riga (****Capital City of Latvia)* ***to raise awareness, to ensure knowledge transfer and to highlight achievements of Riga RTD community from public and private sectors in the area photonics, cpecifically in space sciences, quantum sciences and related technologies. Specifically the Year of Light event in 2015 and Researchers Nights events are held in the premises of RFC***
- ***The 3rd International Conference on Integrative Approaches Towards Sustainability: – "Sustainable development, knowledge society and smart future manufacturing technologies"*** *– KNOWLEDGE, was held in Riga in 2012*
  http://www.lu.lv/knowledge

Description of the Organization

The outcomes of mentioned above conference were finalized in the book issued in 2015:

W. Leal Filho, Arnolds Ubelis, Dina Berzina. (eds.), Sustainable Development, Knowledge Society and Smart Future Manufacturing Technologies, 2015, SPRINGER World Sustainability Series, DOI 10.1007-978-3-319-14883-0_5;

Association FOTONIKA–LV, University of Latvia

Building of the

Institute of Atomic Physics and Spectroscopy

There is a deep background behind our success, even symbolics of the architecture helped to us

Šķūņu iela 4 (Rīga), The Architecter Mandelštams, 1911.

In the building neoclasical style is combined with Jugendstyle.

The childs sculptures on the portal symbolize intermediators between intelectual and material worlds.

•http://www.jugendstils.riga.lv/JugendstilsRiga//Mandelshtams/skunu4/

Description of the your research interest

Research team at the FOTONIKA-LV, University of Latvia besids it's involvement in the research in photonics domain

«***…the impact of photonics in the 21st century will be as significant as electronics was in the 20th, or steam in the 19th…*** *Lord Sainsbury of Turville, www.dti.gov.uk/.../ukphotonicsstrategy* **"**

is active also in the areas of technologies for sustainable development and education for sustainable development directly related to the future developments in the cities

Team leader Dr.Arnolds Ubelis served as an elected chair person for one part of Riga municipality for 3 years

Please add relevant 2017 CALL TOPIC ….
Please add TITLE of the PROJECT IDEA ….

FOTONIKA-LV team in the role of experienced coordinator (FP7 projects) or partner in the consortium would like to contribute to the objectives of the calls:

SCC-1-2016-2017: Smart Cities and Communities lighthouse projects

SCC-02-2016-2017: Demonstrating innovative nature-based solutions in cities
Deadline March 7, 2017

Expected results, main areas of expertise:

Photonics based technologies for future cities, particularly, sun light based advanced lightening solutions in shadowed coutyards

Eventual project idea:
Interplay: Smart Cities and Knowledge Society

The problems are:
a) on what degree smart citiy is succesful in the development basing on best available knowledge, know-how and technologies, allocated in it's own universities and RTD community;

b) How to promote cost efectively exchange and sharing of advanced knowledge between institutions in public and private sectors and with partner cities;

c) Finaly what about interplay: Smart Cities and Knowledge Society.

Among several other options we propose to discuss creation of the consortium for the specific project targeting lightening problems in shadowed sites *(dark courtyards etc.)* in cities basing on sunlight and advanced photonics technologies and "state-of-the-art" in data processing and spatial modeling.

Particularly targeting:
- improvement of lightening in smart and cost effective way, in the areas having centuries old buildings, frequently with high cultural heritage status;
- emerging acute lightening problems when old architecture face construction of new buldings.

Foreseen scope: IA Innovation action. Single Stage or two stage.

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