



Projects generated by DELICE

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DELICE's impact on short term

- DELICE made us interesting for counterparts within and outside Romania
 - modern laboratories
 - state-of-the-art equipments
 - young and specialized personnel
 - good marketing
 - not so much history behind, but great potential



Submitted projects

- South East Europe Programme
 - ELITE-East European Lidar-based Transnational structure for Environmental and Climate change risk prevention – 2009
 - 24 partners – Universities, research institutes, municipalities, national authorities
 - a transnational structure integrating existing and new developed atmospheric capacities in RO, GR, I, AT, BG, SRB and HR
 - SEENA - South East European Network for Climate Change Adaptation -2011
 - 27 partners: National public authorities, Universities, higher education institution, research centers, non-governmental /non-profit organization
 - set up and coordinate a SEE network for specific regional climate vulnerabilities identification and development of concrete adaptive measures.
- Programme "PEOPLE" – Call ID "FP7-PEOPLE-2011-ITN" Proposal N° 289923 - *Initial Training for Atmospheric Remote Sensing – ITARS*

Score 91.4 points

- synergistic application of high-end ground-based remote-sensing instrumentation that has the potential to substantially contribute to an improved understanding of aerosols, clouds, and aerosol-cloud, interaction processes and their role for both climate and weather.

WELL, THIS IS LIFE ...

Financed projects

- 2009: **RADO STVES 115266** (<http://inoe.inoe.ro/RADO>)
 - bilateral project (RO consortium + NO partner)
 - building up and preparing an atmospheric observatory in Romania: instruments, people, procedures
 - opening the observatory to external people:
 - scientists: research projects involving experimental work in the field of atmospheric physics
 - students: master and doctoral practical training using RADO's laboratories and data
 - children: hands-on, fun physics lessons inside the science center
- 2009: **DELICAT FP7** FP7-AAT-2008-RTD-1 (<http://www.delicat-fp7.org>)
 - multinational FP7 project (R&D)
 - development of an UV lidar to be installed on commercial airplanes
 - it will detect clear air turbulences 5Km in front of the airplane
 - better security for airplanes, increased comfort for passengers
- 2010: **ACTRIS** FP7-INFRASTRUCTURES-2010-1(<http://www.actris.net>)
 - multi-networks FP7 project (INFRASTRUCTURES)
 - joining EARLINET, EUSAAR, CLOUDNET, European part of AERONET, and MWRNET
 - therefore: active remote sensing for aerosols (EARLINET) and clouds (CLOUDNET) + ground monitoring (EUSAAR) + passive remote sensing of aerosols (AERONET) and meteorological parameters (MWRNET)
 - offers trans-national access to several stations, including ours



Financed projects

- **RADO - Romanian Atmospheric Research 3D Observatory**
 - **Infrastructure:** RADO building, installation of **equipment** such as lidar systems, sunphotometres, particle sizers, CO₂ and O₃ monitors, weather stations, radioactivity monitors, UV and IR cameras, servers, modelling software
 - **Institutional capacity building/Human Resources:** staff recruited, measurement and data handling procedures developed and implemented at all observation stations, proposals for the integration of RADO into European networks, staff from all the partner institutions involved in scientific consultation sessions in Norway
 - **Awareness raising and dissemination:** international workshops and other science-related meetings, polls on public awareness, exhibition/awareness programmes organised for professionals and laymen alike (with focus on attracting children to science), publicity materials and events (spots /movies, posters, conferences, website and portal, leaflets and brochures)
- **DELICAT—DEmonstration of Lidar based Clear Air Turbulence detection**
 - Develop an UV-LIDAR simulator for Rayleigh/Mie filtering, a simulation program for aerosols and CAT
 - Analysis of the UV LIDAR instrument concept as the most promising candidate for onboard CAT detection in front of the cruising aircraft
 - Evaluation of detection algorithms: on selected sequences (including sequences containing CAT and sequences without turbulence), LIDAR signal processing.
- **ACTRIS—Aerosols, Clouds, and Trace gases Research Infrastructure Network**
 - Transnational access to Infrastructure
 - perform regularly measurements and internal
 - quality checks for the hardware as part of networking activities

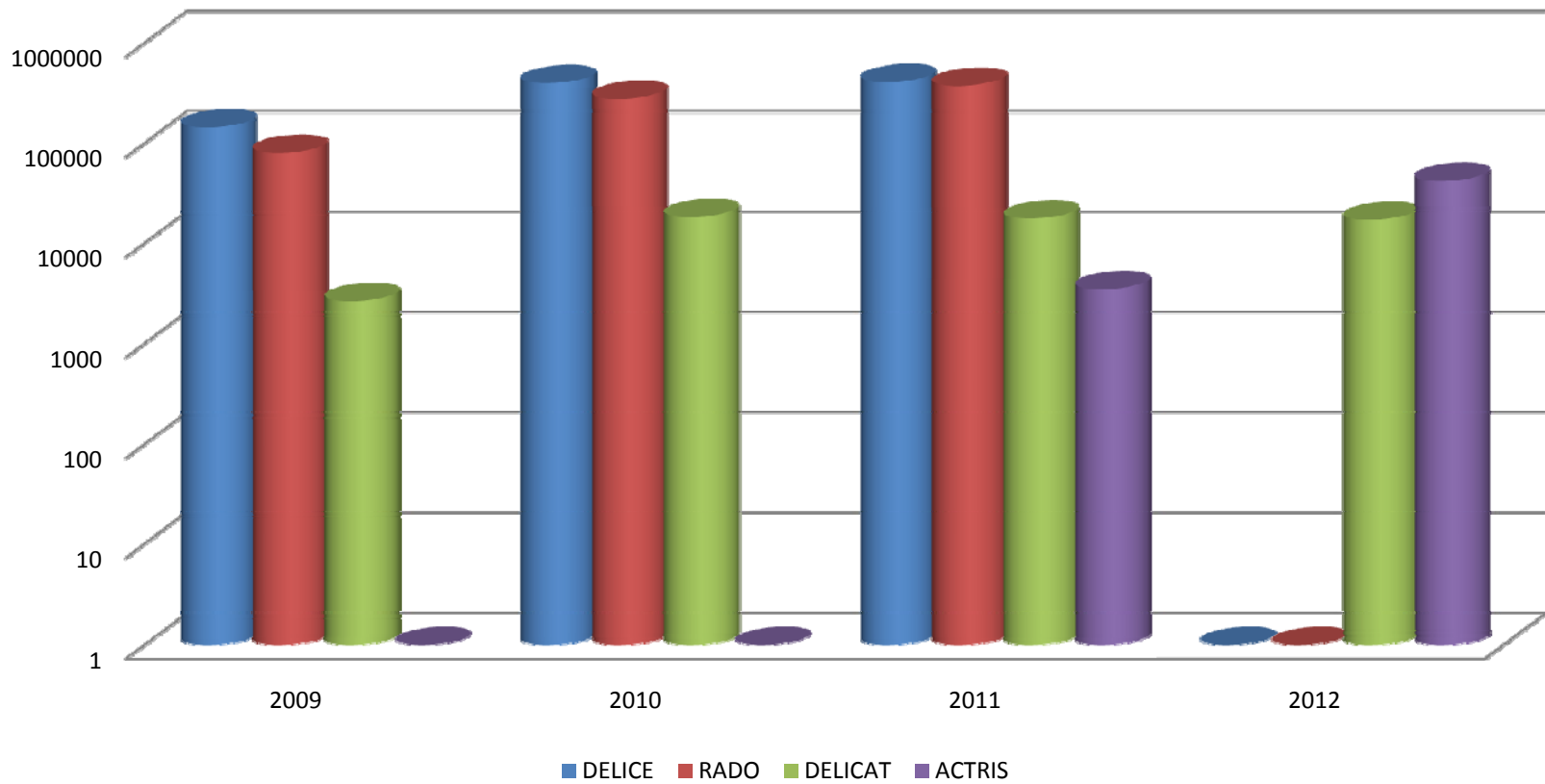
Sounds great, isn't it?

- Few numbers for ROLICE (the station in Magurele):
 - 10 full-time permanent positions right now
 - total necessary budget for salaries: ~120000 € / year
 - 2 main laboratories (lidar + in situ) + a mobile lab
 - total necessary budget for operation: ~90000 € / year
 - is part of AERONET, EARLINET, MWRNET
 - total necessary budget for keeping international connections alive (conferences, meetings etc.): ~ 13000€ / year
 - coordinates RADO (including the 3 stations in Iasi, Cluj, Timisoara)
 - total necessary budget for maintaining the network together (meetings, training, etc.): ~6000 € / year
 - organizes annual conference OTEM
 - total necessary budget to support the workshop, several key speakers, and several young researchers: 7000€ / year
 - overall necessary budget: ~235000€ / year
- It is not an easy task to obtain funds each year



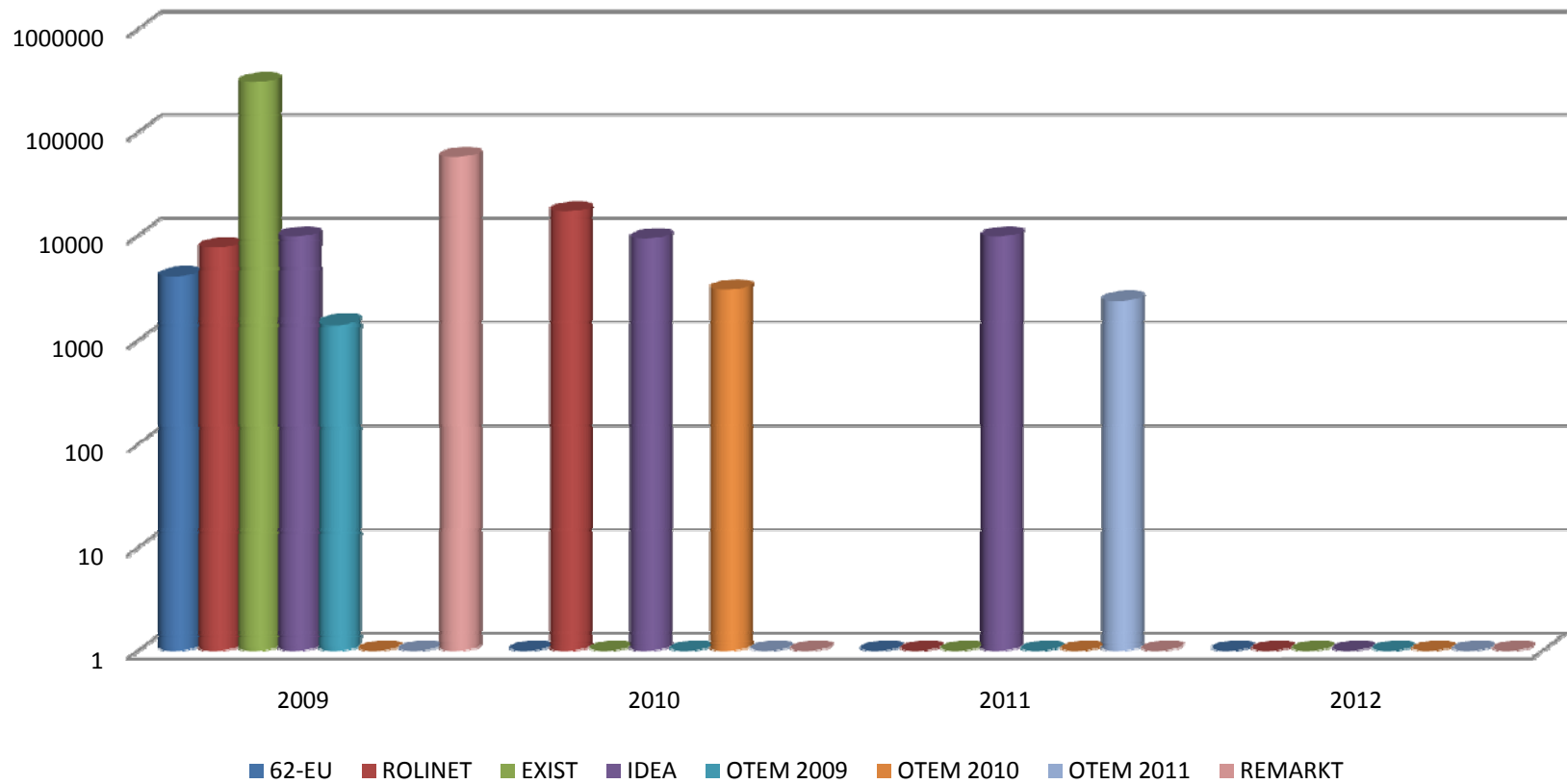
A slice of near past, present, and near future

Budget of international projects (log)



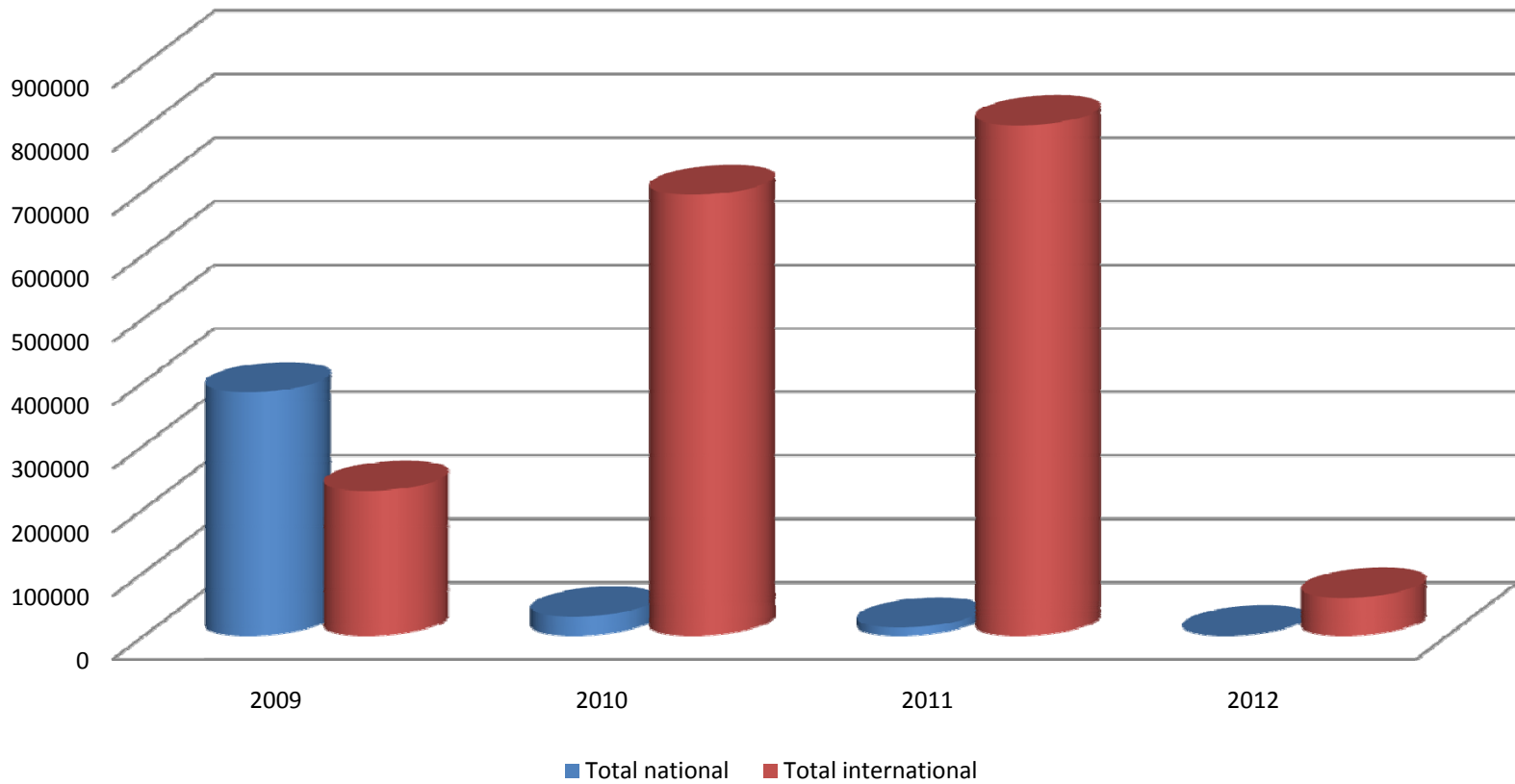
A slice of near past, present, and near future

Budget of national projects (log)



A slice of near past, present, and near future

Comparison between national & international budgets





Can we talk about sustainability?

Any forecast comes with large error bars. Let's hope the future will be good with us.