THE CYPRUS INSTITUTE

Research • Technology • Innovation

Combining Structural Funds and Framework Programmes to improve excellence in R&I: the case of the Cyprus Institute.

Event: European Programmes Conference

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OUR INSTITUTE – OVERVIEW

A research and educational institution suited to a knowledge economy, taking advantage of the Cyprus «gateway» niche.

A European institution, for the Eastern Mediterranean based in Cyprus.

A non-governmental institution devoted to the public benefit and for advancing peace and prosperity in the region, using science and technology.

OUR MISSION

RESEARCH	**Produce novel research approaches for Cyprus and the region**
EDUCATION	**Achieve educational excellence through post-graduate programs**
RELEVANCE	**Deliver output that is relevant to industry and society**
HUB	**Act as a science and technology hub for the region**
PARTNERSHIPS	**Leverage local and international partnerships**

OUR **VISION**

To help foster the development of a knowledge-based economy in Cyprus through cutting edge scientific research and education that has regional as well as international significance.

Cyl is being developed as a gateway for research and technology in the Eastern Mediterranean Region to and from the EU.

STRATEGIC PRIORITIES

RESEARCH **ACHIEVEMENTS**

Secured

>€22,5m

Competitive Grants

Scientific

>250

Publications

Active

34

Research Projects

Cyl

105

Researchers and Faculty

Research

11

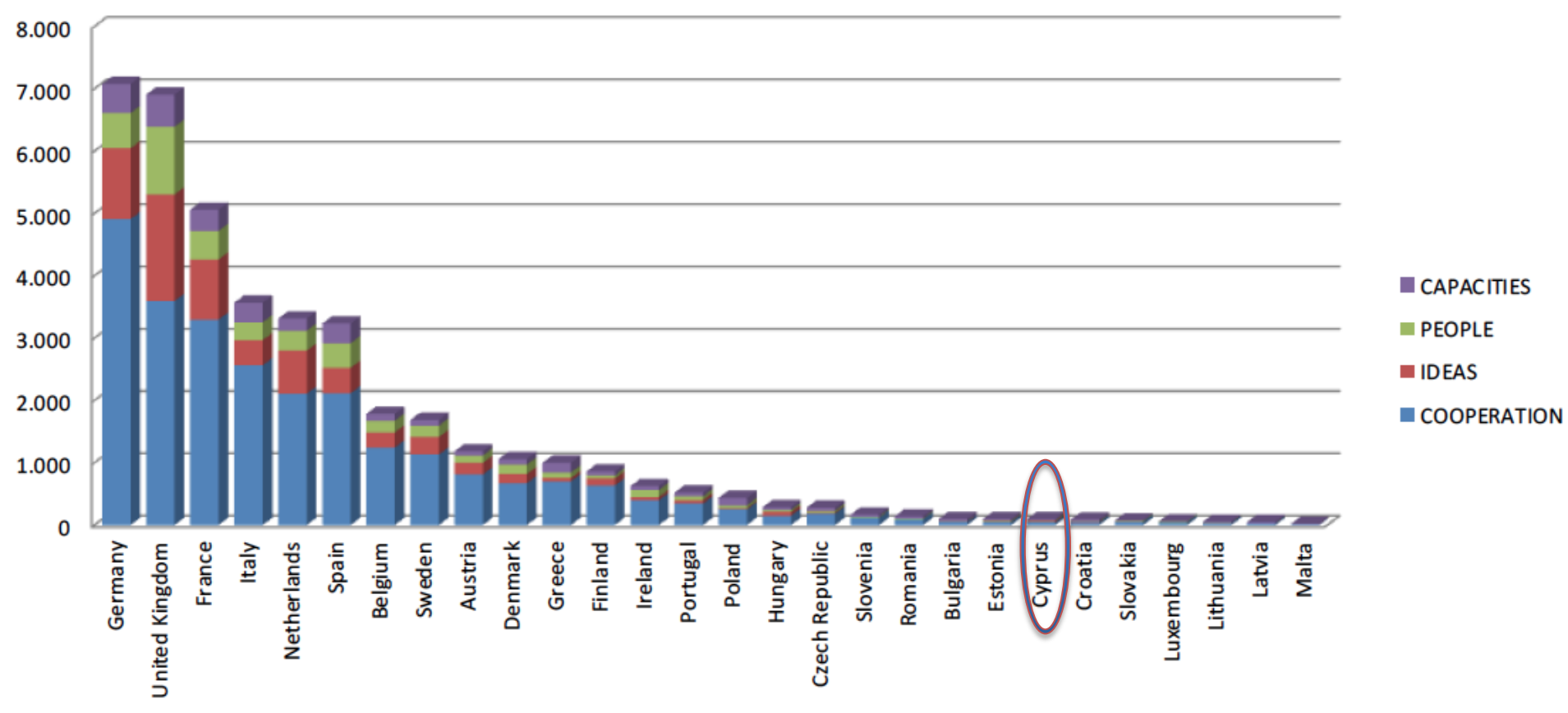
Laboratories

Proposal success rate

22.5%

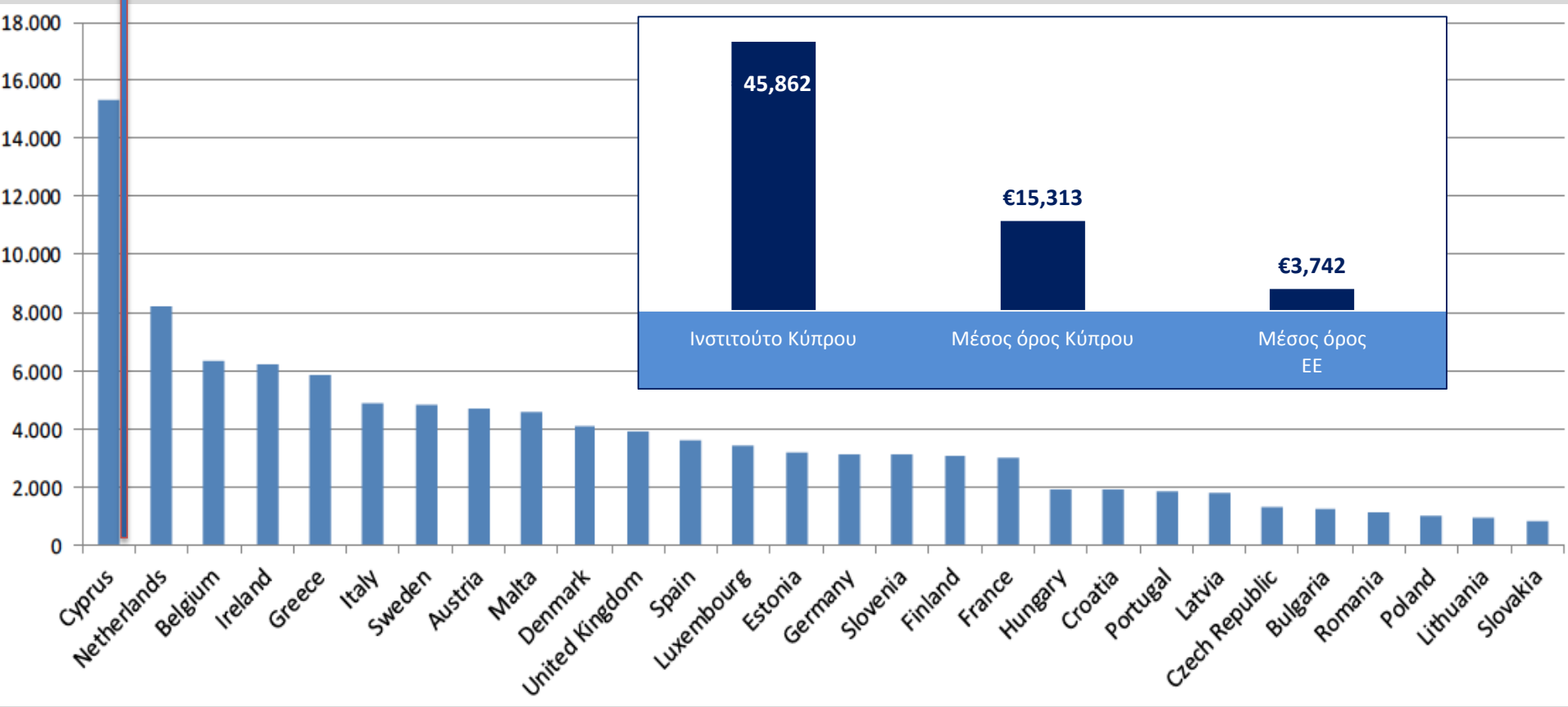
5 x EU Average

FP7 Funding to Member States (in M€)



45 856

FP7 Annual Funding per Researcher



EU average: € 3.900
Cyprus: € 15.313

Cyprus Institute:€ 45.856
Eleven times the EU Average

OUR RESEARCH CENTERS

Our Fundamental Building Units

Energy, Environment & Water (EEWRC)

Science Technology in Archaeology & Culture (STARC)

Computation-Based Science & Technology (CaSToRC)

Cyprus: research funding

- **R&D expenditures GDP %: 0,49% or € 88,8 millions**
  - Public Expenditures: 70,6%
    - --Research Promotion Foundation → Public Universities, Public Research Institutes, Private Universities
  - Private Expenditures (BERD): 14,9 %
  - Other Sources: 14,5 %
- Smart Specialisation Strategy announced in 2014
- New Research Promotion Foundation grants announced in September 2016 – structural funds (e.g. integrated projects) and government funds.
- **<u>Cyprus Institute funding</u>: in 2015 CyI raised 50% of its funds from competitive EU grants and 50% from government funding.**

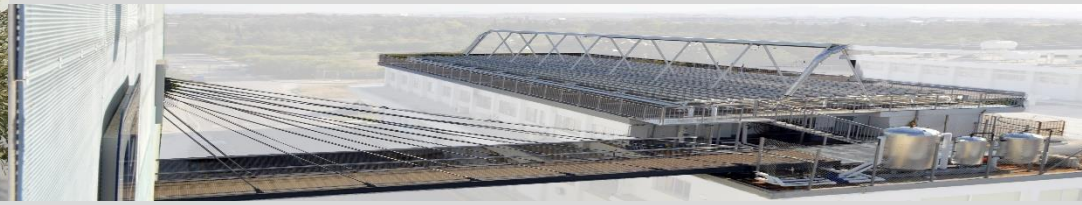
The CyI strategy

- From the onset, CyI has had a business plan, developed with the support of MiT
- CyI is involved in a wide range of FP7 and H2020 projects: initially as junior partner, and then taking on leadership roles: first WP, then whole projects: e.g. LINKSCEEM 2 (high performance computing eco-system in the Eastern Mediterranean), and NESTER in the field of Concentrated Solar Power.
- The strategy is to leverage structural funds (ERDF – not Cohesion fund or ESF) to build infrastructure, then secure participation in large-scale EC-funded projects, followed by further infrastructure upgrades etc.
- The next step is to collaborate with the public and private sectors to accelerate the transfer of innovation into the knowledge economy
- CyI research is aligned with the National "Smart Specialisation Strategy" *and was actively involved in its development*

Example 1: Solar Energy

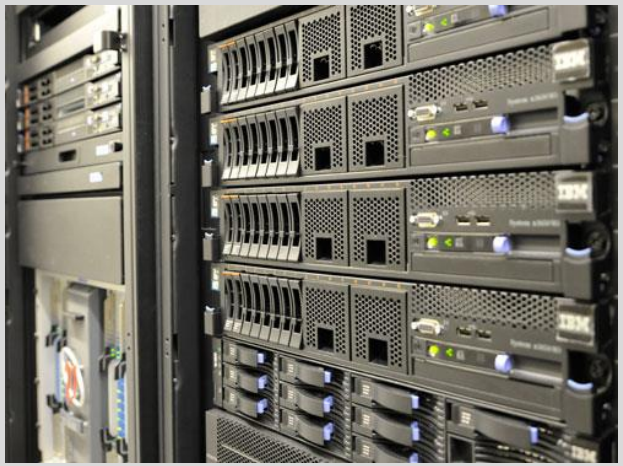
Build infrastructure:

- The Solar Thermal Production of Electricity and Water (STEP-EW) project, initiated in 2011, involved construction of an experimental Concentrated Solar Power (CSP) plant in Cyprus: the PROTEAS facility.
- Another CSP plant was built in 2014-2015 using ENPI funds (STS-MED)



- **Initial funding: INTERREG - ERDF (Greece-Cyprus 2007-2013) - €1.3 M**
- **Leveraging infrastructure:**
  - FP7: STAGE-STE (IRP), EU-SOLARIS (distributed research infrastructure)
  - H2020: CySTEM (ERA Chair - €3.5 Mln.), NESTER (TWINNING - €1 Mln.)
  - Reinforces role of CyI in EU networks: EERA, ESTELA
- **Converting infrastructure into partnerships:**
  - Development of partnerships with Industry (e.g. MoU with ARCA)
  - High-level partnerships with European CSP leaders: ENEA, CIEMAT, CNRS, LNEG, CEA, RwTH Aachen etc.

Example 2: High Performance Computing



Building infrastructure: Cy-Tera supercomputer: largest supercomputer in the Eastern Mediterranean, was installed in 2011

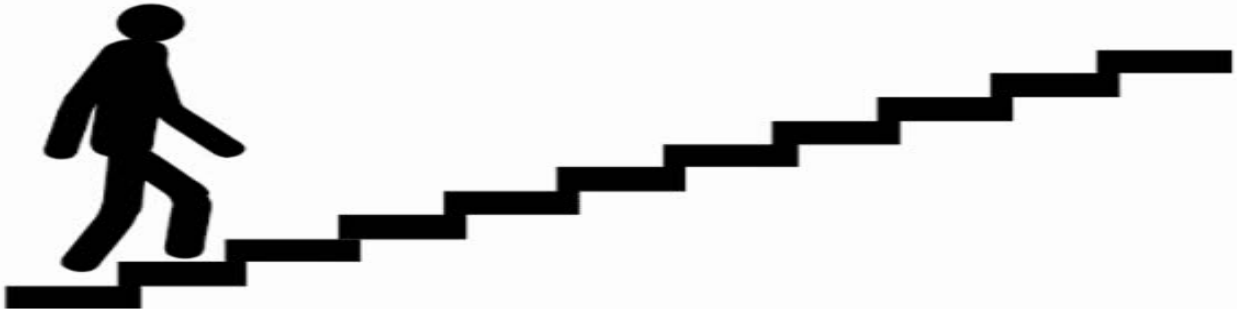
- **Building infrastructure:** Cy-Tera supercomputer: largest
- **Initial funding**: Structural funds (Research Promotion Foundation)
- **Leveraging infrastructure**:
  - Open to Cypriot Universities, Research Institutes, and Industry
  - Secured a European-funded infrastructure programme worth € 2.5 million to lead the development of HPC in the East Med.
  - 2008: CaSToRC obtains membership of PRACE
  - 2014: HPC-LEAP (EJD programme)
  - 2015: EoCoE project: Energy-oriented centre of excellence
  - **Converting infrastructure into partnerships:** University of Illinois, Juelich supercomputing centre, Max Planck etc.

Example 3: Atmospheric-Earth surface observation

Building infrastructure: 2008-2012: The unmanned Autonomous Flying Platforms for Atmospheric and Earth Surface Observations (APAESO) have been designed and built

- **Initial funding: E**uropean Regional Development Fund and the Republic of Cyprus through the Research Promotion Foundation.
- **Leveraging infrastructure**: APAESO is put at the disposal of a range of European and International research efforts, and is currently being proposed as a contribution to H2020 proposals.

NEXT STEPS



- **Contribute to alignment of national and EU research funding –** e.g. STAGE-STE and INSHIP projects (solar thermal energy)
- **Reach out to the private sector:**
  - So far have been only partners, but can also be investors
  - Joint Technical Initiatives (JTIs)
  - Contracted Public-Private Partnerships (cPPPPs)
- **Grasp opportunities that bring together government and EU funding to further enhance the research infrastructure:**
  - TEAMING
  - ERA NET cofund

CONCLUSIONS

- Rather than an “upstream” or “downstream” approach, our funding model is a spiral “stairway to excellence” where each “step” alternates Structural and Horizon 2020 funding
- The Cyprus Institute is an example of how academic institutions in small and low-RDI countries can become to centres of academic excellence.
- The lessons learned from the Cyprus experience involve leveraging infrastructure funded by structural funds (ERDF) to participate in FP7/H2020 projects of ever greater magnitude.
- This should be an inspiration not only for other small or low-RDI member states, but also for smaller regions within larger EU countries.

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Thank you!