“ROAD TO SUCCESS” – AN EXPERIENCED PARTICIPANT

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WHY – 3 Entry Points

- **Strategic** (change, growth…)
- **Opportunistic** (invitation to join, partnerships with strong partners….)
- **Organisational Need** (funding; technology…)

Our First Attempt :

- FP6 **Science and Society Work Program**– 2003 : **The Jerusalem National Science Festival**
- The call asked : 4.3.4.1 (b): “To promote increased public scientific culture, especially among the young, of the impact and benefits of science and its uses on the daily lives of European citizens; and associated measures for improving the exchange of experiences and resources among organisers of national events to enhance the European dimension and added value of these activities.”
- Partners : HUJI (Hebrew University) and the BSMJ (Bloomfield Science Museum Jerusalem)
- Duration 12M; Budget 720,000 Euro

GOOD PRACTICE (what not to do)

Our First Success

- FP6 Science and Society Work Program– 2004- 2007 : PENCIL : Permanent European Resource Centre for Informal Learning.
- The call asked for:“Promoting young people’s interest in science, enhancing science education and monitoring scientific careers”.
- Partners : 19 partners from 13 courtiers; Ecsite as coordinator; Mix of science centres, academia and European networks.
- Duration 36 M; Budget 1,625,645 EURO

BEST PRACTICE :

- *Why we joined : Strategic - to work with strong European partners; to support our core business; to grow*
- *Why we Won : Good coordinator, variety of partners with different know-how and connections; enough time to develop and execute;*

Long term local consortium

- FP6 : **Researchers Night** 2005-2020 **Marie Skłodowska-Curie Actions**
- The call asked to target the general public, addressing and attracting people regardless of the level of their scientific background, with a special focus on families, pupils and students, and notably those who do not have easy access to, and thus are less inclined to engage in, STEAM or research activities
- Partners: National consortium from 2005 with 8 Academic partners only; from 2006 – additioanl science centres; from 2010 – additional funding from the Ministry of Science .
- Each year- around common theme

STRATEGIC MOVE :

- ***The Ministry of Science adopted the program as flagship event (and supports it since as well as new other events)***
- ***The European Commission adopted the concept of National Consortium and Common Thematic Topic***

Some other references of success

- FP6- 2007 -2010 **Wonders: Science Communication**- Sharing best practices of science shows and science activities among 21 partners ; call for personal pledge on reducing energy (Need)
- FP6 – 2007 -2010 **ESCALATE : Science Education** . Using Argumentation in science learning in different settings (as a third party) (Opportunistic)
- FP7 2009-2011 **MIC : Science Engagement through cooperation**. Using a virtual platform for public participation in urban planning (Strategic)
- FP7 2009 -2011 **2WAYS : Science Engagement through cooperation**. Life science opportunities and threats (Opportunistic)
- FP7 2009-2011 **ACCENT: Science Engagement through cooperation**. Action plan on Climate change (Need)
- FP7 2010-2013 **StudioLab: Science and the Arts**. Innovation in interaction between artists, scientists and the public (Strategic)
- Fp7 2011-2014 **Places :Platform for science museums and cities** (third party) (Strategic)
- Fp7 2016-2019 **Nano2all** (third party) : RRI (Opportunistic)

Many Failures as partner

- 2004 – **Science communication** : **SCOPE** : European Science week in every European country. **Not responding to the objectives**
- 2004 – **Science Education** : **ASTRA** – Web experiments. **Great idea but too early**
- 2006 – **Science shops** : **SITE** – on historic cities. **Weak consortium**
- 2010 – **Science and Art ; STARS** Based on Performance arts : **Bad writing**
- 2010 – **Science Education** : **POSITIVE** – to create Links between employees and youth at science centres. Partners: mainly Academia + Industry (Intel, Pfiser…) – **Nonprofessional coordinator in the field of science education**
- 2010 – Mobilization and Mutual Learning (MML) **:CONNECTION**. 60 partners(CNRS as coordinator), 4.9 M , 5 years –**Too ambitious**
- 2014 – **ACHIEVE** – Science education for low achievers . **Lack of good methodology, missing some key partners**

New Status – as Coordinator

- FP7 : SIS- Science Education : **ENGINEER** (2011-2013)
- 26 partners : 10 science centres + 10 schools + 2 universities + 2 European networks + 1 expert organization (from the US) + 1 Management company

Why we initiated – Big Idea (add engineering as part of science curriculum in elementary school) ; know how (Museum of Science Boston with a flagship program EiE) ; need in Israel (partnership with the MoE from day 1);

Why we won : Excellent writer (from a company that join as management partner); Novel idea (missing curriculum in Europe); Attractive (10 engineering fields- link from education to labor) ; original partners (co-design with schools); expert partner from the US (MOS) ;

What we got : position in Israel as experts in STEM; knowhow; experience in content development; programs for schools and for the museum; many connections for future collaboration in Israel and in Europe; recognition as content developer for formal education

Failures as coordinator

- **Citizen Brain** – Pan European public outreach, exhibits and science café engaging citizen in science.

Based on HBP (flagship project) Connecting HBP scientists with leading science centres to co-create exhibitions and science Café to achieve RRI through participatory events .

"The proposal has **not adequately** addressed how the proposal will take up the **RRI and the citizens'** contributions during the project. The proposal has **not demonstrated** in sufficient detail **how policy makers will be involved** from all over Europe. The proposal is **unclear as to how it will reach additional European countries**, compared to the initial project partner and Ecsite network countries"

- **SKILLS –**Innovative ways to make science education and scientific careers attractive to young people.

Based on "Engineer" - (Approach and partners) Using science centres and informal learning environments to effectively connect STEM education with STEM career promotion by connection STEM Curriculum to real life and career

"**The link between informal learning and STEM formal education is not fully developed**. **The impact** on informal education in countries without fully developed infrastructure of museums and sciences centres **remains unclear**. **The urban life focus** of courses potentially **will limit their impact**. .... some important **risks are overlooked**...." + Hard competition (3 out of more then 100)

A Game Changer – Gender

- **FP7 ;SIS Capacity, Gender: TWIST-Towards Women In Science and Technology 2011-2013**

7 science centres, 1 university, 2 companies, 1 network

What we got :Awareness; internal change; research content; publications and media (PR); guidelines for best practices; expertise; new connections with teachers and researchers; new role in national organizations (MoE; MoS. national committees) and …… opening the door for core partners to the next call

- **H2020 :SWAF Capacity, Gender : HYPATIA 2015-2018**

5 science centres, 1 university , 3 companies, 1 network + 9 SC's as 3rd parties

What we got: Excellent theoretical framework, useful toolkits for different stakeholder engagement (research institutions, Industry, schools and science museums); strong recognition locally and globally (partners with US organizations)

Unique Role in an EU Flagship project

HBP – Human Brain Project

The European Commission had launched various flagships to address the major science and technology challenges and boost innovation in the EU. Long –term and large scale - A very competitive call

- **The big Idea** (from our side) – to offer our expertize in public engagement through a traveling exhibition on cutting-edge research (through personal connections with the coordinator)
- **An new role** - to address RRI and public engagement in an innovative way
- **A unique position in the consortium** - the only non-research institution in a huge research consortium (more then 100 partners)

Strengths – links to cutting-edge research and links to innovative researchers

Weaknesses – not in the core interest of the research partners ; 10 years project - change of leaders, new directions

Opportunities –Based on the experience - offer our expertise to other research consortiums in Europe as well as in Israel

Threats – budget cuts – firsts to be removed

The Latest- outcomes

SY STEM 2020 SCIENCE LEARNING OUTSIDE THECLASSROOM

R&I project: Collaboration between researchers and practitioners in informal learning

- Development of evaluation tools for informal STEM learning : observation & self reflections
- Mapping informal STEM learning
- Creating design principle toolkit
- Recommendations for equitable informal science education

Science makes connections

MAKE IT OPEN

CSA project: Open schooling- A gateway to open schooling where schools become key community actors and students perceive themselves as change makers.

- Development of open schooling learning dimensions and approach
- Development of tools for open schooling : Learning Scenarios and Navigator
- Creating open schooling hubs

Physics in Playground

9 Tips

- Read carefully the call and read it again every few days during writing
- Look for the “big idea” and develop clear vision for the evaluators
- Search for strong diverse partners and choose carefully the WP’s leaders
- Make time for writing
- Co- write with your partners (especially the WP’s leaders) and If needed- add an external writer to structure and unify
- Pay attention to all the objectives and impact in the call and give tight answers
- Be honest about the risks
- Create sustainability plan
- Ask for a review from an outside person before submission

מוזאון המדע ע"ש בלומפילד ירושלים (ע.ר)
متحف العلوم على اسم بلومفيلد القدس
Bloomfield Science Museum Jerusalem