ESCC-17 Santorini

The opportunity of MFF & Horizon2020
How to seize it & Lessons 2015-2017

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Fellow, Ireteth-Certh
There is much talk about EU + other Funding & Research Projects

Opportunity? Hype?
“Opportunity is missed by most people because it is dressed in overalls and looks like work”

Thomas Edison
The Multiannual Financial Framework 2014-2020

Key Challenge: **stabilise the financial & economic system while taking measures to create economic opportunities**

<table>
<thead>
<tr>
<th>Category</th>
<th>Budget (€bn)</th>
</tr>
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<tbody>
<tr>
<td>Smart &amp; inclusive growth</td>
<td>€491</td>
</tr>
<tr>
<td>- Education, Youth, Sport</td>
<td></td>
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<tr>
<td>- Connecting Europe</td>
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<td>- Cohesion</td>
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<tr>
<td>- Competitive Business SMEs</td>
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<tr>
<td>- Horizon 2020</td>
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<tr>
<td>Sustainable growth, natural resources</td>
<td>€383</td>
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<tr>
<td>Security &amp; citizenship</td>
<td>€19</td>
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<tr>
<td>Global Europe</td>
<td>€70</td>
</tr>
<tr>
<td>Administration</td>
<td>€62</td>
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**TOTAL ~ €1 Trillion Euros!**
What is Horizon 2020?

**Horizon 2020** is the **biggest** EU Research & Innovation program ever
✧ with nearly **€75 billion** of funding available over 7 years (2014 to 2020)
   the private investment that this money will attract
   promises more *breakthroughs, discoveries* and *world-firsts* by trying to take great ideas from the lab to the market.

**Horizon 2020**: open to everyone!
with a simple structure that reduces time so participants can focus on what is really important.
H2020 is a single Programme
The EU Research Programmes Budget

€ Billion

3.27 5.36 6.6 13.12 14.96 17.5


FP8
Ok and ...

what’s in it for me?
Fundamentals in European Funding

How European Funding Budget is distributed?

• About 72% through *Decentralised* actions

• About 28% through *Centralised* action
Fundamentals in European Funding

- Around **72%** through decentralised actions
  - Decentralised actions managed through **Member States**
  - **European Structural & Investment Funds** (ESIF–European Social Fund, ERDF European Regional Development Fund)
  - Funds distributed according to **structural needs per region or countries** in EU
  - Funds mainly for development of structures (such as transport (e.g. motorways, airports), for rural development (e.g. tourism in underdeveloped regions),
for disadvantaged groups, for education, for agriculture, etc
Fundamentals in European Funding

- Around **28% through centralised** actions

- Centralised actions are managed through **European Commission** and its directorates, agencies and other Bodies
- Trans-european Dimension and Impact!
  - ✦ **Horizon 2020** for Research and Innovation,
  - ✦ **Erasmus+** for Education/Sports/Youth,
  - ✦ **Creative Europe**: Culture and Media,
  - ✦ **Life+** for environment
  - ✦ **Europe for Citizens**: advancing the European idea across member states,
  - ✦ **Europeaid**: external aid, etc
Fundamentals in European Funding

Why? (its purpose) – Three Priorities

- **Create new and useful Knowledge + Innovation in Europe** (1st pillar in Horizon 2020: Excellent Science)
- **Advance Growth** (2nd pillar in Horizon 2020: LEIT – Leadership in Emerging and IndustrialTech)
- **Improve Quality of life** of European Citizens (see 3rd Pillar in Horizon 2020 – Societal Challenges)
A Three Pillar structure

Excellent Science

Industrial Leadership

Societal Challenges

Widening Participation

EIT

EURATOM

JRC
Overview of H2020 Programme

Excellent Science
- European Research Council (ERC)
- Future and Emerging Technologies (FET)
- Marie Skłodowska-Curie Actions (MSCA)
- Research Infrastructures

Industrial Leadership
- Enabling and Industrial Technologies (LEIT)
- Access to Risk Finance
- Innovation in SMEs – The SME Instrument
- Innovation in SMEs – Eurostars-2; CIP

Societal Challenges
- Health & Wellbeing
- Food Security
- Transport
- Energy
- Climate Action
- Societies
- Security

Widening Participation: Science with and for Society, Mainstreaming of Social Sciences and Humanities (SSH); Mainstreaming of ICT

European Institute of Innovation and Technology (EIT)
EURATOM
Joint Research Centre (JRC)
Excellent Science

European Research Council (ERC)
- Basic Frontier Science
- Research Revenue
- Mainly single applicants
- Open / any topic

Future and Emerging Technologies (FET)
- Opening up frontier Science
- Research Revenue
- Collaborative/Interdisciplinary/Open

Marie Skłodowska-Curie Actions (MSCA)
- Personalised training / career development programmes
- Individual or Collaborative
- Open and Themed
- Requires mobility

Research Infrastructures
- Revenue for infrastructure development / integration

Features

Example Goals

Scientific curiosity
Noble Prize research
High scientific impact
Build a research team
Leading publications

Validate fundamental technologies / IP
High scientific impact & publications
Build research network

Professional development...
People into your team
Team training
Strategic collaborations

Create or develop leading European research infrastructures
3. Societal Challenges

**Challenge focused** – finding diverse and innovative solutions to well defined societal challenges

**Less prescriptive** of S&T approach compared to FP7 – ‘without pre-determining technologies or solutions’

- Basic and applied R&D
- Demonstration & close to market
- Coordination
- Strong societal dimension & **outcome** orientated
- Societal challenge focused - S&T open

**Example Goals**
- High societal impact
- Good science & publications
- Grow or sustain a research team / equip
- Strategic networking (research & industry)
- Create, develop & commercialise IP
- Knowledge / technology transfer
Why is it important to understand TRLs?

*They will be used to help define:*

- Scope of project
- Intended start point
- The end result
- Eligible funding rate (100% or 70%)

<table>
<thead>
<tr>
<th>TRL Level</th>
<th>Description</th>
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<tbody>
<tr>
<td>1</td>
<td>Basic principles observed</td>
</tr>
<tr>
<td>2</td>
<td>Technology concept formulated</td>
</tr>
<tr>
<td>3</td>
<td>Experimental proof of concept</td>
</tr>
<tr>
<td>4</td>
<td>Technology validated in lab</td>
</tr>
<tr>
<td>5</td>
<td>Technology validated in relevant environment</td>
</tr>
<tr>
<td>6</td>
<td>Technology demonstrated in relevant environment</td>
</tr>
<tr>
<td>7</td>
<td>System prototype demonstration in operational environment</td>
</tr>
<tr>
<td>8</td>
<td>System complete and qualified</td>
</tr>
<tr>
<td>9</td>
<td>Actual system proven in operational environment</td>
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Essentials for Funding

EU Budget

960 billion €
2014-2020

26% Centralised Actions

72% Decentralised Actions

European Structural & Investment Funds €454 billion

ERDF €196bn

ESF €86bn

EAFRD €99bn

CAP €252bn

EAGF €5.7 bn

Cohesion Fund €64bn
EU Indirect Funds 2014-2020

- European Structural & Investment Funds: €454 billion
- Cohesion Fund: €64bn
- ERDF: €196bn
- ESF: €86bn
- EAGF: €252bn
- EAFRD: €99bn
- EMFF: €5.7bn
EU Direct Funds 2014-2020

- Horizon 2020: €80bn
- Erasmus+: €16.5bn
- COSME: €2.22bn
- Creative Europe: €1.3bn
- Justice: €0.47bn
- Connecting Europe: €30bn
- Food Safety: €1.7bn
- Gallileo: €7.8bn
- Europe for Citizens: €0.16bn
- EaSI: €0.9bn
- Food: €2bn
- EEA Norway: €1.8bn
- HAI: €1.2bn
- EIDHR: €1.25bn
- Life+: €3bn
- Viisegrad: €48m
- IfS: €2bn
- IPA: €0.1bn
- ENI: €13.6bn
- PI: €0.8bn
- DCI: €18bn
- SCFI: €0.2bn
- INSC: €0.2bn
The biggest market opportunity in Europe

How much (money) organisations spend in total every year for developing and participating in proposals and bids that fail to receive funding in Europe?

9-10 Billion

Big need for skilled funding experts!
New requirement for all European programmes for the period 2014-2020. A convincing Dissemination and Exploitation Strategy is required within the proposal application.
EU Budget

58 billion € for administration

960 billion € 2014-2020

902 billion € funding for yearly

Forefront know how
Growth
Better life for EU citizens

128 billion € funding

25% Success rate (1/4 proposals successful)
Proposal Development cost around 3% of requested funding
3.8 bn € spent annually for successful proposals of total budget 128 bn €

Very conservative Assumptions

CANNOT AFFORD TO FAIL!

75% failed rate 3/4 proposals unsuccessful
Proposal Development cost around 3% of requested funding
11.2 bn € spent annually for failed proposals for requesting european funds
WHY YOU CANNOT AFFORD TO FAIL!

Horizon 2020

4.8 billion € for administration

80 billion € 2014-2020

6%

75.2 billion € funding for yearly funding

Forefront, know how
Growth
Better life for EU citizens

94%

10.7 billion €

14% Success rate (~1/7)
Proposal Development cost around 3% of requested funding

86% failed rate (~6/7)
Proposal Development cost around 3% of requested funding

321 million € spent for successful proposals of total budget 10.7 bn €

1.9 bn € spent annually for failed proposals in Horizon 2020
Why EU-Funding Opportunity?

• Available Funding for 2014-2020 around €1 trillion. Main aim to support in European Union

• Success Rates in European Funding range from around 4% to 16%

• Failed proposals cost so far €8-9Billion to industry and society (huge waste in resources!)

• Successful projects may fall into “Valley of Death” -> fail to reach expected Impact or produce sustainable outcomes

• Therefore: serious and big need for **good quality writing & development** that will lead not only to successful proposals but also to sustainable projects!!
7 Myths in Funding Exploitation

**Myth 1:** Writing winning proposals is the result of only a learning by doing process

**Myth 2:** Writing a winning proposal requires years of experience and it is not for novices and beginners in the area

**Myth 3:** Public funding and especially funding by the European commission is so vast that you cannot follow all the funding opportunities available

**Myth 4:** Funding by the European Commission is not for me or for my organization that is very small
7 Myths in Funding Exploitation

**Myth 5:** Writing a winning proposal for funding requires a lot of effort, time and resources

**Myth 6:** My chances of having a winning proposal and receiving public funding are very low

**Myth 7:** You need to speak very good English or any other language for writing winning proposals
Now ... Some Lessons
All proposals are Stories!

What makes a proposal good?  
*Is there a recipe?*
Every good story needs a *Hero*
a hero alone is not enough!
a serious threat challenge required
quests, campaigns, strategies for conquest..
There is nothing impossible to him who will try"

...and the hero seeks to fight it!

S.M.A.R.T., specialization, glory
And then..

If *magic* or *super powers* are not available.... (and should NOT!)
The hero will need (or possess) special -state of the art- equipment + Technology.
But when the threat is too big, then the hero will need also...
Some strong Partners and allies!

- Thessalic Cavalry
- Thracian Peltasts
- Agrianian skirmisher
To conquer the threat and prevail 
(in the enlarged new *market!*)
What was the impact of Alexander the Great?

Imagine his campaign prescribed in a proposal!

Would you fund it?
What we’ve learned so far from H2020

• Highly competitive programme = most difficult ever!
• More “truly Innovative” ideas needed!
• Quality + cohesion of partners: a big+ (importance of v-clusters)
• More market oriented than its predecessors
• Proposal writing capacity + experience is a big asset!
What we’ve learned so far from H2020

SUCCESS FACTORS

- IDEA
- PARTNERS
- MARKET
- OTHER
What we’ve learned until now from H2020

“OTHER” success factors are NOT negligible:

– Benefits for SME’s
– Benefits for EU
– Previous collaborations / links between partners
– ... and “other” more

So ... experience matters!
TOGETHER we MAKE TODAY’S IDEAS TOMORROW’S TECHNOLOGY!

Thank you!

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Interdisciplinary Research
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Dr. Kostas Chrysagis, Hon. Professor City University
Ireteth Fellow - Horizon2020 expert

- NTUA Chem. Engineer - PhD with minor in Electr. Engineering + Postgrad diploma Harvard
- Involved ~ 25+ years in Research & Innovation (Coordinator of more than 20 EC projects, designer/contributor or participant in 110).
- Invests his time between Athens, London and Brussels bridging cross-disciplinary teams in Industry & Academia to create synergies + Innovation projects.
Who is Kostas Chrysagis

• Delivers work + training on EU Project Management and successful preparation of Innovation Projects for almost 15 years.

• Member of the Institute of Electrical and Electronics Engineers (IEEE), the American Institute of Chemical Engineers (AIChe) and the Technical Chamber of Greece (TEE).

• His persisting hobby flourishes in more than 100 EU-funded projects and 30+ national/regional projects of a total budget > €360 Million