How to Write a Competitive Proposal for Horizon 2020

COURSE PRESENTER
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sean.mccarthy@hyperion.ie

Hyperion Website
www.hyperion.ie

(Version 1.0)

Structure of the Workshop

1 From Framework 7 and Horizon 2020
2 New Issues in Horizon 2020
3 How European Research Proposals are Evaluated
4 The One Page Proposal
5 Discussion

# Hyperion’s Training Courses

- Getting Ready for Horizon 2020
- How to Write a Competitive Proposal for Framework 7
- How to Write the Abstract and Impact of a Research Proposal
- How to Negotiate and Administer Framework 7 Grant Agreements
- Training Course for European Research Advisors
- How to Present Research Activities to non-Research Audiences

Details on [www.hyperion.ie](http://www.hyperion.ie)

## Experience of Participants

<table>
<thead>
<tr>
<th>Who attended a previous Hyperion training course?</th>
</tr>
</thead>
<tbody>
<tr>
<td>Beginners ?</td>
</tr>
<tr>
<td>Research Support Office?</td>
</tr>
<tr>
<td>Legal Advisor on FP7?</td>
</tr>
<tr>
<td>Worked in Commission ?</td>
</tr>
<tr>
<td>Companies? (Large/SME?)</td>
</tr>
<tr>
<td>Private Consultants?</td>
</tr>
</tbody>
</table>

SME (Small and Medium Sized Enterprise)
Success Criteria for Horizon 2020 Proposals

Best Ideas  
Best Science  
From Telling to Selling (to Evaluators)

Best Partners  
Coordinator (Key issue)

Impact  
From Policy to Programmes to Projects

Professional Support Services  
Scientists undertake research  
Managers manage  
Administrators administer

EU (European Union)  EC (European Commission)
“Chasing Sheep is Best Left to Shepherds”*  music by Michael Nymam

Common Strategic Framework: Horizon 2020

(2007-2013)

Framework 7 (€50bn)  
CIP (€3.6bn)  
EIT (€309m)

(2014-2020)

Horizon 2020

CIP (Competitiveness and Innovation Programme)  
EIT (European Institute for Innovation and Technology)

Other EU Funding*

Joint Programming

* COSME, Erasmus for All, Life + Structural Funds etc.
How Horizon 2020 will be Prepared

1. Strategic Phase
   H2020 (2011-2013)

2. Programme Planning Phase (2013)

How to Write a Competitive Proposal for Horizon 2020

Politicians

European Commission

Researchers

europa.eu

Researcher Input

Participant Portal

Horizon 2020

The Preparation of Horizon 2020

CONTENT

Politicians

Researchers

RULES

Politicians

Researchers

EC (European Commission)

Financial Regulations

Rules*

Grant Agreement

*Rules of Participation

(c) Hyperion Ltd.   February 2013   www.hyperion.ie
How ‘Top Down’ Priorities are Identified (Lobby)

Politicians

EU 2020 Policy

ERAC (CREST) →

ERIAB

European Technology Platforms
Key Enabling Technologies (KET)
European Innovation Partnerships
COST Actions/Conferences
Joint Programming / ERAnets
EU R&D Associations/Networks
‘Expert’ Advisory Groups
Tender Studies/Foresight Studies
FP7 Projects (especially CSAs)

ERIAB (European Research Innovation Area Board)  CSA (Coordination and Support Actions)

How Priorities are Identified

The establishment of priorities during the implementation of this challenge will take account of relevant strategic research agendas and technology roadmaps part of:

* relevant aspects of the strategic implementation plan of the European Innovation Partnerships,
* European Technology Platforms,
* public-private partnerships (Joint Technology Initiatives);
* public-public partnerships (ERANets)
* and Joint Programming Initiatives.

H2020 Communication

Other means of identifying priorities:
- Consultations on policy documents, such as Action Plans and Green Papers, in particular those concerning the European Strategic Energy technology plan;
- Spontaneous inputs received from stakeholder groups or organisations;
- Opinions of the FP6 and FP7 Advisory Group on Energy;
- Member States (Programme Committee)
- Outcome of previous Framework 7 calls for proposals.
Poor Exploitation and Low Impact

European Science Paradox: Good at Science - Poor at Exploitation

The ‘Valley of Death’

Society

Science

Economy

Psalm 23

EU Policies and Horizon 2020

‘Lead Markets’*

Gap 1 Social Challenge

Gap 2 Regional Challenge

The Region

Gap 3 Economic Challenge

EU Industrial Sector

International

USA

BRIC


BRIC (Brazil, Russia, India, China)
EU Policies and Horizon 2020

- Societal Challenges
- "Smart Specialisation" (Structural Funds for R&I)

EU Policies and Horizon 2020 (Proposed)

- Societal Challenges
  - Health, Demographic Change and Well-being Challenge
  - Food Security and Bio-based Economy Challenge
  - Secure, Clean and Efficient Energy Challenge
  - Smart, Green and Integrated Transport Challenge
  - Resource Efficiency and Climate Challenge
  - Inclusive, Innovative and Secure Societies Challenge (Europe in a Changing World) ?+ (Secure Europe)?
EU Policies and Horizon 2020 (Proposed)

Industrial Leadership
- Leadership in Enabling and Industrial Technologies
  - Information and Communication Technologies
  - Nanotechnologies, Advanced Materials, Production Technologies
  - Biotechnology
  - Space Technologies

Innovation in SMEs
Access to Risk Finance

Key Enabling Technologies

- Advanced Materials
- Nanotechnology
- Micro- and Nanoelectronics
- Industrial Biotechnology
- Photonics
- Advanced Manufacturing Systems

H2020 Proposal (30th November 2011) €6.7 billion for KETs
Innovation in SMEs

Only SMEs will be allowed to apply

SME Instrument (SBIR Model)

Phase 1: Concept and feasibility assessment
Phase 2: R&D, demonstration, market replication
Phase 3: Commercialisation (only support)

Specific Support
Support for Research Intensive SMEs (Eurostars)
Enhancing the innovation capacity of SMEs
Supporting market driven innovation

SBIR (Small Business Innovation Research)

The SME instrument will cover all fields of science, technology and innovation in a bottom-up approach within a given societal challenge or enabling technology so as to leave sufficient room for all kinds of promising ideas, notably cross-sector and inter-disciplinary projects, to be funded.

– Phase 1: Concept and feasibility assessment:
SMEs will receive funding to explore the scientific or technical feasibility and the commercial potential of a new idea (proof of concept) in order to develop an innovation project. A positive outcome of this assessment will allow for funding under the following phase(s).

– Phase 2: R&D, demonstration, market replication:
Research and development will be supported with a particular focus on demonstration activities (testing, prototype, scale-up studies, design, piloting innovative processes, products and services, performance verification etc.) and market replication.

– Phase 3: Commercialisation:
This phase will not provide direct funding other than support activities, but aims to facilitate access to private capital and innovation enabling environments. Links to the financial instruments are foreseen, for example by giving SMEs that have successfully completed phases 1 and/or 2 priority within a ring-fenced volume of financial resources. SMEs will also benefit from support measures like networking, training, coaching and advice. In addition this part may connect to measures promoting pre-commercial procurement and procurement of innovative solutions.
“Although the EU remains the largest producer of scientific publications in the world, the US produces twice as many of the most influential papers (the top 1% by citation count). Similarly, international university ranking exercises show that US universities dominate the top places. And 70% of the world's Nobel Prize winners are located in the US.”

**Excellent Science**

This programme aims at reinforcing and extending the excellence of the EU’s science base and consolidating the European Research Area to make the EU’s research and innovation system more competitive on a global scale. It consists of four parts:

- **The European Research Council (ERC)** will provide attractive and flexible funding to enable talented and creative individual researchers and their teams to pursue the most promising avenues at the frontier of science, on the basis of EU-wide competition,

- **Future and Emerging Technologies** will foster radically new, high-risk ideas and accelerate the development of the most promising emerging areas of science and technology, and the corresponding cross-national communities of knowledge, to extend Europe’s capacity for advanced and paradigm-changing innovation.

- **Marie Curie Actions** will provide excellent and innovative research training as well as attractive career and knowledge exchange opportunities to ensure the availability of highly skilled and competent researchers best prepared to face current and future challenges.

- **Research Infrastructures** will promote world-class European research infrastructures and ensure EU-wide access for researchers, exploiting their human and innovation potential and reinforcing the consistency of related EU policy.
# Proposed Structure of Horizon 2020

<table>
<thead>
<tr>
<th>Industrial Leadership</th>
<th>€20.3 bn</th>
</tr>
</thead>
<tbody>
<tr>
<td>-Leadership in enabling and industrial technologies (LEIT) (Information and communication technologies, Nanotechnology, Advanced Materials, Biotechnology, Advanced Manufacturing Processes, Space) -Innovation in SMEs -Access to Risk Finance</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Societal Challenges</th>
<th>€35.9 bn</th>
</tr>
</thead>
<tbody>
<tr>
<td>Health, demographic change and wellbeing Food security, sustainable agriculture and the bio-economy Secure, clean and efficient energy Smart, green and integrated transport Climate action and resource efficiency + raw materials Inclusive, innovative and secure societies</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Excellent Science</th>
<th>€27.8bn</th>
</tr>
</thead>
<tbody>
<tr>
<td>European Research Council Future and Emerging Technologies Marie Skłodowska Curie Actions Research Infrastructures</td>
<td></td>
</tr>
</tbody>
</table>

### ‘Bottom Up’ Versus ‘Top Down’

<table>
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EIT | Euratom (2014-18) | JRC
Structure of the Workshop

From Framework 7 and Horizon 2020

2

New Issues in Horizon 2020

PPP (Public Private Partnerships)
FET (Future and Emerging Technologies)
EIT (European Institute of Innovation and Technology)
JPI (Joint Programming Initiatives)


Public Private Partnerships (PPP)

Framework 7

Institutional PPP (JTI's)
IMI
ARTEMIS
ENIAC
Clean Sky
Hydrogen Fuel Cells

Contractual PPP
Energy Efficient Buildings
Green Cars
Factory of the Future
Future Internet

JTI (Joint Technology Initiative)

Horizon 2020

Institutional PPP (JTI's)
IMI
ARTEMIS/ENIAC
Clean Sky
Hydrogen Fuel Cells
Railways
Bio-based industries (2014+)

Contractual PPP
Energy Efficient Buildings
Green Cars
Future Internet
Factory of the Future
Sustainable Processes (SPIRE) (2014+)
Photonics + Robotics (2014+)
Future and Emerging Technologies (FET)

Framework 7 ‘Cooperation’

1. Health
2. Food, agriculture and biotechnology
3. Information/communications
4. Nanosciences + nanotechnologies, Materials+new Production technologies
5. Energy
6. Environment and climate change
7. Transport
8. Socio-economic sciences + the humanities
9. Space
10. Security

Horizon 2020

FET* Programme (Covering all Areas)
€3.5 bn (proposed)

*FEST? Future Emerging Science and Technology

FET (Future and Emerging Technologies)

FET Open
FET Proactive
FET Flagships
FET Young Explorers
High-tech Research Intensive SMEs in FET Research
International Cooperation on FET Research:
Examples of FET Projects (FP7)

Novel design principles and technologies for a new generation of high dexterity soft-bodied robots inspired by the morphology and behaviour of the octopus (ICT)

The Body-on-a-Chip (BoC) (ICT)

The Listening Talker (ICT)

PLants Employed As SEnsor Devices (ICT)

Forecasting Financial Crises (ICT)

Synthetic pathways to bio-inspired information processing (ICT)

Reverse Electrodialysis Alternative Power Production (Energy)

PlantPower - living plants in microbial fuel cells for clean, renewable, sustainable, efficient, in-situ bioenergy production (Energy)

FET Flagships

<table>
<thead>
<tr>
<th>FuturICT</th>
</tr>
</thead>
<tbody>
<tr>
<td>GRAPHENE-CA</td>
</tr>
<tr>
<td>Guardian Angles (Zero power intelligent systems of systems)</td>
</tr>
<tr>
<td>HBP-PS (The Human Brain Project)</td>
</tr>
<tr>
<td>CA-ROBOCOM (Robot Companions for Citizens)</td>
</tr>
<tr>
<td>ITFoM (Modelling in health and medicine)</td>
</tr>
</tbody>
</table>

*FET Flagship Initiatives are large-scale, goal-oriented, science-driven research initiatives putting Europe in the forefront of science, providing a strong and broad basis for future technological innovation. The objective is to launch at least 2 flagships by 2013. The funding of these flagships is expected to be up to EUR 100 million per year over a period of up to 10 years.*
EIT
(European Institute of Innovation and Technology)


* €1542m direct + €1652m from Industrial Leadership and Societal Challenges

Knowledge and Innovation Communities (KIC)

EIT ICT Labs
EIT Climate KIC
EIT Inno Energy

Knowledge Triangle
Innovation
Research
Education

## EIT ICT Labs

<table>
<thead>
<tr>
<th>City</th>
<th>Institutions</th>
</tr>
</thead>
<tbody>
<tr>
<td>Berlin</td>
<td>Fraunhofer SAP Siemens TU Berlin DFKI Deutsche TeleKom</td>
</tr>
<tr>
<td>Helsinki</td>
<td>VTT Nokia Aalto (TKK)</td>
</tr>
<tr>
<td>Stockholm</td>
<td>SICS KTH Acreo TeliaSonera Ericsson</td>
</tr>
<tr>
<td>Eindhoven</td>
<td>Philips 3TU.NIRICT Novay TNO-ICT</td>
</tr>
<tr>
<td>Paris</td>
<td>Université Pierre et Marie Curie Université Paris-Sud INRIA Institut Telecom Alcatel-Lucent Orange-France Telecom Thomson</td>
</tr>
<tr>
<td>Trento</td>
<td>Trent RISE ?????</td>
</tr>
</tbody>
</table>

*“Representing 2/3 of European R&D spending in ICT”*


## EIT Climate KIC

<table>
<thead>
<tr>
<th>City</th>
<th>Institutions</th>
</tr>
</thead>
<tbody>
<tr>
<td>London</td>
<td>Thames Gateway Institute for Sustainability LSE Imperial College National Centre for Earth Observation ESA University of Reading UK Met Office Porter Alliance</td>
</tr>
<tr>
<td>Randstad</td>
<td>Wageningen University Alterra TNO Province of Utrecht Region of Rotterdam- Rijnmond Deltares Utrecht University Delft University of Technology</td>
</tr>
<tr>
<td>Zurich</td>
<td>ETH WSL IBM MeteoSwiss Siemens City of Zürich Techno Park Zürich Eawag Viva! campus AG PSI</td>
</tr>
<tr>
<td>Berlin</td>
<td>Albert-Einstein-Campus Postdam ZAB PIK SAP GFZ UnternehmerTUM TU München Berlin Partner GmbH Charlottenburg Campus Business Location Center TU Berlin Center of Entrepreneurship TU Berlin Berlin</td>
</tr>
<tr>
<td>Paris</td>
<td>CEA Campus Saclay plateau INRA ABA IncubAlliance Polystart UPMC University of Versailles St-Quentin en Yvelines Agoranov VC funds (Emertec) Paris-Ext Campus Marne-la-Vallée IPSL ParisTech Advancity MeteoFrance UVSQ</td>
</tr>
</tbody>
</table>

KIC INNO Energy

<table>
<thead>
<tr>
<th>Karlsruhe</th>
<th>SAP Karlsruhe University (UKA) Stuttgart University (US) Karlsruhe Institute of Technology (KIT) EnBW Forschungszentrum Karlsruhe (FZK)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Alps Valleys (Grenoble)</td>
<td>Schneider Electric CEA EDF AREVA Carnot Institute Grenoble INP CCIE/GEM Vattenfall CNRS INSA Lyon</td>
</tr>
<tr>
<td>Sweden</td>
<td>ABB KTH Vattenfall Uppsala University (UU)</td>
</tr>
<tr>
<td>Poland Plus</td>
<td>The Institute for Chemical Processing of Coal(IChPW) ZAK Kędzierzyn Central Mining Institute (GIG) AGH University of Science and Technology Silesian University of Technology (SUT)</td>
</tr>
<tr>
<td>Benelux (Eindhoven/Leuven)</td>
<td>K.U. Leuven TNO EANDIS VITO ECN TU/e</td>
</tr>
<tr>
<td>Iberia (Barcelona)</td>
<td>Iberdrola ESADE CIEMAT IREC Tecnalia Technical University of Catalunya (UPC) Instituto Superior Técnico de Lisboa (IST) Gas Natural</td>
</tr>
</tbody>
</table>

Website: http://eit.europa.eu/kics1/kic-innoenergy.html

Future Knowledge Innovation Communities

1. Innovation for healthy living and active ageing 2014
2. Raw materials- sustainable exploration, extraction, processing, recycling and substitution 2014
3. Food 4 Future -sustainable supply chain from resources to consumers
4. Added-value manufacturing
5. Smart secure societies 2014
6. Urban mobility 2014
7. Marine and Sustainable use of the seas (possible) 2014

Source: EIT Strategic Innovation Agenda (2011)
Background to Joint Programming

Public R&D Funding in Europe

- National R&D
- European Infrastructures
- FP7

More than 95% of National R&D budgets are spent nationally without coordination across countries. (European Commission)

Only 11% of National R&D budgets are fully Open to non-national researchers

* Source: TOWARDS JOINT PROGRAMMING IN RESEARCH: Working together to tackle common challenges more effectively. [SEC(2008) 2281]

ERA-Net, ERA-Net Plus and Article 185

- ERA-Net
- Collaboration of Programmes
- ERA-Net Plus (Article 182)*
- “Virtual Common Pot” (Money does not cross borders) (Single Call for Proposals)
- Article 169 (Article 185)*
- “Real Common Pot” (Money crosses borders) Integration of National Programmes

* Lisbon Treaty Calls may cover subjects beyond Framework 7 themes
Article 185 (formerly 169) Initiatives

Framework 6 (Article 169 Nice Treaty)
- EDCTP European and Developing Countries Clinical Trials Partnership

Framework 7 (Article 185 TFEU)
- AAL Ambient Assisted Living
- Bonus 185 Baltic Sea Research
- EMRP Metrology
- Eurostars Eureka programme for SMEs
  http://cordis.europa.eu/coordination/art169.htm
  TFEU (Treaty on the Functioning of the European Union)

Joint Programming (Possible Future Topics)

<table>
<thead>
<tr>
<th>Topic</th>
<th>Urban Europe - Global Challenges, Local Solutions</th>
</tr>
</thead>
<tbody>
<tr>
<td>Topic</td>
<td>Connecting Climate Knowledge for Europe</td>
</tr>
<tr>
<td>Topic</td>
<td>The microbial challenge – an emerging threat</td>
</tr>
<tr>
<td>Topic</td>
<td>More Years, Better Lives – Potential and Challenges</td>
</tr>
<tr>
<td>Topic</td>
<td>Water Challenges for a Changing World</td>
</tr>
<tr>
<td>Topic</td>
<td>Health and Productive Seas and Oceans</td>
</tr>
</tbody>
</table>
Structure of the Workshop

From Framework 7 and Horizon 2020

New Issues in Horizon 2020

How European Research Proposals are Evaluated

The One Page

Discussion


Evaluation of European Research Proposals

100 Proposals

Done by

Example only

Eligibility*

Commission

10 Eliminated

External Evaluators

50 Eliminated

15

Threshold

Commission+

20 Eliminated

Experts

Lists Published (Rejected, Funded, Reserve)

* Eligibility Criteria (deadline, number of partners, Form A/B, Funding Scheme, Content)
### Forms used by the External Evaluators

<table>
<thead>
<tr>
<th>Proposal</th>
<th>Proposal</th>
<th>Proposal</th>
</tr>
</thead>
<tbody>
<tr>
<td>Evaluator No. 1 (Remote)</td>
<td>Evaluator No. 2 (Remote)</td>
<td>Evaluator No. 3 (Remote)</td>
</tr>
<tr>
<td>Individual Assessment Reports</td>
<td>Individual Assessment Reports</td>
<td>Individual Assessment Reports</td>
</tr>
</tbody>
</table>

#### Observers
- Consensus Meeting between the 3 Evaluators (Rapporteur: Evaluator or another person)
- EC Moderator
- Consensus Report (Signed by evaluators)
- Panel Review (Ranking of Proposals + Rejection List)
  (Chaired by Commission, involving some expert evaluators)

#### List of Proposals for Funding + Evaluation Summary Reports

### Evaluation of Proposals (Possible Scenario)

<table>
<thead>
<tr>
<th>Topic</th>
<th>Score 1</th>
<th>Score 2</th>
<th>Score 3</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>15.0</td>
<td>14.5</td>
<td>14.0</td>
</tr>
<tr>
<td>2</td>
<td>14.5</td>
<td>14.0</td>
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<td>3</td>
<td>15.0</td>
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<tr>
<td>8</td>
<td>13.5</td>
<td>12.0</td>
<td>11.0</td>
</tr>
</tbody>
</table>

*Unfilled Topic*

Recommended for Funding

**Extra Criteria**
- (Political Priorities)
- *'Unfilled' Topics* (Scientific Excellence, Impact, SME involvement, Country balance, International Partner)

- "Unfilled Topic"

*Topics that did not have successful proposals in previous calls. SME (Small and Medium Enterprise)
How to Write a Competitive Proposal for Horizon 2020

How FP7 Cooperation Proposals are Evaluated

- Bureaucrats
  - Eligibility Criteria
  - Deadline
  - Forms A/B
  - Number of Partners
  - Budget / Content
  - Funding Scheme

- Scientific Evaluators
  - Excellence (>3/5)
  - Impact (>3/5)
  - Implementation (>3/5)

- Commission (Panel)
  - Evaluator’s Scores
  - Impact
  - Involvement of SMEs
  - Country balance/Gender

How to Prepare a Cooperation Proposal

- Bureaucrats
  - Full Proposal (Fill in Forms A/B)

- Scientific Evaluators
  - 4 Page Proposal
    - Address Evaluator’s Questions
      - (Abstract + Excellence + Impact + Implementation)

- Commission (Panel)
  - One Page Proposal
    - (Lobby Document)
### How Marie Curie Proposals are Evaluated

<table>
<thead>
<tr>
<th>Bureaucrats</th>
<th>Scientific Evaluators</th>
<th>Panel (Commission)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Eligibility Criteria</td>
<td>Evaluator’s Scores</td>
</tr>
<tr>
<td></td>
<td>Deadline</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Forms A/B</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Number of Partners (Network)</td>
<td></td>
</tr>
<tr>
<td>Science</td>
<td>(25-30%)</td>
<td></td>
</tr>
<tr>
<td>Researchers *</td>
<td>(25-30%)</td>
<td></td>
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<tr>
<td>Implementation</td>
<td>(15-25%)</td>
<td></td>
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<tr>
<td>Impact</td>
<td>(20-30%)</td>
<td></td>
</tr>
<tr>
<td>Training Plan (Fellow)</td>
<td>(15%)</td>
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<tr>
<td>Transfer of Knowledge **</td>
<td>(15-20%)</td>
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</tbody>
</table>

*IEF, ERG, IOF, IIF, IRG  **IAPP, IRSES, IIF,

“Training should aim at making them more independent and providing them with the skills to become team leaders in the near future.” Marie Curie Guide for Applicants

### Evaluation of ERC Grants

<table>
<thead>
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<th>Bureaucrats</th>
<th>Scientific Reviewers</th>
<th>Scientific Panel</th>
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<tbody>
<tr>
<td></td>
<td>Eligibility Criteria</td>
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<tr>
<td></td>
<td>-Excellence of Principal Investigator (Max 4, Threshold 2)</td>
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<td>-Excellence of the Science (Max 4, Threshold 2)</td>
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<td></td>
<td>Excellence of the Science Excellence of PI</td>
<td></td>
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<tr>
<td></td>
<td>Interviews with PIs</td>
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</table>

- European Commission not included
- PI (Principal Investigator)
Structure of the Workshop

From Framework 7 and Horizon 2020
New Issues in Horizon 2020
How European Research Proposals are Evaluated
The One Page Proposal
Discussion


Role of the One Page Proposal

<table>
<thead>
<tr>
<th>Role</th>
<th>What to do</th>
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<tbody>
<tr>
<td>Self</td>
<td>Put complex concept on paper</td>
</tr>
<tr>
<td>Advisor</td>
<td>Discuss idea with Research Support Services</td>
</tr>
<tr>
<td>NCP/ National Delegate</td>
<td>Discuss idea with NCP</td>
</tr>
<tr>
<td></td>
<td>Get topic into next Call for Proposals</td>
</tr>
<tr>
<td>Project Officer</td>
<td>Discuss idea with Project Officer of topic</td>
</tr>
<tr>
<td></td>
<td>Help select appropriate evaluators</td>
</tr>
<tr>
<td>Partners/ Competitors</td>
<td>Discuss idea with potential partners</td>
</tr>
<tr>
<td></td>
<td>(While being careful they are not competitors)</td>
</tr>
<tr>
<td>Abstract</td>
<td>The One Page Proposal leads to the Abstract</td>
</tr>
</tbody>
</table>

NCP (National Contact Point)  PO (Project Officer)
Structure: One Page Proposal

<table>
<thead>
<tr>
<th>Number</th>
<th>Official Number of the Proposal</th>
</tr>
</thead>
<tbody>
<tr>
<td>Topic/Grant</td>
<td>Topic Number: e.g. 4.3.1</td>
</tr>
<tr>
<td>Title</td>
<td>Title (Slogan) ACRONYM (Brand name)</td>
</tr>
<tr>
<td>Objective</td>
<td>What we are planning to do</td>
</tr>
<tr>
<td>Background</td>
<td>Why we are doing it (5 Key Questions)</td>
</tr>
<tr>
<td>Results</td>
<td>Results ? + Who wants them ? (Impact)</td>
</tr>
<tr>
<td>Phases</td>
<td>How the work will be done (Science)</td>
</tr>
<tr>
<td>Consortium</td>
<td>Who will do the work (Consortium)</td>
</tr>
<tr>
<td>Cost/Duration</td>
<td>How much it will cost and duration</td>
</tr>
</tbody>
</table>

Structure of the ‘One Page Proposal’

<table>
<thead>
<tr>
<th>Official Number (if available)</th>
<th>How to Prepare</th>
</tr>
</thead>
<tbody>
<tr>
<td>Work Programme + Funding Scheme</td>
<td>1</td>
</tr>
<tr>
<td>Title of Proposal + ACRONYM</td>
<td>4</td>
</tr>
<tr>
<td>Objective of the Proposal</td>
<td>5</td>
</tr>
<tr>
<td>Background</td>
<td>3</td>
</tr>
<tr>
<td>Impact (Expected Results + Lead Users)</td>
<td>2</td>
</tr>
<tr>
<td>Phases of the Work</td>
<td>6</td>
</tr>
<tr>
<td>Organisations involved and their roles</td>
<td>7</td>
</tr>
<tr>
<td>Expected Cost+Duration</td>
<td>8</td>
</tr>
</tbody>
</table>
How to Write a Competitive Proposal for Horizon 2020

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TITLE

The title should be based on the impact

*Development of a Sensor to Measure Hydrocarbons in Water*

ACRONYM: Must make sense e.g. *Hydrocarbex Sensor*

Title could be used in a sentence + self explanatory

The TITLE is usually written last

Title= Slogan for the Project  Acronym = Brand

Examples of Titles and Acronyms

<table>
<thead>
<tr>
<th>Title</th>
<th>ACRONYM</th>
</tr>
</thead>
<tbody>
<tr>
<td>Social Platform on Research for Families and Family Policies</td>
<td>FAMILYPLATFORM</td>
</tr>
<tr>
<td>Gross Inequality Impacts</td>
<td>GINI</td>
</tr>
<tr>
<td>Work Organisation and Restructuring in the Knowledge Society</td>
<td>WORKS</td>
</tr>
<tr>
<td>A Micro-Level Analysis of Violent Conflict</td>
<td>MICROCON</td>
</tr>
<tr>
<td>Debates about Female Muslim Headscarves in Europe</td>
<td>VEIL</td>
</tr>
<tr>
<td>Platform of Local Authorities and Cities Engaged in Sciences</td>
<td>PLACES</td>
</tr>
<tr>
<td>Code of Conduct for Responsible Nanosciences and Nanotechnologies Research</td>
<td>NANOCODE</td>
</tr>
<tr>
<td>Science Teacher Education Advanced Methods</td>
<td>S-TEAM</td>
</tr>
<tr>
<td>Learning, Teaching, Research and Policy in Inquiry-Based Science Education</td>
<td>Mind the Gap</td>
</tr>
</tbody>
</table>
The Objective of the Proposal

A short clear description of the proposed work

The aim of this proposal is to develop a technical prototype of an infrared sensor that will measure hydrocarbons in water. The sensor will use a fibre-optic cable, coated with a polymer and the level of the hydrocarbons will be determined by measuring the changes in refractive index. The key research challenges will be: assessing the use of infrared to measure the level of hydrocarbon in water; identifying a range of polymers that could be used in the sensor and finally assessing the accuracy of the sensor.

This should be the last paragraph written !!
### 5 Key Questions (Applied Research)

<table>
<thead>
<tr>
<th>Educate the Evaluator with ‘Facts’ and ‘Figures’</th>
</tr>
</thead>
<tbody>
<tr>
<td>Why bother? (what problem are you trying to solve?)</td>
</tr>
<tr>
<td>Is it a European priority? Could it be solved at National level?</td>
</tr>
<tr>
<td>Is the solution already available (product, service, transfer)?</td>
</tr>
<tr>
<td>Why now? (What would happen if we did not do this now?)</td>
</tr>
<tr>
<td>Why you? (Are you the best people to do this work?)</td>
</tr>
</tbody>
</table>

*Questions must be answered in the first 15 seconds of the proposal!*

TELES (Technical Economic Legislation Environment Social)?

### 5 Key Questions (Basic Research)

<table>
<thead>
<tr>
<th>Educate the Evaluator with ‘Facts’ and ‘Figures’</th>
</tr>
</thead>
<tbody>
<tr>
<td>Why bother? (what new knowledge are you generating?)</td>
</tr>
<tr>
<td>Will this establish Europe as International leader?</td>
</tr>
<tr>
<td>Is the knowledge already available (state-of-the art)?</td>
</tr>
<tr>
<td>Why now? (Why was this not done before now?)</td>
</tr>
<tr>
<td>Why you? (Are you the best people to do this work?)</td>
</tr>
</tbody>
</table>

*Questions must be answered in the first 15 seconds of the proposal!*
5 Questions (Example 1)

Solar Disinfection of Drinking Water (SODIS)

According to the World Health Organisation (WHO), over 1 billion people around the world have no access to any kind of treated drinking water. Every year 1.6 million people, most of them young children, die of diseases such as cholera which are attributable to a lack of access to safe drinking water and basic sanitation. Millions more are infected with water borne parasites. The United Nations Millennium Development Goals call for the proportion of people without access to safe drinking water and basic sanitation to be halved by 2015.

Harnessing the power of the sun to disinfect water is nothing new; the technique was used in India 4000 years ago. In recent years solar water disinfection has undergone something of a revival, as its ease of use and low costs make it ideal for use in poor, developing countries.

The only equipment used in this projects is a water bottle and a steady supply of sunlight. This work has been approved by the WHO. In this project research will be undertaken on the use of catalysts to speed up the process of disinfection and to provide the WHO with scientific data to support their guidelines.

Source: CORDIS Focus No 272 November 2006

5 Questions (Example 2)

Development of an Infrared Sensor to Measure Hydrocarbons in Water

In 1999 the European Commission published the ‘Water Framework Directive (COM 2000/60). Annex 1 of this legislation lists 11 parameters that must be continuously monitored to meet the legislation. One of these parameters is hydrocarbon. The sensors that are used today to monitor hydrocarbons in water are laboratory based, they require regular calibration and are operated by specialist personnel. The sensors cost over €3000 each and can measure to an accuracy of 2000 parts per billion (ppb). If the legislation is enforced it will cost water companies throughout Europe hundreds of missions of euros to monitor this one parameter.

The aim of this proposal is to develop a low cost infrared sensor that can monitor hydrocarbons to meet the legislation. The proposed sensor will be located in the water system and will provide continuous signals to a central control unit. The estimated cost of the sensor will be less than 50 euro per sensor and it will measure to an accuracy of 1000 ppb.
## Strategy for Research Groups

<table>
<thead>
<tr>
<th>Mapping</th>
<th>Clarify scientific ‘niche within a niche’</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Identify Relevant Topics and Funding Schemes</td>
</tr>
<tr>
<td>Strategic Networking (Visibility)</td>
<td>Identify EU officials, best scientists, gurus</td>
</tr>
<tr>
<td></td>
<td>Join EU Associations/Networks/Platforms</td>
</tr>
<tr>
<td>EU Policy</td>
<td>Study relevant European Policy Documents</td>
</tr>
<tr>
<td>Procedures</td>
<td>Participate in EU Evaluations, Committees</td>
</tr>
</tbody>
</table>

EU (European Union)

---

## Strategy for Newcomers

### Challenges
- Learning the Rules, Procedures and Secrets (unwritten rules)
- Competing with established networks and experience

### How to Start
- Mapping: Who’s Who in EU Research (your niche)
- Visibility via Networking (Networks, Conferences, Evaluation)
- Easy Start: Fellowships (Euraxess), Access Infrastructures
- Minor Partner to Work-package Leader to Coordinator

Links on [www.hyperion.ie/beginners.htm](http://www.hyperion.ie/beginners.htm)
What was the Key Message from the Workshop?

Any Comments or Questions?

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