Introducing Horizon 2020

Dr Martin Grabert
A short history of the EC Framework Programs


• In the 1980s, the Germans had some experience with their concept of “Verbundforschung”. This concept was taken up by the Research Commissioner at the time, Etienne Davignon, who ‘converted’ this concept into a policy, together with a number of other ideas, such as that of the first grant programme for researchers, or the first major European programme in IT technology, ESPRIT.

• All this with a view to putting a little order into an increasing profusion of activities by placing them in a single ‘framework’ to counteract the perceived American dominance. The impact was achieved by a medium-term ‘program’, with a budget covering several years. This was a ‘French policy style’ approach to planning, combined with ‘German engineering’.
Motivation for EC Framework Programs
History of EC Framework Programs

- EEC Treaty
- EURATOM Treaty
- ECS Treaty
- Treaties fusion
- Single European Act
- Maastricht Treaty
- European Research Area (ERA)
- Amsterdam Treaty
- Lisbon Treaty
- European Research Council
- European Charter for Researchers
- ECS Treaty
- JRC creation
- First Specific Programmes
- FP1
- FP2
- FP3
- FP4
- FP5
- FP6
- FP7

Timeline:
- 1952
- 55
- 57
- 67
- 84
- 87
- 91
- 93
- 94
- 98
- 99
- 00
- 03
- 05
- 07
- 09
- 14
- 2020

Horizon 2020
History of EC Framework Budgets

Billions €

<table>
<thead>
<tr>
<th>(FP1)</th>
<th>FP2</th>
<th>FP3</th>
<th>FP4</th>
<th>FP5</th>
<th>FP6</th>
<th>FP7</th>
<th>Horizon2020</th>
</tr>
</thead>
<tbody>
<tr>
<td>€ 3.27</td>
<td>€ 5.36</td>
<td>€ 6.55</td>
<td>€ 13.12</td>
<td>€ 14.96</td>
<td>€ 19.24</td>
<td>€ 53.30</td>
<td>€ 78.60 *</td>
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* current prices
H2020 as part of the European policy framework

H2020 is a core part of Europe 2020, integrating the political concepts of the Innovation Union & the European Research Area:

– Responding to the economic crisis to invest in future jobs and growth
– Addressing peoples’ concerns about their livelihoods, safety and environment.
– Strengthening the EU’s global position in research, innovation and technology

Through promotion of intensive innovation, from research to retail, in all forms.

With a focus on societal challenges facing EU societies, e.g. jobs, health, environment, food and energy security and efficient transport. Offering simplified access, for all companies, universities, institutes in all EU countries and beyond.
H2020 structure

Europe 2020 priorities

- Coherent with other EU and MS actions
- Simplified Access
- International Collaboration
- European Research Area

Tackling Societal Challenges
- Health, demographics and wellbeing
- Food security and sustainable bio-resources
- Secure, clean and efficient energy
- Smart, green and integrated transport
- Resource Efficiency and Climate Challenge
- Secure and inclusive societies

Creating Industrial Leadership and Competitive Frameworks
- Leadership in enabling technologies (ICT, nanotech etc)
- Access to risk finance
- Integrating research, education and innovation (EIT)
- Innovation in SMEs

Seamless Connections

Excellence in the Science base
- Frontier research (ERC, FET)
- Skills and career development
- Priority research infrastructures

Common rules, toolkit of funding schemes

Coherent with other EU and MS actions
H2020 budget

2014-2020: € 78,600,000,000 (current prices) ~ AU$115.6bn
H2020 international collaboration

*Enhancing and focusing EU international cooperation in research and innovation: a strategic approach* [COM(2012)497]

International cooperation activities developed under Horizon 2020 should contribute to the objectives of:

- Strengthening the Union’s excellence and attractiveness in research and innovation and its economic and industrial competitiveness;
- Tackling *global societal challenges*; and,
- Supporting the *EU’s external policies*.

The new international cooperation strategy focuses on research in areas of common interest and mutual benefit in order to achieve these objectives. To strengthen implementation, the strategy also differentiates between three country groupings:

- Industrialised and emerging economies (which will only receive funding under specific conditions);
- Enlargement and neighbourhood countries (eligible for automatic funding); and
- Developing countries (eligible for automatic funding).
A Research Manager's Introduction to Horizon 2020

ARMS pre-conference workshop

Rado Faletic
Director, Projects & Communications
Montroix Pty Ltd
Going through the details

• Detailed structure
• Eligibility rules
• Funding possibility and options
• Hints & tips
Structure of Horizon 2020

• Three pillars:
  – **Excellent Science**: support for the best science
  – **Industrial Leadership**: support for future technologies
  – **Societal Challenges**: solving major social concerns
Excellent Science

• Specifically for developing research talent
• Open to researchers from any country, in any field of research
• Best scientists supported by the European Research Council (ERC)
• Marie Skłodowska-Curie Actions (MSCA) facilitates the mobility of researchers
• Future and Emerging Technologies (FET), support for radical new ideas and fields
• Investment in infrastructures
European Research Council

- Grants for individual investigators and their teams
- Any researcher of *any* nationality can apply
- Portable grant
- Must undertake the project at a **host institution** in Europe (including private enterprise)
- Can include **international partners** (with funding)
- Must spend at least 50% (30% for AdG) of time working on project, and 50% of time in Europe – i.e. joint appointments are possible
- Funding for up to 5 years
## ERC matrix

<table>
<thead>
<tr>
<th>grant</th>
<th>ARC equivalent</th>
<th>eligibility</th>
<th>amount</th>
<th>calls</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>StG Starting Grant</strong></td>
<td>DECRA</td>
<td>2-7 years after PhD At least 1 major paper</td>
<td>€1.5 million + €0.5 million</td>
<td>closed next deadline Feb 2015</td>
</tr>
<tr>
<td><strong>CoG Consolidator Grant</strong></td>
<td>Future Fellowship</td>
<td>7-12 years after PhD Several major papers</td>
<td>€2 million + €0.75 million</td>
<td>closed next deadline March 2015</td>
</tr>
<tr>
<td><strong>AdG Advanced Grant</strong></td>
<td>Laureate Fellowship</td>
<td>10+ years of significant research</td>
<td>€2.5 million + €1 million</td>
<td>open deadline 21 Oct 2014</td>
</tr>
</tbody>
</table>

- [erc.europa.eu](http://erc.europa.eu)
Marie Skłodowska-Curie Actions

• Designed to improve research outcomes and career development via mobility
• Excellent mechanism for building lab-lab relationships and long-term collaborations
• Focus on (fully-funded) individual fellowships: international and intersectoral
• Grants go to a host institution in Europe
• Must consider impact, dissemination, training, knowledge transfer (in addition to excellence)
MSCA fellowships

• 1-2 years (plus 1 year returning for European)
• Fully funded (salary, travel, administration)
• Must have administrative host institution in Europe
• Any career level (postdoc, career re-entry, repatriation)
• Must have at least 4 years research experience (which can include PhD)
• Note: exchange rates (EUR to AUD)
Industrial Leadership & Societal Challenges

- Enabling and Industrial Technologies
  - ICT, nanotechnology, materials, manufacturing, biotechnology, space

1. Health, Demographic Change and Wellbeing
2. Food Security, Sustainable Agriculture and Forestry, Marine, Maritime and Inland Water Research and the Bioeconomy
3. Secure, Clean and Efficient Energy
4. Smart, Green and Integrated Transport
5. Climate Action, Environment, Resource Efficiency and Raw Materials
6. Europe in a changing world – Inclusive, innovative and reflective societies
7. Secure societies – Protecting freedom and security of Europe and its citizens
Collaborative opportunities

• Topics are prescribed by the EC
• Many different types of projects:
  – Networks on topics, or in regions
  – Coordination actions
  – Collaborative projects (5-60 partners)
• How to find call topics?
  – Go to the Participant Portal
    ec.europa.eu/research/participants/portal
Australian participation in FP7

17 September 2014
Some basic admin info

- Success rate: 10-20% (for previous FP7)
- Fields of research: all
- Funding: 100% + 25%
- Minimum 3 independent legal entities, from separate EU Member States or Associated Countries
  - Plus any other legal entity from any country
  - Any exceptions are noted in individual calls
- Evaluation of proposals based on:
  a. Excellence
  b. Impact
  c. Quality & efficiency of implementation
International cooperation

• Horizon 2020 is open to participants from all countries
• Coordinator can be from any country, but usually Member State or Associated Country
• Many call topics will target specific countries/regions
• EC may exclude some countries from participation (e.g. joint calls)
• EU participants sign contract under EU law, but other countries sign contract under Belgian law
Funding rules

• Automatic and full funding for participants from:
  – EU Member States
  – Horizon 2020 Associated Countries
    • Albania, Bosnia & Herzegovina, Faroe Islands, FYRoM, Iceland, Israel, Liechtenstein, Moldova, Montenegro, Norway, Serbia, Turkey
  – Plus a large number of “developing” countries

• Notable exceptions:
  – Australia, Brazil, Canada, China, India, Japan, Mexico, New Zealand, Russia, Saudi Arabia, Singapore, South Korea, Switzerland*, Taiwan, UAE, USA
Funding to Australia?

• Funding to countries such as Australia, China, USA, etc. is possible when:
  – There is a specific bilateral agreement that includes funding (not the case for Australia),
  – The call topic allows for it, or
  – Their participation is essential to address the topic (e.g. global leader, infrastructure, location, unique data)
Financial support in Australia

• Health:
  – NHMRC – European Union Collaborative Research Grants

• Everything else:
  – Oh dear!?
Steps in the process

1. Read the *Work Programme* and/or explore the call topics online
2. Contact colleagues
3. Attend *InfoDay* in Europe
4. Build consortium
5. Develop & submit proposal
6. Evaluation
7. Negotiation with EC, sign *Grant Agreement*
8. Start project
Strategy & hints

• Let an experienced coordinator do the hard work
• Approach your EU colleagues & consider your local and regional partners
• Establish your financial requirements and sources of funds prior to application
  – Best strategy is to use existing funds
  – Consider if you qualify for Horizon 2020 funding
  – Secure additional funding prior to proposal submission
  – Identify potential sources of funding
• Accentuate your unique assets / capabilities
• Join a COST Action (www.cost.eu)
• Become an evaluator
Getting more help

• Supporting projects:
  – CAESIE (Australia-EU), caesie.org
  – PACE-Net Plus (Pacific-EU), pacenet.eu
  – INCONTACT (global), www.ncp-incontact.eu

• National Contact Points
  – ec.europa.eu/research/participants/portal/desktop/en/support/national_contact_points.html

• Montroix Pty Ltd:
  – Australia’s foremost experts in H2020 – over 30 years experience, www.montroix.com
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