The EU's Seventh Framework Programme (FP7)

The University of Newcastle – 31 August 2012

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Director, Projects & Communications

Montroix Pty Ltd

Support in Australia

- formerly FEAST (Forum for European-Australian Science and Technology cooperation), www.feast.org
- upcoming CAESIE (Connecting Australian-European Science and Innovation Excellence)
- National Contact Point (NCP) for FP7

Web portal www.feast.org

- Opportunities: including FP7 calls and Australian co-funding opportunities
- Diary: including European research conferences
- Articles: including bilateral news
- Resources: country pages, FP7, European projects with Australia
- FP7 checklist for Australians www.feast.org/members/fp7checklist

Presentation overview

- Mobility in FP7
- FP7 overview
- Examples:
 - Health
 - Food, Agriculture and Fisheries, and Biotechnology (KBBE)
 - Information and Communication Technologies (ICT)
 - Energy
- FP7 strategy
- Introduction to Horizon 2020 & CAESIE
- Q&A

RTD in Europe



Australia (third country)

European opportunities grid

| Objective | Training | Career development | Build/maintain networks | Collaborative projects | Strategic planning |
|------------------------|-----------------------------|-------------------------|-------------------------|------------------------|-------------------------|
| Postgraduate student | MC ITN Erasmus Mundus | | | | |
| Postdoc | Marie Curie fellowships | Marie Curie fellowships | | | |
| Junior lecturer | | ERC | MC IRSES COST | FP7 Cooperation | |
| Group leader | | ERC | MC IRSES COST | FP7 Cooperation | |
| Research management | | | | | FP7 NoE FP7 large IP |
| Policy community | | | | | FP7 capacities ERANET |

Marie Curie Actions

- Individual fellowships
 - IIF International Incoming Fellowship
 - IOF International Outgoing Fellowship
 - CIG Career Integration Grant
- Institutional programs
 - IRSES International Research Staff Exchange Scheme
- Businesses can participate
- ec.europa.eu/research/mariecurieactions

Marie Curie International Incoming Fellowships (IIF)

- Researchers can be of any nationality.
- The researcher has spent less than 1 year during the previous 3 years in Europe and has carried out research in Australia for at least 1 year
- 4 years research experience or/and a PhD (not an MD)

- 1-2 years in Europe.
- Support salary + oncosts, travel expenditure, limited research costs.
- €38,000-87,500 per annum
- €800-1,000 per month mobility/training
- 1 stage evaluation: S&T quality (25%), researcher (25%)
- Importance of knowledge transfer through dissemination and training
- Annual call, deadline 14 August 2013
- ec.europa.eu/research/mariecurieactions/aboutmca/actions/iif

Marie Curie International Outgoing Fellowships (IOF)

- Researchers eligible if nationals of a European country, but can be nationals of another country if at least 5 years in Europe
- The researcher has spent less than 1 year during the previous 3 years in Australia
- 3 year fellowships (1-2 years in Australia, in general as visiting fellow visa 419)
- Evaluation gives weight to proposal quality, researcher track record, benefits for EU including dissemination and training
- Annual call, deadline 14 August 2013
- <u>ec.europa.eu/research/mariecurieactions/about-mca/actions/iof</u>

Marie Curie Career Integration Grants (CIG)

- Researcher of any nationality working in Australia for more than 3 years and wanting to take up a position in a European institution
- To help establish researcher in a stable research career in Europe
- Haven't spent more than 12 months in the host country during the last 3 years
- Max €25,000/year for up to 4 years toward all research expenses (including salary) and 10% overheads
- 2x deadlines, 18 September 2012 & 7 March 2013
- ec.europa.eu/research/mariecurieactions/aboutmca/actions/cig

Marie Curie International Research Staff Exchange Scheme (IRSES)

 Funding to establish or reinforce long-term research co-operation through a coordinated joint and balanced program of exchange for 2-4 years, up to 12 months for any individual staff member.

- The EC will support European staff travelling to Australia, but not vice-versa
- In Australia, each organisation is expected to cover their own costs
- Annual call, deadline 17 January 2013
- We recommend pooling existing and available resources that you would have anyway used to travel to the European countries in the IRSES project
- The "balanced exchange" is not measured in budget spent but in equivalent person month in exchange, and between Europe and all the non-European countries

European Research Council (ERC)

- Akin to ARC Discovery awards & grants
- Starting Grant (StG), 2-7 years after PhD
- Consolidator Grant (CoG), 7-12 years after PhD
- Advanced Grant (AdG), open to all
- Synergy Grant (SyG), interdisciplinary frontier research

ERC grants

- All nationalities and disciplines can apply
- Must conduct work at a host institution in the EU (Member State or Associated Country)
- Host institution can be public or private (including business)
- Can include international team members
- Very prestigious but highly competitive (~10-15% success rate)
- Strongly focused on track record

- European Research Council
 - erc.europa.eu
- Read the Work Programme and the Guide for Applicants
- Must spend at least 50% of working time on the ERC project
- StG open now, closes 17 October
- CoD opens 7 November
- AdG open now, closes 11 November
- SyG opens 10 October

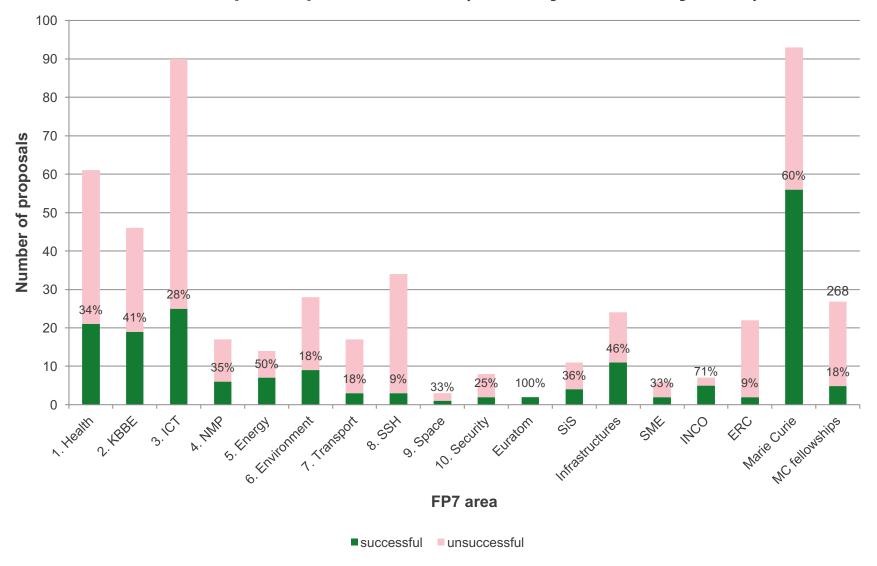
COST

- European Cooperation in Science and Technology, the oldest pan-European research mechanism
- Supports cooperation among scientists and researchers across Europe, allowing the coordination of nationally-funded research on a European level
- Valuable for building networks and collaborations, and seeding projects
- Funding available through the Australian Academy of Science for Australia-based researchers to take part in COST Actions
- www.cost.eu
- www.science.org.au/internat/europe/cost.html

Seventh Framework Programme (FP7)

- Largest research funding program in the world
- Over €50 billion between 2007-2013
- cordis.europa.eu/fp7
- Any legal entity can participate

Australian participation in FP7 (January 2007 - July 2012)



FP7 funding schemes

- Collaborative projects:
 - Small or medium-scale focused/targeted projects
 - Large scale integrated projects
 - Research for the benefit of specific groups
- Networks of Excellence
- Coordination and Support Actions
- Support for training and career development of researchers (Marie Curie actions)
- European Research Council grants

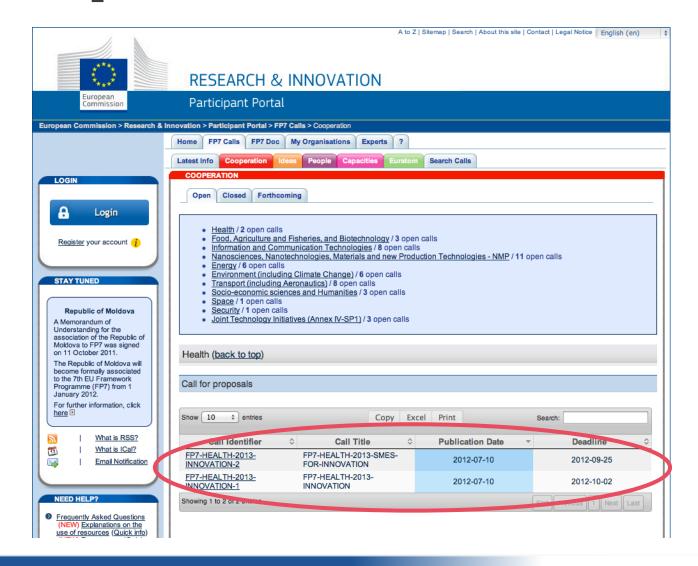
Eligibility of Australian participants

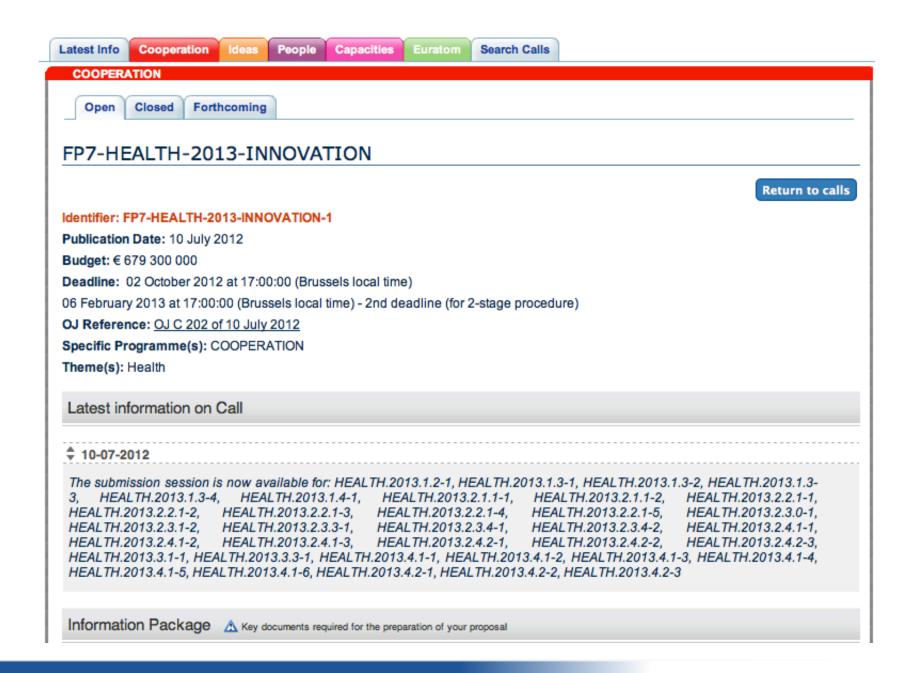
- Minimum requirements of European countries
 (3)
- Australian participation: Third Country with S&T agreement (Rules for participation, Article 11)
- Funding: a Community financial contribution may be granted provided that it is essential for carrying out the indirect action (I, p.6)
- ftp.cordis.europa.eu/pub/fp7/docs/guidelinethird-country-participants en.pdf

Proposals

- Annual Work Programmes describing call details:
 - Budget per project
 - Number of projects
 - Topics
 - Other specific conditions
 - cordis.europa.eu/fp7/find-doc en.html
- Each project will be submitted by a European chief investigator: the proposal coordinator
- Consultants specialised in FP7 projects deliver a very high success rate when helping a consortium
- Main resource: *Guide for Applicants* ec.europa.eu/fp7calls

Example: call details





In order to receive a complete Information Package for this call, you will need to select the following elements:

- 1. The call fiche (only available in .pdf format)
- 2. The work programme (.pdf format)
- 3. FP7 factsheets in your preferred language an overview of the basic features of this programme (.pdf format)
- 4. The Guides for Applicants relevant to the funding schemes used in this call (.pdf format)

| Click to download file | Select language |
|--|-----------------|
| FP7 Factsheets | English ‡ |
| Cooperation Work Programme 2013 - General Introduction | English |
| Work Programme 2013 - Health | English |
| Cooperation Work Programme 2013 - General Annexes | English |
| Call Fiche FP7-Health-2013-Innovation-1 | English |
| Clinical trials Guidance Document | English |
| Guide for Applicants (General part) - Collaborative projects (CP) | English |
| Guide for Applicants (Annexes) - Collaborative projects (CP) | English |
| Guide for Applicants (General part) - Coordination and Support Actions (coordinating) - (CA) | English |
| Guide for Applicants (Annexes) - Coordination and Support Actions (coordinating) - (CA) | English |
| Guide for Applicants (General part) - Coordination and Support Actions (supporting) - (SA) | English |
| Guide for Applicants (Annexes) - Coordination and Support Actions (supporting) - (SA) | English |

Example: Health

- General information: cordis.europa.eu/fp7/health
- Calls: <u>ec.europa.eu/research/participants/portal/page/cooperation#health</u>
- Calls close around end of September
- €0.8 billion+

Health areas (2013)

- 1. Biotechnology, Generic Tools and Medical Technologies for Human Health
 - 1.2 Detection, diagnosis and monitoring
 - 1.3 Suitability, safety, efficacy of therapies
 - 1.4 Innovative therapeutic approaches and interventions

2. Translating Research for Human Health

- 2.1 Integrating biological data and processes: largescale data gathering, systems biology
 - 2.1.1 Large-scale data gathering
- 2.2 Research on the brain and related diseases, human development and ageing
 - 2.2.1 Brain and brain-related diseases
- 2.3 Translational research in major infectious diseases: to confront major threats to public health
 - 2.3.1 Anti-microbial drug resistance
 - 2.3.3 Potentially new and re-emerging epidemics
- 2.3.4 Neglected infectious diseases
- 2.4 Translational research in other major diseases
 - 2.4.1 Cancer
 - 2.4.2 Cardiovascular diseases

3. Optimising the Delivery of Health Care to European Citizens

- 3.1 Translating the results of clinical research outcome into clinical practice including better use of medicines, appropriate use of behavioural and organisational interventions and new health therapies and technologies
- 3.3 Health promotion and prevention

4. Other Actions Across the Health Theme

- 4.1* Coordination and support actions across the theme
- 4.2 Responding to EU policy needs

- Eg 4.1-5 Global initiative on geneenvironment interactions in diabetes/obesity in specific populations
 - This action should support the coordination of research activities in the field of population research into diabetes and obesity that are currently funded by ... other national funding agencies, notably in Mexico, New Zealand, Canada, the USA and Australia, as well as charities. It aims at aligning programmes and policies across Europe and the world, and contributing to increase sharing of best practice and best use of research and public health resources
- See the Work Programme
 32745-annex 4 to the decision health wp2013-18 june for egreffe en.pdf

NHMRC funding

- NHMRC has co-funding for FP7 Cooperation calls (not limited to Health)
- Up to \$1 million (\$200,000/year)
- www.nhmrc.gov.au/grants/typesfunding/nhmrc-european-unioncollaborative-research-grants

Example: KBBE

- KBBE: Knowledge-Based Bio-Economy, or Food, Agriculture and Fisheries, and Biotechnology (FAFB)
- General information: cordis.europa.eu/fp7/kbbe
- Calls: ec.europa.eu/research/participants/portal/page/ cooperation#kbbe
- Calls closes in February
- €0.3 billion+
- Australia viewed as strong partner (and should ask for more EC funding)

KBBE areas (2013)

- 1. Sustainable production and management of biological resources from land, forest and aquatic environments
 - 1.1 Enabling research
 - 1.2* Increased sustainability of all production systems (agriculture, forestry, fisheries and aquaculture); plant health and crop protection
 - 1.3 Optimised animal health, production and welfare across agriculture, fisheries and aquaculture
 - 1.4 Socio-economic research and support to policies
 - 1.5 "The Ocean of Tomorrow" challenges in ocean management

2. Fork to farm: Food (including seafood), health and well being

- 2.1 Consumers
- 2.2** Nutrition
- 2.3 Food processing
- 2.4 Food quality and safety
- 2.5 Environmental impacts and total food chain
- 2.6 European Research Area

3. Life sciences, biotechnology and biochemistry for sustainable non-food products and processes

- 3.1 Novel sources of biomass and bioproducts
- 3.2 Marine and fresh-water biotechnology (blue biotechnology)
- 3.3 Industrial biotechnology: novel high addedvalue bio-products and bio-processes
- 3.4 Biorefinery
- 3.5 Environmental biotechnology
- 3.6 Emerging trends in biotechnology

Eg. 1.2-08 Innovative insights and tools to integrate the ecosystem-based approach into fisheries advice

 Participation of relevant partners from Australia, Canada and New Zealand will add to the scientific and/or technological excellence of the project and ensure effective uptake of on- going international efforts for the implementation of the ecosystem-based approach to fisheries management.

See the Work Programme
32746-annex 5 to the decision kbbe for cap en.pdf

Example: ICT

- ICT: Information and Communication Technologies
- General information: cordis.europa.eu/fp7/ict
- Calls: <u>ec.europa.eu/research/participants/portal/page/cooperation#ict</u>
- Two calls per year, current call closes January
- €0.7 billion+ in main call, €0.2 billion+ in FET,
 €0.5 billion+ in other calls
- Australia view as strong partner, with relatively good success rate of getting EC funding
- NITCA & CSIRO ICT have strong track record

ICT areas (2012/2013)

- Challenge 1:* Pervasive and Trusted Network and Service Infrastructures
- Challenge 2: Cognitive Systems and Robotics
- Challenge 3: Alternative Paths to Components and Systems
- Challenge 4: Technologies for Digital Content and Languages
- Challenge 5: ICT for Health, Ageing Well, Inclusion and Governance
- Challenge 6: ICT for a Low Carbon Economy
- Challenge 7: ICT for the Enterprise and Manufacturing
- Challenge 8: ICT for Learning and Access to Cultural Resources
- 9:* Future and Emerging Technologies (FET)
- 10:* International Cooperation
- 11: Horizontal Actions

Eg. 1.5 Trustworthy ICT

- EU-Australia cooperation on building user trust in broadband delivered services
- Contact Dr John Percival, DSTO
 john.percival@dsto.defence.gov.au, 08 7389 5756

Eg. 10.3 International partnership building and support to dialogues

 Support dialogues between the EC/EU and strategic partner countries and regions, and to foster cooperation with strategic third country organisations in collaborative ICT R&D both within FP7 / Horizon 2020 and under relevant third country programmes

See the Work Programme 32767-annex 6 to the decision ict for cap en.pdf

A note about FET

- FET: Future and Emerging Technologies
 - "FET fosters exploratory research to open up new avenues across the full breadth of future information and communication technologies. It supports new and alternative ideas, concepts or paradigms of risky or non-conventional nature. FET aims to go beyond the conventional boundaries of ICT and ventures into uncharted areas, often inspired by and in close collaboration with other scientific disciplines."

FET-Open

- "FET-Open is a light, topic-agnostic and deadline free scheme specifically designed to be open and continuously responsive to novel and fragile ideas that challenge current thinking, whenever they arise and wherever they come from.
- "FET is especially well placed for global collaboration."
- In 2011, FET-Open focuses on:
- Challenging Current Thinking
- High-Tech Research Intensive SMEs in FET Research
- FET Young Explorers
- International Cooperation on FET Research
- Call details: ec.europa.eu/fp7calls?callIdentifier=FP7-ICT-2011-C
 Deadline(s): 10 April & 25 September 2012

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 - International Cooperation on FET Research
 - Xtrack (risky & non-conventional ideas)



FET Flagships

 "Science-driven, large-scale, multidisciplinary research initiatives oriented towards a unifying goal, with a transformational impact on science and technology ... visionary and highly ambitious in terms of scientific challenges, resources required and coordinated efforts ... cooperation among a range of disciplines, communities and programmes, extending over a long period (in the order of 10 years duration)."

Example: Energy

- General information: cordis.europa.eu/fp7/energy
- Calls: <u>ec.europa.eu/research/participants/portal/page/cooperation#energy</u>
- €0.2 billion in main calls, €0.3 billion+ in other calls

Energy areas (2013)

1. Hydrogen and Fuel Cells

 see Fuel Cells and Hydrogen Joint Undertaking www.fch-ju.eu

2. Renewable Electricity Generation

- 2.1 Photovoltaics
- -2.3 Wind
- 2.4 Geothermal
- 2.6 Ocean
- 2.7 Hydro
- 2.9 Cross-Cutting Issues

3. Renewable Fuel Production

- 3.2 Second Generation Fuel from Biomass
- 3.7 Cross-Cutting Issues

4. Renewables for Heating and Cooling

4.1 Low/Medium Temperature Solar Thermal Energy

5. CO₂ Capture and Storage Technologies for Zero Emission Power

- 5.1* CO₂ Capture
- 5.2 CO₂ Storage

6. Clean Coal Technologies

 – 6.1* Conversion Technologies for Zero Emission Power Generation

7. Smart Energy Networks

- 7.1 Development of Inter-Active Distribution Energy Networks
- 7.2 Pan-European Energy Networks
- 7.3 Cross Cutting Issues and Technologies

8. Energy Efficiency and Savings

– 8.8 Smart Cities and Communities

9. Knowledge for Energy Policy Making

 – 9.2 Scientific and Socio-Economic Support to Policy

10.Horizontal Programme Actions

- 10.1 Integration of the European Energy Research Area
- 10.2 "The Ocean of Tomorrow"

Eg. 5.1.2 New generation high-efficiency capture processes

- "Promoting international cooperation with Australia, initiatives for collaboration between project(s) under this topic and selected Australian project(s) will be encouraged on the basis of mutual benefit and reciprocity ... are endorsed by RET or DIISRTE."
- Contact Sean Hannan, International CCS, RET sean.hannan@ret.gov.au, 02 6243 7468

See the Work Programme
32765-annex 8 to the decision energy for cap en.pdf

Useful documents

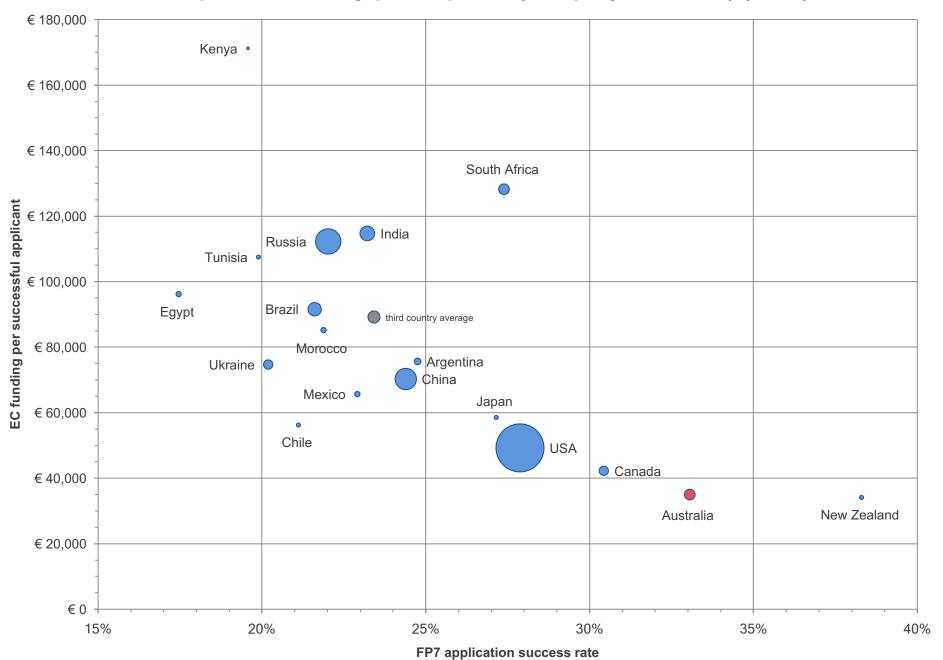
FP7 2013 Work Programmes: Opportunities for Australia

ec.europa.eu/research/iscp/pdf/fp7 infoday 2012/australia wp 2013.pdf

 Practical Advice for Proposal Submission and Negotiation

ftp://ftp.cordis.europa.eu/pub/fp7/docs/guideline-third-country-participants en.pdf

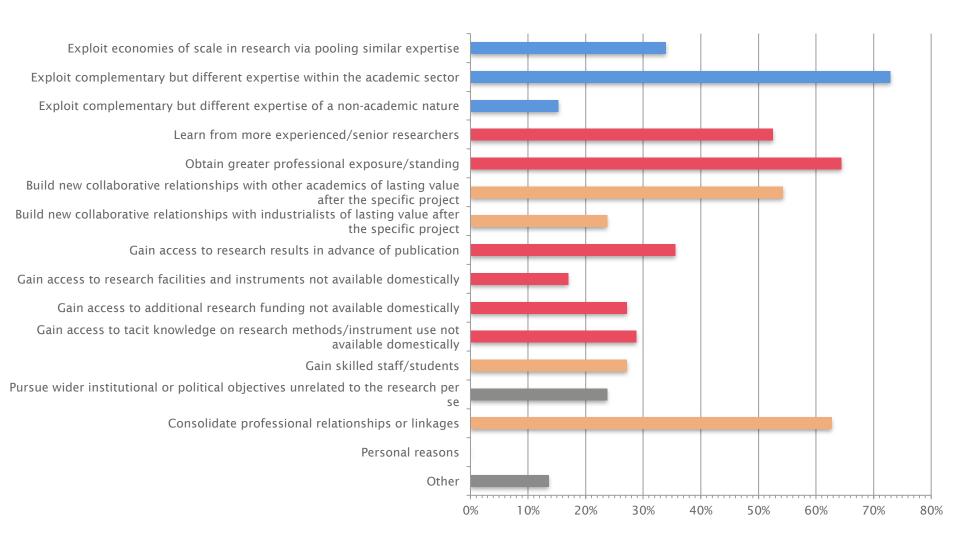
FP7 top third country participants (50+ projects each) (2011)



FP7 stocktake (2009)

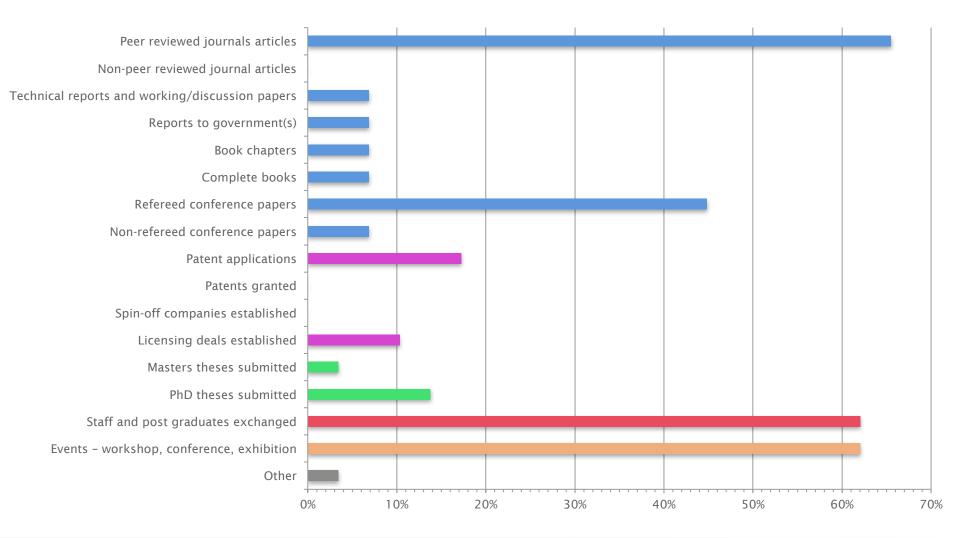
- You have 20+ years academic experience
- You've probably had prior involvement with FP7
- You've either worked, or been trained, in Europe
- You entered FP7 via an established relationship in Europe
- The reasons you joined the project was to:
 - Exploit complimentary academic expertise
 - Gain exposure/standing
 - Consolidate existing relationship, build new relationships, and learn from more experienced researchers
- Biggest perceived risks were obtaining external funding and administrative issues
- You relied almost exclusively in advice from your European partners, who didn't tell you the whole story about your eligibility
- FEAST Discussion Paper #3 www.feast.org/index/document/3

Main reasons for participation



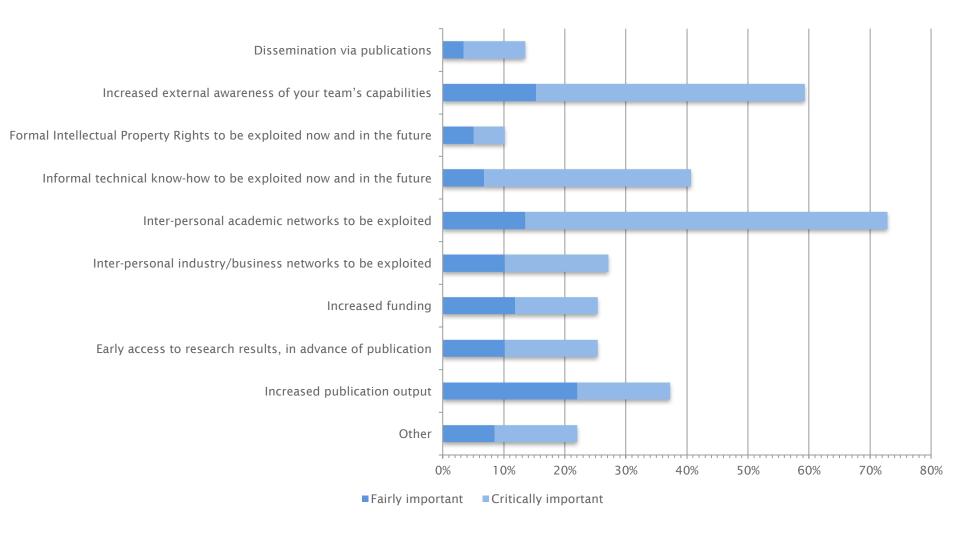


Formal and anticipated outputs





Important outcomes





Key messages

- Know your position of strength, and the value you bring to the consortium
- Determine what you want/need in order to participate
- Develop a financially viable default position
- Involve your research managers early

Horizon 2020

- This is what comes after FP7, 2014-2020
- €80 billion proposed
- Brings together three programs:
 - Framework Programme for Research and Technical Development (FP)
 - Competitiveness and Innovation Framework Programme (CIP)
 - European Institute of Innovation and Technology (EIT)
- Similar rules to FP7
- "Impact" as a selection criteria
- Will see new co-funding via third parties
- ec.europa.eu/research/horizon2020

Horizon 2020: Excellent Science

- €28 billion
- European Research Council (ERC)
- Future and Emerging Technologies (FET)
- Marie Curie Actions (MC)
- Research infrastructures

Horizon 2020: Industrial Leadership

- Enabling and Industrial Technologies (includes key emerging technologies, KETs)
 - ICT
 - Nanotechnologies
 - Advanced materials
 - Biotechnology
 - Advanced manufacturing and processing
 - Space
- Access to risk finance
- Innovation in SMEs

Horizon 2020: Societal Challenges

- 1. Health, Demographic Change and Wellbeing
- 2. Food Security, Sustainable Agriculture, Marine and Maritime Research and the Bio-Economy
- 3. Secure, Clean and Efficient Energy
- 4. Smart, Green and Integrated Transport
- Climate Action, Research Efficiency and Raw Materials
- 6. Inclusive, Innovative and Secure Societies

CAESIE

- Connecting Australian-European Science and Innovation Excellence
- The next evolution beyond FEAST
- Special focus on SMEs and innovation
- Support for 3 societal challenges:
 - Clean energy
 - Healthy ageing through enabling technologies
 - Sustainable cities
- Limited travel/seed funding
- Kick-off in October 2012

Become an expert evaluator

- Get an inside experience
- Network with European experts
- The EC wants more Australian evaluators
- https://cordis.europa.eu/emmfp7

www.montroix.com

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