



Forum for European-Australian Science and Technology cooperation

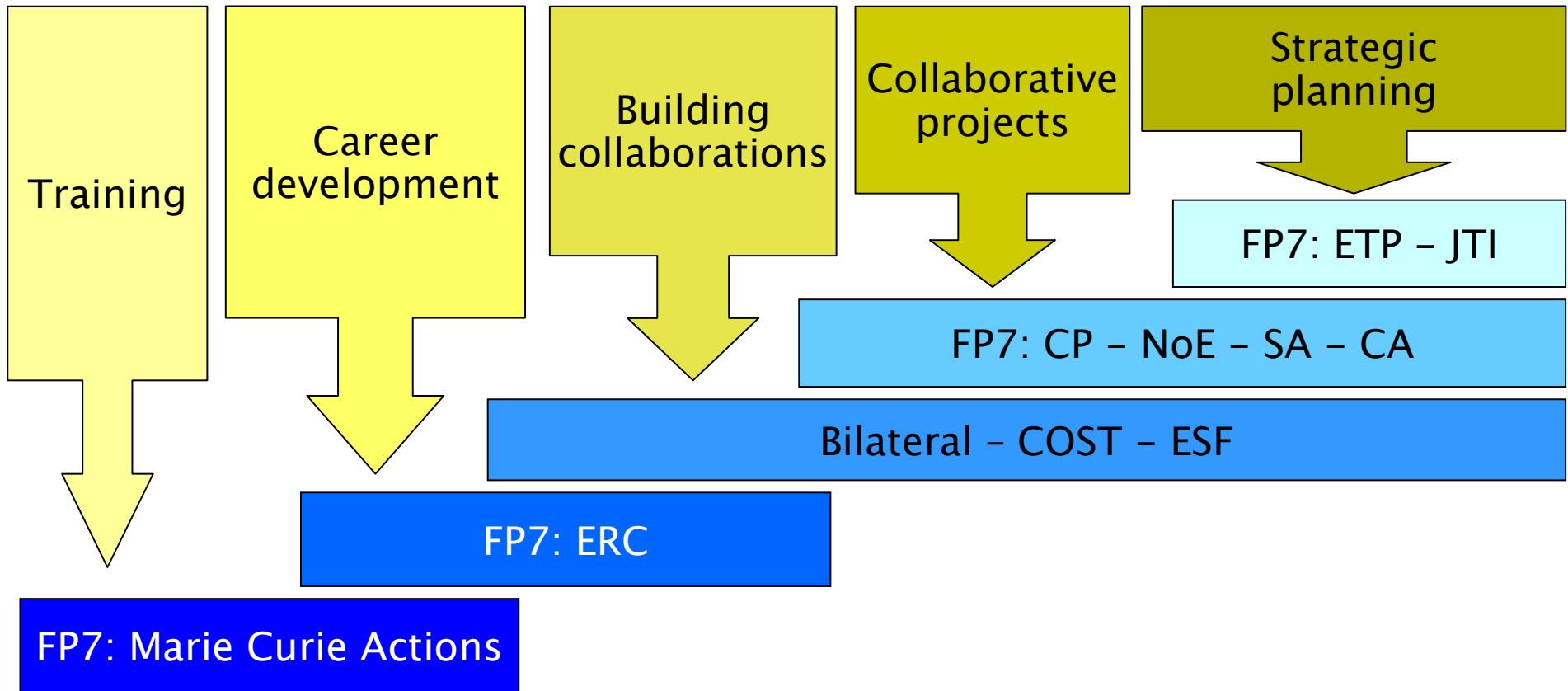
# Research collaboration with Europe: *opportunities, prospects and challenges*

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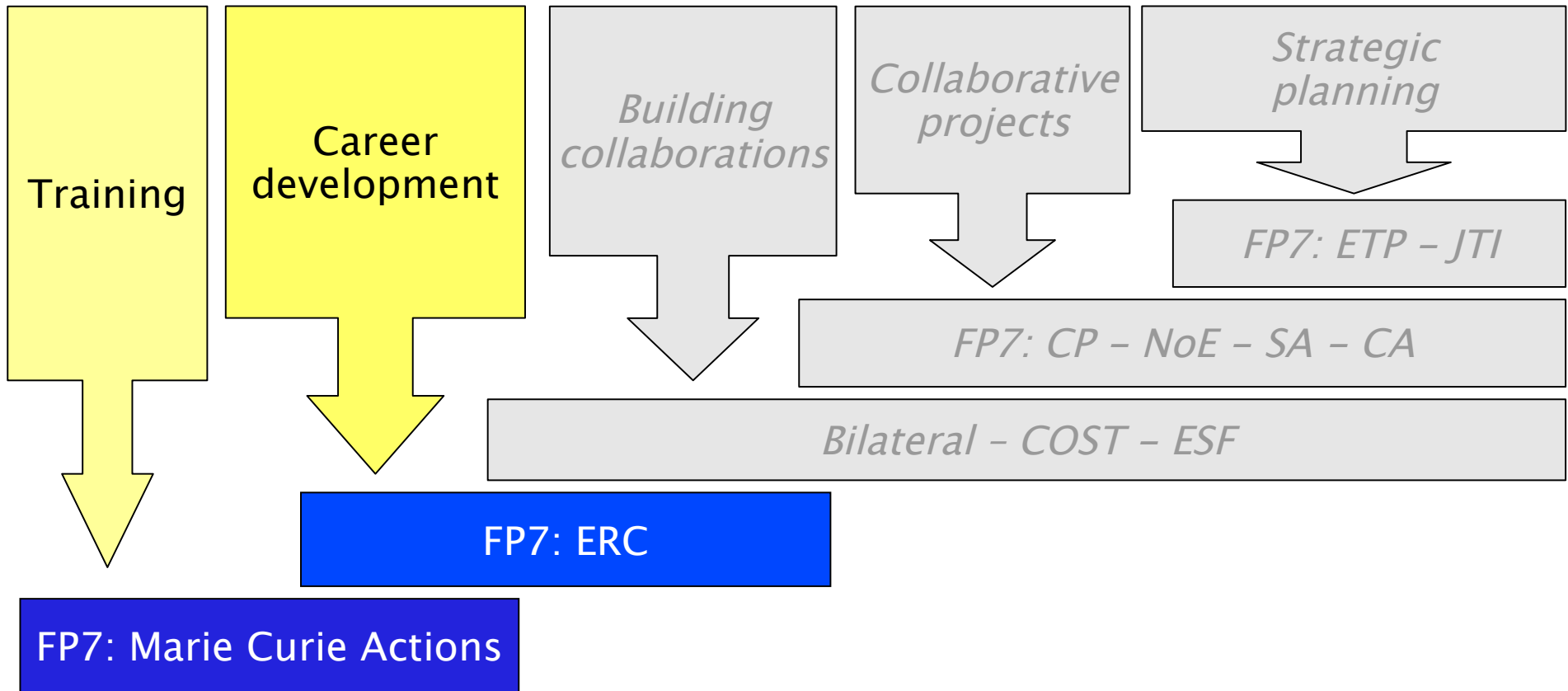
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# European research step by step



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# People: Marie Curie actions

- EU-27 Human Resources:
  - 3% EU nationals, 3% third countries
  - 18.4% Switzerland, 7.2% UK, 6.4% Germany, 4.1% France
- €4.7b (+50% from FP6), 35,000 researchers
- FP6: 34 IIF, 30 OIF – FP7: double participation?
- Success rate in FP6: approx. 30%
- Call PEOPLE-OIF/IIF2007: **deadline 14/08/2007**

# Marie Curie networks

- Initial training of researchers (ITN)
  - 4 years
  - 3 years PhD scholarships
  - Limited postdocs and visiting scientists
  - Training programmes
  - Nationals of a country other than the country of the host organisation where they will carry out their project.

# MC International Outgoing Fellowships (IOF)

- Researchers must be nationals of a Member State or Associated Country
- *Contract in the host organisation (Europe)*
- 3 year fellowships (1–2 years in AU)
- 1 stage evaluation: S&T quality (3), researcher (4) (overall 70%)
- In general, visa 419 visiting fellow

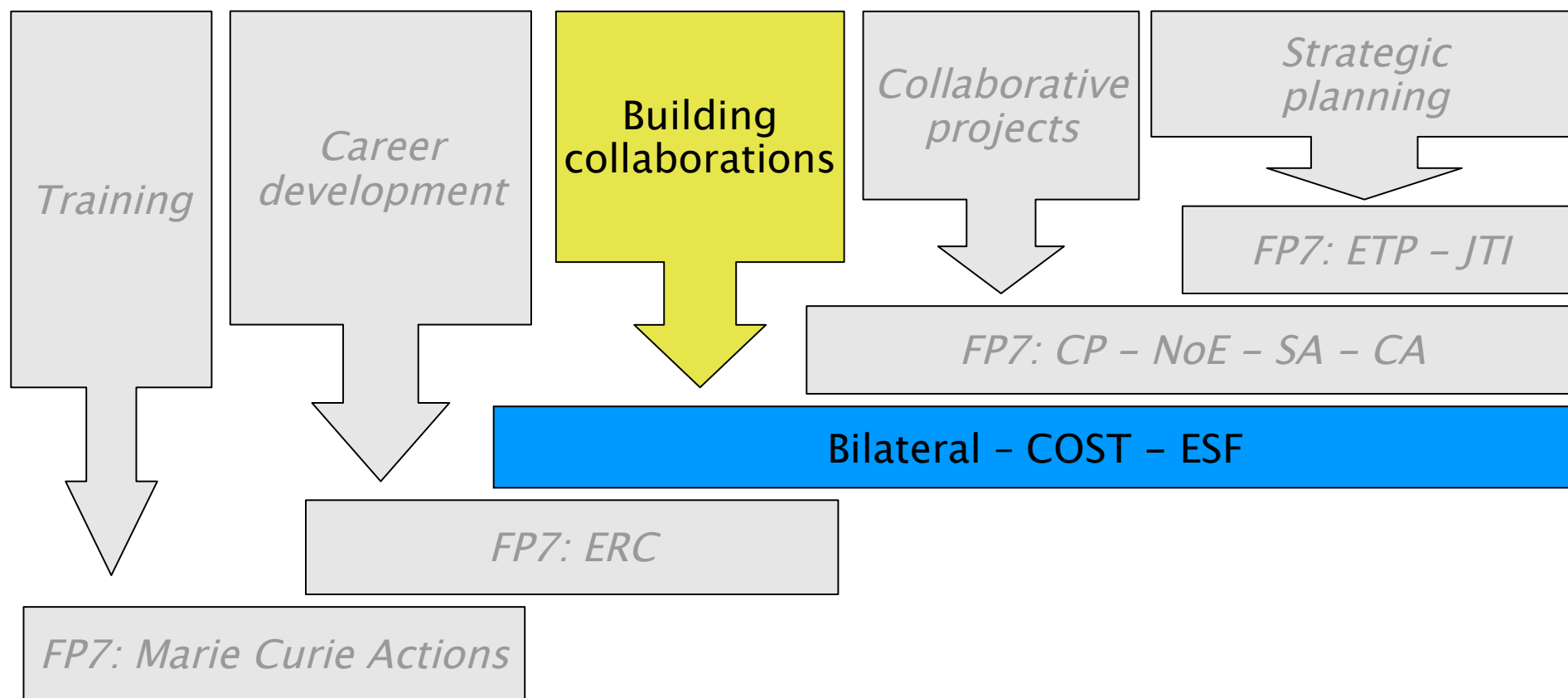
# MC International Incoming Fellowships (IIF)

- Researchers must be nationals of a Third Country
- *Contract in the host organisation (Europe)*
- Incoming phase (1–2 years in Europe)
- No return phase in Australia
- 1 stage evaluation: S&T quality (3), researcher (4) (overall 70%)
- Reintegration Grants (IRG)

# Ideas: frontier research

- ERC: the European Research Council
- ERC Starting Grants
  - Single investigator **IN** Europe: PhD +(2–8)
  - Bottom up (2 stage evaluation)
  - €100–400K per year up to 5 years
  - Multinational team
- ERC Advanced Grants
- Next calls in 2008 (+9,000 applicants in 2007)

# European research step by step



# *COST: European Co-operation in Science and Technology*

- Does not fund research itself, but co-ordination, management, workshops and meetings.
- Stimulates research by bringing researchers together in “actions” proposed by scientists: “bottom up”

# COST Actions: Australian Academy of Science support

- Short missions to Europe (max 3 months)
- Total budget: up to 10 visits per annum (FY 2007–2008 and 2008–2009)
- Up to A\$5,000 per visit, covering a return airfare and daily living allowances
- Priority to agriculture, biotech and food, nanotech, ICT, environment and climate change

# DEST: International Science Linkages (ISL) programme

- FAST: French–Australian Science and Technology Programme
- Australian Academy of Science: Scientific visits to Europe
- Australian Academy of Technological Sciences and Engineering (ATSE): Frontiers of S&T Missions and Workshops
- Next Deadlines around July 2008

# Thinking International

- Human Frontier Science Program (HFSP)
  - International collaborations in research focused on complex mechanisms of living organisms
  - Research Grants (Young Investigators' Grants, Program Grants)
  - Fellowships
  - Calls in 2008 (Short-term Fellowships have an open call)
- European Molecular Biology Laboratory (EMBL)
  - Targeted partner laboratories in Australia
  - Projects, fellowships, scholarships
  - *Under construction*

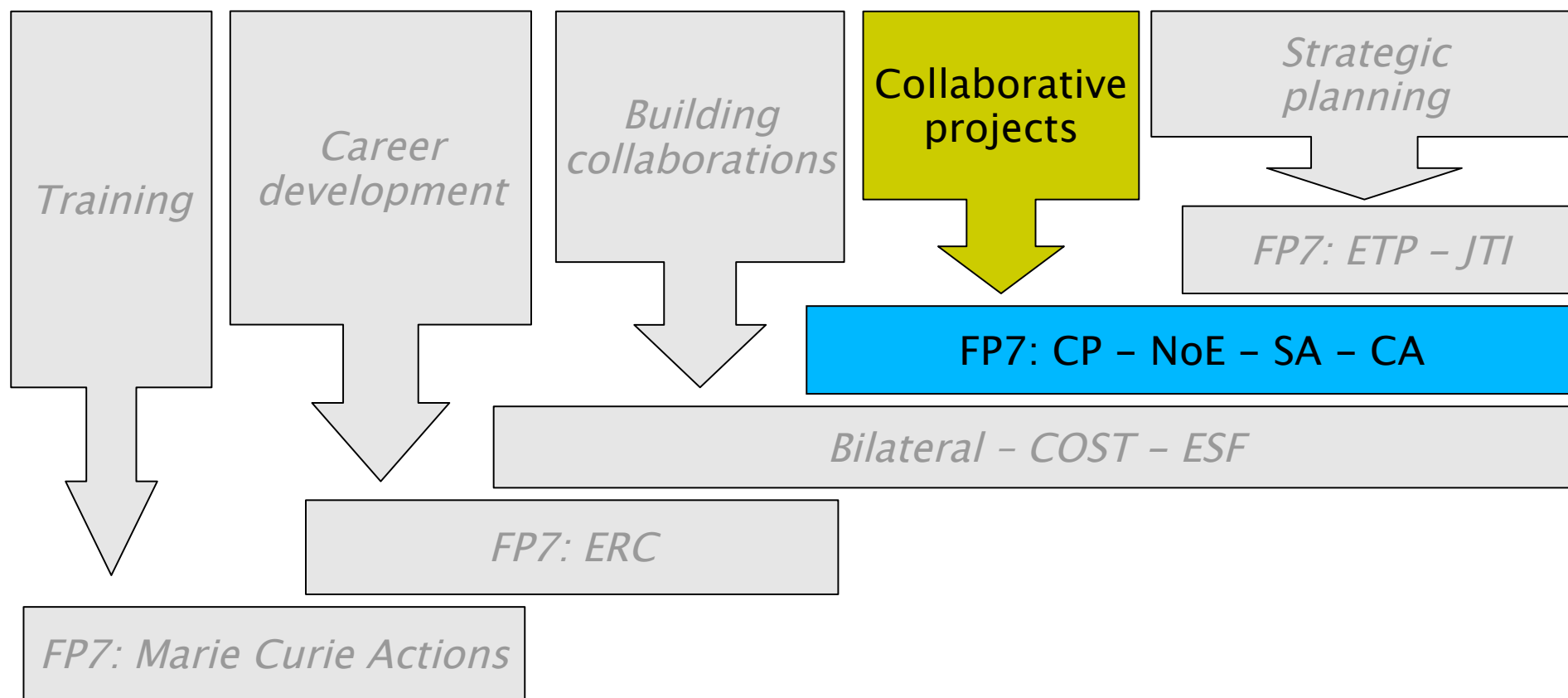
# More of Europe

- JRC: Joint Research Centre
  - ISPRA (Italy)
- ESF: European Science Foundation
  - Workshops
  - Conferences
  - Forward Looks
  - EUROCORE

# More of Europe

- Member States: reign of diversity
- Sweden
  - STINT: Institutional Grants Programme (IGP)
- Germany
  - Humboldt Research Fellowships
- France
  - CNRS: International Programs for Scientific Cooperation – PICS

# European research step by step



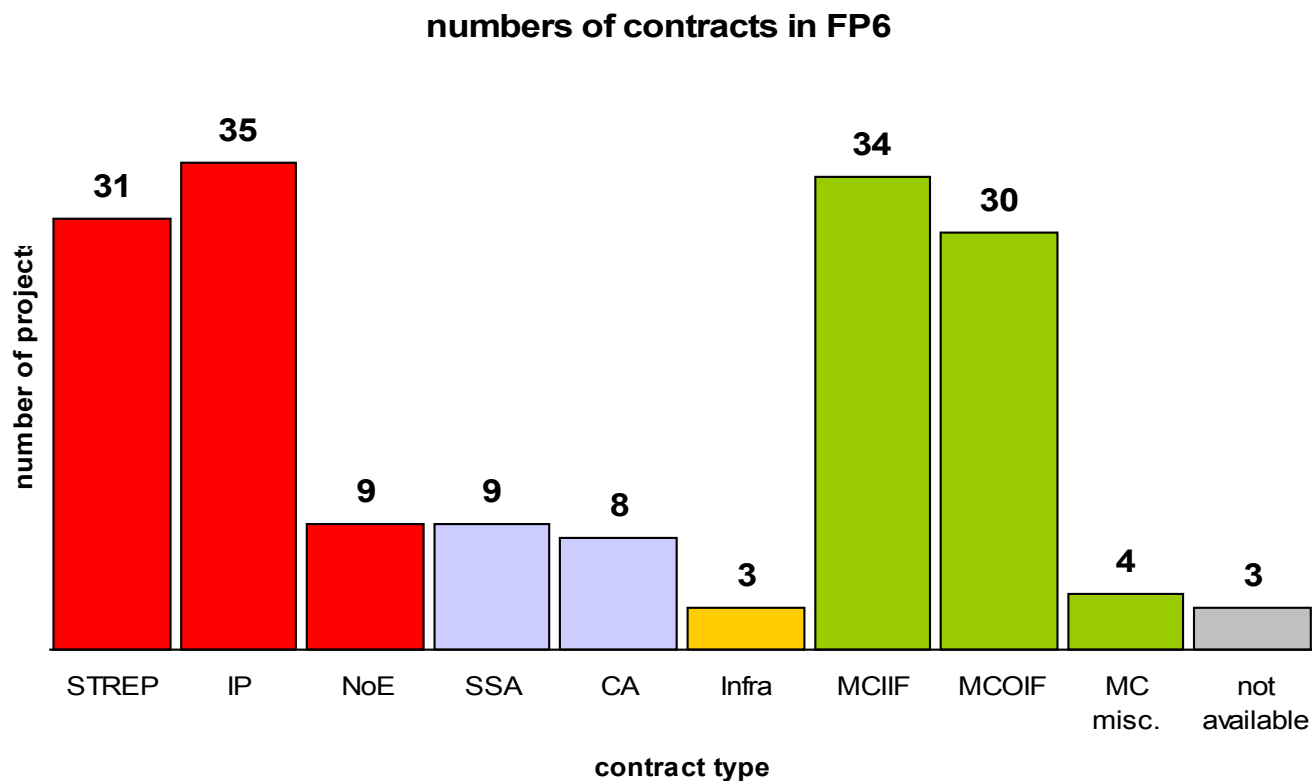
# FP7: General rules of engagement

- European countries = MS + AC
- AU participation (Rules for participation, Article 11): Third Country with S&T agreement
- **No funding** to Third Countries, including Australia (exception for ICPC)
  - provision is made in the specific or work programmes;
  - provided for in a bilateral S&T agreement or any other arrangement between the EU and the country in which the legal entity is established;
  - the contribution of AU is essential for carrying out the project.
- Grant agreement (unique for FP7)

# How to participate

- Work Programme (Y-1.5+)
- The project coordinator is European
- Intelligence: networking, EU events, ...
- Calls (CORDIS) (Y-1)
- Work packages, Consortium Agreement
- Evaluation, negotiation, start (Y)
- Contractual obligations (Y+2+6):
  - indirect interactions: associated partner, sub-contractor
  - IPR: foreground and background

# FP6: Funding schemes



# Collaborative Projects (CP)

- Objective driven research projects
- Research & demonstration activities (dissemination, training)
- Funding: max EC contribution 50/75% (RTD)
- Minimum: 3 entities from 3 different MS or AC
- **Small or medium-scale focused research actions** (*FP6 STREP*)
  - target a specific objective, sharply focussed
  - max EC contribution of €3m (food)
- **Large-scale integrating projects** (*FP6 IP*)
  - Integrated activities with specific deliverables, typically of multidisciplinary character, flexibility
  - EC contribution €6–12m (health), €3–6m (food)

# Networks of Excellence (NoE)

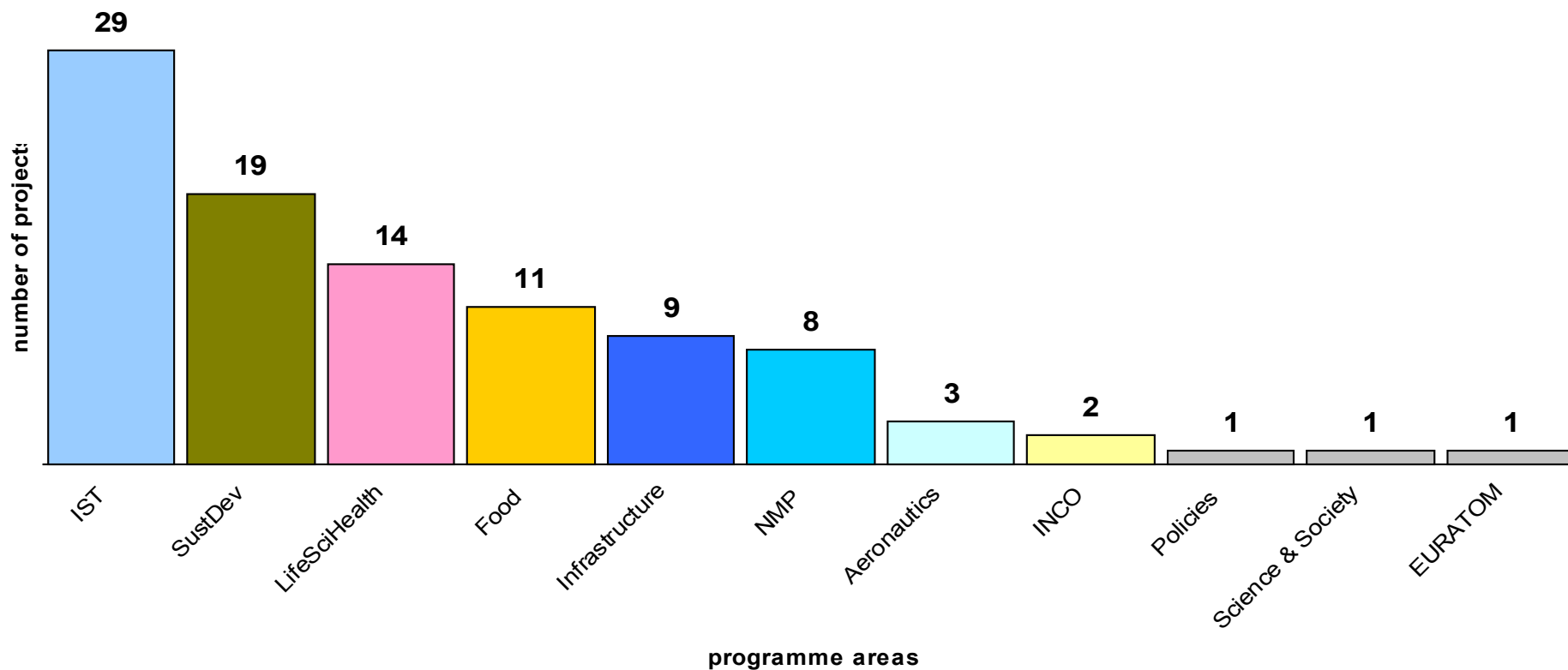
- Research institutions combine and functionally integrate a some of their activities and capacities: *'virtual centre of research'*
- Joint Programme of Activities
  - consolidating or establishing European leadership
  - Integrating activities: sharing facilities, IP, planning
  - Jointly executed research
  - Activities for spreading excellence: training, communication, innovation, management
- 15–50 participants
- Minimum: 3 entities from 3 different MS or AC
- Funding: actual cost or lump sum (€23,500/y/p), max EC contribution 50/75%

## Coordination and Support Actions (CSA)

- Funding: 100%, no funding of research
- Coordinating (CA)
  - 3 entities from 3 different MS or AC
  - Promote and support networking, joint initiatives, training, exchange, expert groups
- Supporting (SA, *SSA in FP6*)
  - 1 entity
  - Support implementation of FP, prepare for future Community research

# FP7: Cooperation, 10 Thematics

number of projects in FP6 (excluding Marie Curie)



# NHMRC

- Australian–European Union Health Research Grants
  - Medical research: FP7–Health calls, but not only if H&M related research
  - AU\$1m per call (2 calls per year)
  - **Only for new submissions to FP7**
  - Not under subscribed anymore in FP7

# DEST: ISL Competitive grant

- Under review: priority countries and thematics
- Approx. \$3m per call (+\$4m last 2 rounds)
- AU matching funding for up to 3 years
- 1 call per year: February 2008!
- Science and Technology, **no SSH**

# DEST: ISL (2)

Round 11	Food Science Australia (CSIRO)	\$28,050	Europrevall
	Macquarie University	\$40,970	FP6
	The University of Melbourne	\$166,872	AMI-4-SME
	The University of Queensland	\$288,983	QOSCOSGRID
	The University of Melbourne	\$382,670	EQUIND
	The University of New South Wales	\$412,250	FP6
	The University of Newcastle	\$461,474	BASYSBIO
	The Australian National University	\$620,500	FP6
	The University of Queensland	\$837,159	NEPTUNE

## ● Outcomes

- 74% Europe (FP: 30% projects, 49% budget)
- Very competitive

# 1 Health

- **3 activities**
  - Biotechnology, generic tools and medical technologies for human health
  - Translating research for human health
  - Optimising the delivery of healthcare to European citizens
- **2 Calls in 2007**
  - HEALTH-2007-B: deadline 18 September

## 2 FOOD, AGRICULTURE AND BIOTECHNOLOGY

- **Building the Knowledge Based Bio-Economy (KBBE)**
- **3 activities:**
  - Sustainable production and management of biological resources from land, forest and aquatic environments
  - Fork to farm: food (including seafood), health and well being
  - Life sciences, biotechnology and biochemistry for sustainable non-food products and processes
- **Call KBBE-2007-2A: 2 stage evaluation (11 September)**

# 3 ICT

- **7 Challenges:**
  - Pervasive and Trusted Network and Service Infrastructures
  - Cognitive Systems, Interaction, Robotics
  - Components, systems, engineering
  - Digital Libraries and Content
  - Towards sustainable and personalised healthcare
  - ICT for Mobility, Environmental Sustainability and Energy Efficiency
  - ICT for Independent Living and Inclusion
- **FET open** (Future and Emerging Technologies): open call, 2 stage evaluation, 1<sup>st</sup> short proposal: anonymous (deadline 31/12/2008)
- Annual ICT conference
- Work Programme for 2007–2008
  - ICT-2007-2: deadline 09 October 2007<sup>open</sup>
  - ICT-2007-3: deadline 04 April 2008
  - Joint Call ICT & Security 1: deadline 27 November 2007<sup>open</sup>

# 4 Nanotech and new materials (NMP)

- **4 activities:**

- Nanosciences and nanotechnologies
- Materials
- New production
- Integration of technologies for industrial applications

# 5 ENERGY

- 10 activities
  - Hydrogen and fuel cells
  - Renewable electricity generation
  - Renewable fuel production
  - Renewables for heating and cooling
  - CO<sub>2</sub> capture and storage technologies for zero emission power generation
  - Clean coal technologies
  - Smart energy networks
  - Energy efficiency and savings
  - Knowledge for energy policy making

# 6 ENVIRONMENT

- **4 activities:**
  - Climate change, pollution and risks
  - Sustainable management of resources
  - Environmental technologies
  - Earth observation and assessment tools
- Climate change: horizontal theme
- Includes water

# 7 TRANSPORT

- 3 Sub-Themes:
  - Aeronautics and air transport (AAT)
  - Sustainable surface transport (SST)
  - Galileo

## 8 SOCIO-ECONOMIC SCIENCES AND THE HUMANITIES

- 8 activities:
  - Growth, employment and competitiveness in a knowledge society: the European case
  - Combining economic, social and environmental objectives in a European perspective: paths towards sustainable development
  - Major trends in society and their implications
  - Europe in the world
  - The citizen in the European Union
  - Socio-economic and scientific indicators
  - Foresight activities
  - Strategic activities
- CALL: SSH-2007-1: second deadline 29 November 2007 (selected topics), only €40m

# 9 SPACE

- 3 activities
  - Space-based application at the service of European society (includes GMES)
  - Strengthening the foundations of space science and technology (includes space exploration)
  - Cross-cutting activities

# 10 SECURITY

- 7 activities:
  - Increasing the security of citizens
  - Increasing the security of infrastructures and utilities
  - Intelligent surveillance and enhancing border security
  - Restoring security and safety in case of crisis
  - Improving security systems integration, interconnectivity and interoperability
  - Security and society
  - Security research coordination and structuring
- Joint Call ICT & Security 1: deadline 27 November 2007<sup>open</sup>

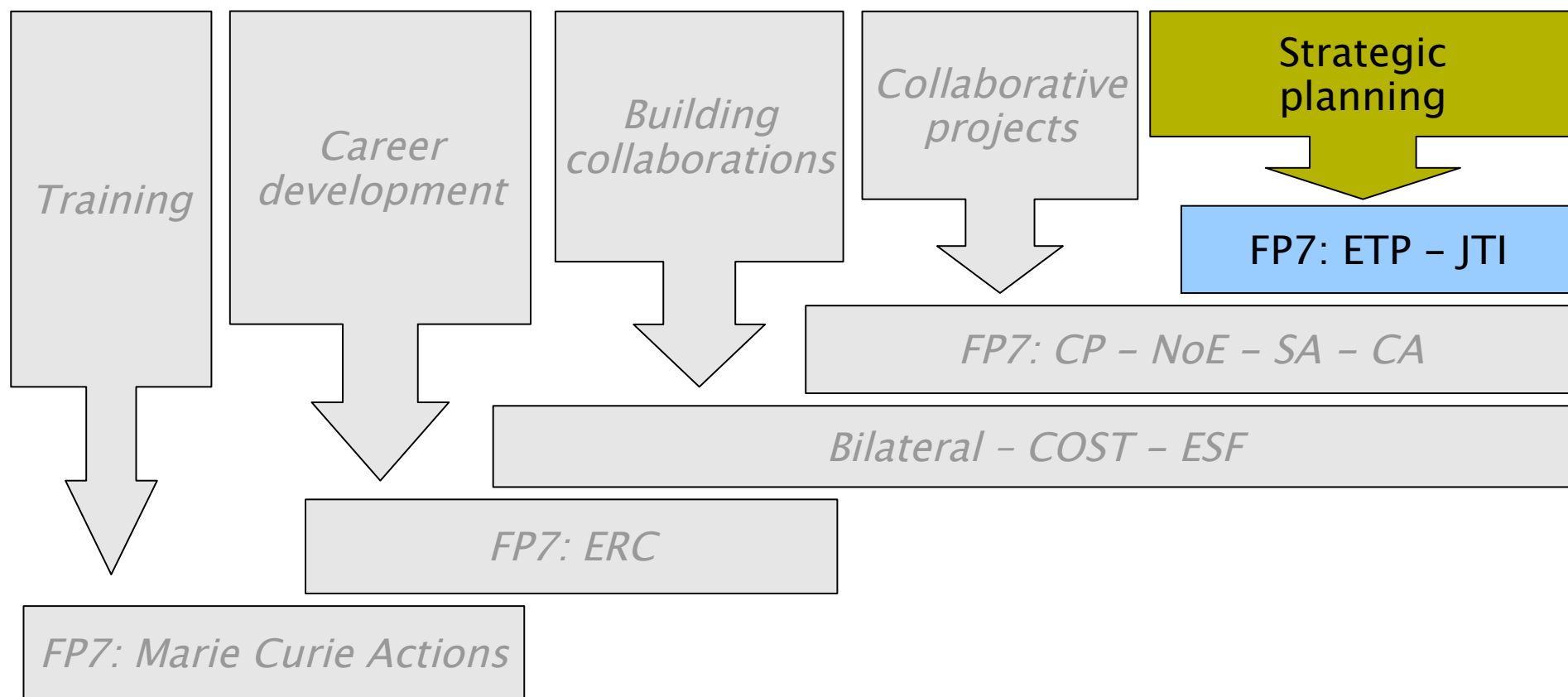
# Work Programmes

- **Example: ICT Work Programme 2007–08**
  - **Challenge 3: Components, systems, engineering**
    - **Objective 7: Networked Embedded and Control Systems**
- Outcomes
- Impact
- Funding schemes
- Budget
- Calls details
- Horizontal issues: i.e. international cooperation



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Document

# European research step by step



# Strategic research agenda

- 31 European Technology Platforms (ETP)
  - i.e. Hydrogen and Fuel Cell Technology Platform (energy)
- Joint Technology Initiatives (JTI)
  - Clean Sky
  - ARTEMIS
  - IMI
  - ENIAC
  - *(HFP, GMES) proposed*
- €2–3b each JTI

Благодаря за вниманието! – Děkujeme Vám za pozornost! –  
Danke für Ihre Aufmerksamkeit! – Tak for opmærksomheden! –  
Σας ευχαριστούμε για την προσοχή σας! – **Thank you for  
your attention!** – ¡Gracias por su atención! – Täname  
tähelepanu eest! – Kiitos huomiostanne! – Merci de votre  
attention! – Míle buíochas as do chineáltas! – Köszönjük  
figyelmét! – Grazie per l'attenzione – Dèkojame už dèmesj! –  
Paldies par uzmanību! – Grazi ta' l-attenzjoni tagħkom! –  
Bedankt voor uw aandacht! – Dziękujemy za uwagę! – Muito  
obrigado pela sua atenção!! – Vă mulțumim pentru atenție! –  
Ďakujeme za vašu pozornost! – Hvala za pozornost! – Tack för  
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