

Aeronautics and Air Transport

5th CALL

Work Programme 2012

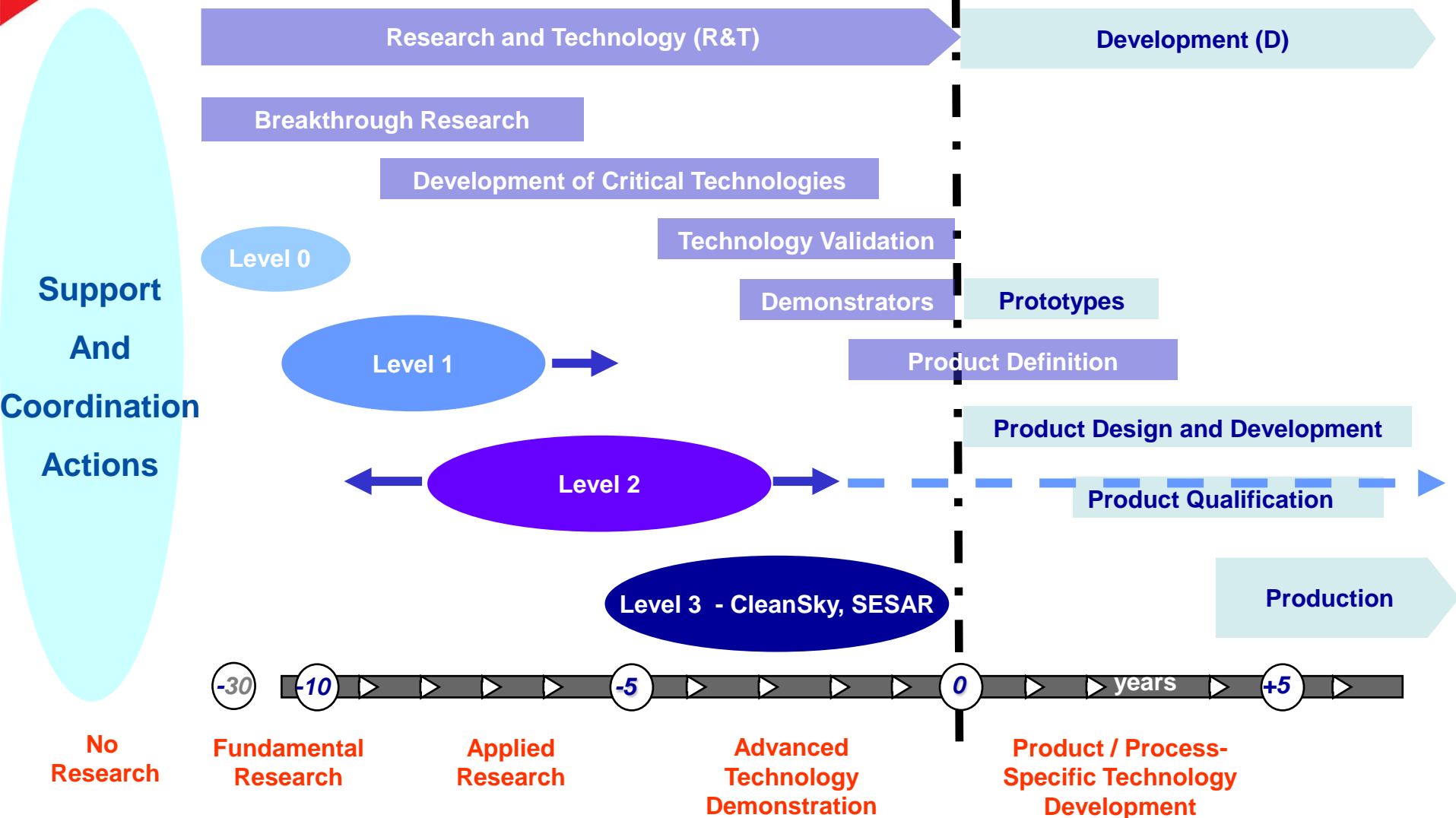
Directorate 'Transport' Unit 'Aeronautics'
Directorate-General for Research and Innovation
European Commission

FP7 Aeronautics & Air Transport Research

Activities

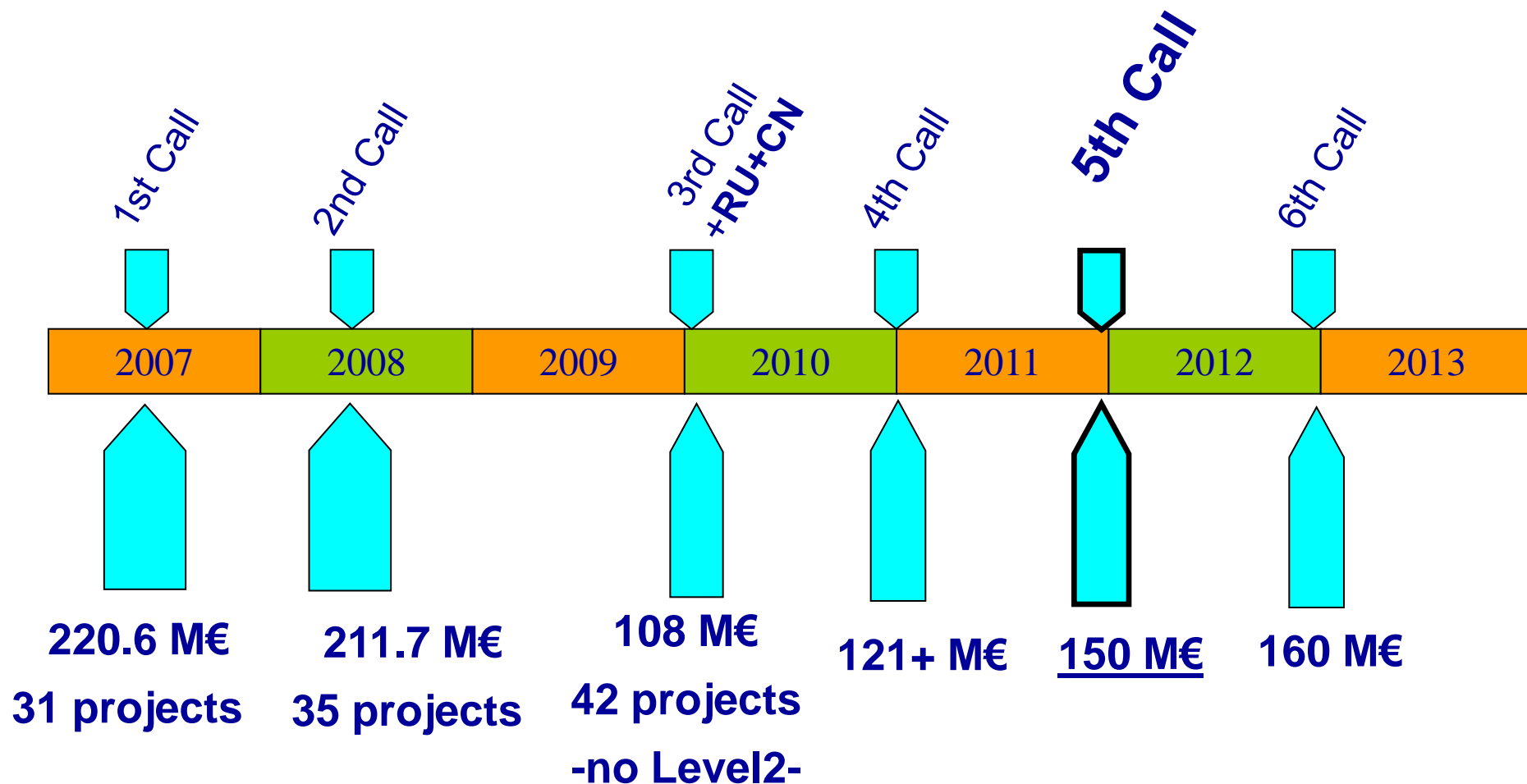
1. The **Greening** of air transport
2. Increasing **Time** efficiency
3. Ensuring **Customer** satisfaction and **Safety**
4. Improving **Cost** efficiency
5. **Protection** of the aircraft and passengers
6. **Pioneering** the air transport of the future

FP7 AERONAUTICS AND AIR TRANSPORT R&T



Calls for Proposals

FP7 Aeronautics and Air Transport Collaborative Research & Support



WP2012 at a Glance

Publication: 20/07/2011

Closing: 01/12/2011

Main Call (5th Call)

L1 (CP-FP): Applied focussed research

L2 (CP-IP): Integrated projects

CSAs: Support Actions

Joint Topic with Energy

L1 (CP-FP): Research and demonstration

L0 Open Call

L0 (CP-FP): Upstream research (beyond 2050)

Coordinated Call with Japan

L1 (CP-FP): Applied focussed research

Max EC (M€) per proposal	Available Total (M€)	
5.0	68.0	
30.0*	65.0	(5 Topics)
0.6	3.0	
10.0	5.0	(+ 5 MEur ENER, 1 Topic)
0.6	5.0	(2 Topics)
1.4	4.0	(5 Topics)
Total	150.0	

* not an eligibility criteria

Level 1 - in WP2012 (5th Call in AAT)

Activities	Topics in Technological Domains											
	Flight Physics	Aero-structures and Materials	Propulsion	Systems & Equipment	Avionics	Design Systems and Tools	Production	Maintenance Repair Disposal	Flight Air Traffic Management	Airports	Human Factors	Noise and Vibration
The Greening of Air Transport	o	o	o	o	o	x	o	o	o	o		
Increasing Time Efficiency				x	x			x	x	o		
Ensuring Customer Satisfaction and <u>Safety</u>		o	o	o	x	x		x	x	x	o	o
Improving Cost Efficiency	o	o	x	o	o	o	o	o	x	x	o	
Protection of the Aircraft and Passengers		o		x	x				x	x	x	
Pioneering the Air Transport of the Future						2 Topics for L1						

o: open

x:closed

Total EC: 68.0 MEur

Max 5.0 MEur EC contribution per Proposal

Development and Testing of advanced bio-based fuels for Air Transport

Demonstrate the production of biofuels at large enough **scale** to allow testing in typical short to medium distances in Europe.

Investigate the **complete engine fuel system** with a special attention to the relationship between fuel composition range, **combustion** and air pollutant **emissions**.

Assess the **environmental, economic and social sustainability** of the fuel.

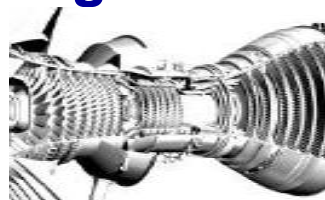
Identify **barriers to innovation** (economic, social and regulatory) for the **large-scale** bio-fuels utilisation in aviation.

Joint Topic with ENER
(application should be made
to ENER Call)

Total EC: **10 MEur**

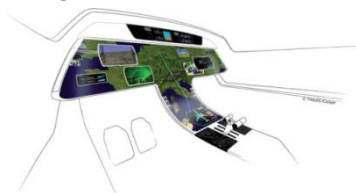
CP-IP (Integrated Projects) - Level 2

- Demonstration of breakthrough technologies enabling **high overall pressure ratio**



- Integrated approach to **safe** flight under **icing** conditions

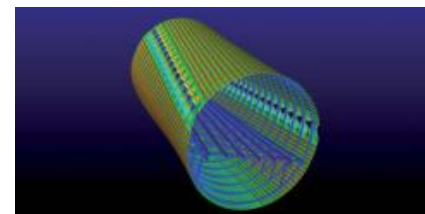
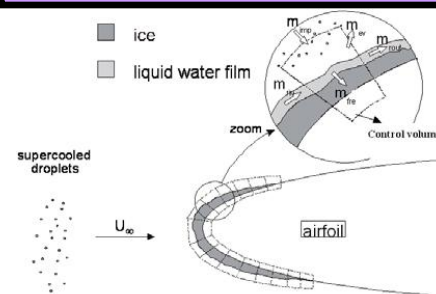
- Integrated approach and demonstration of **safe** operations under **crew** peak **workload** / reduced crew



- Integrated approach and demonstration to **lean manufacturing** of metal, composite and hybrid aircraft / engine structures

Total EC: 65 MEur

EC contribution per proposal: > 5 MEur (el.) and **expected to be < 30 MEur**

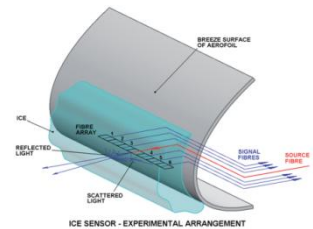


L1 - Coordinated Call with Japan

- Separate Call
- 4 M€ EC + 4 M€ Japan

5 Topics:

- Aeronautical **communications**
- **Anti-Icing** systems
- Surface **heat-exchanger** for aeroengines
- **Ceramic bearings** for engine
- **High speed aircraft**



Total EC: 4 MEur

Max 1.4 MEur EC contribution per Proposal

At least 2 legal entities established in Japan

Support Actions

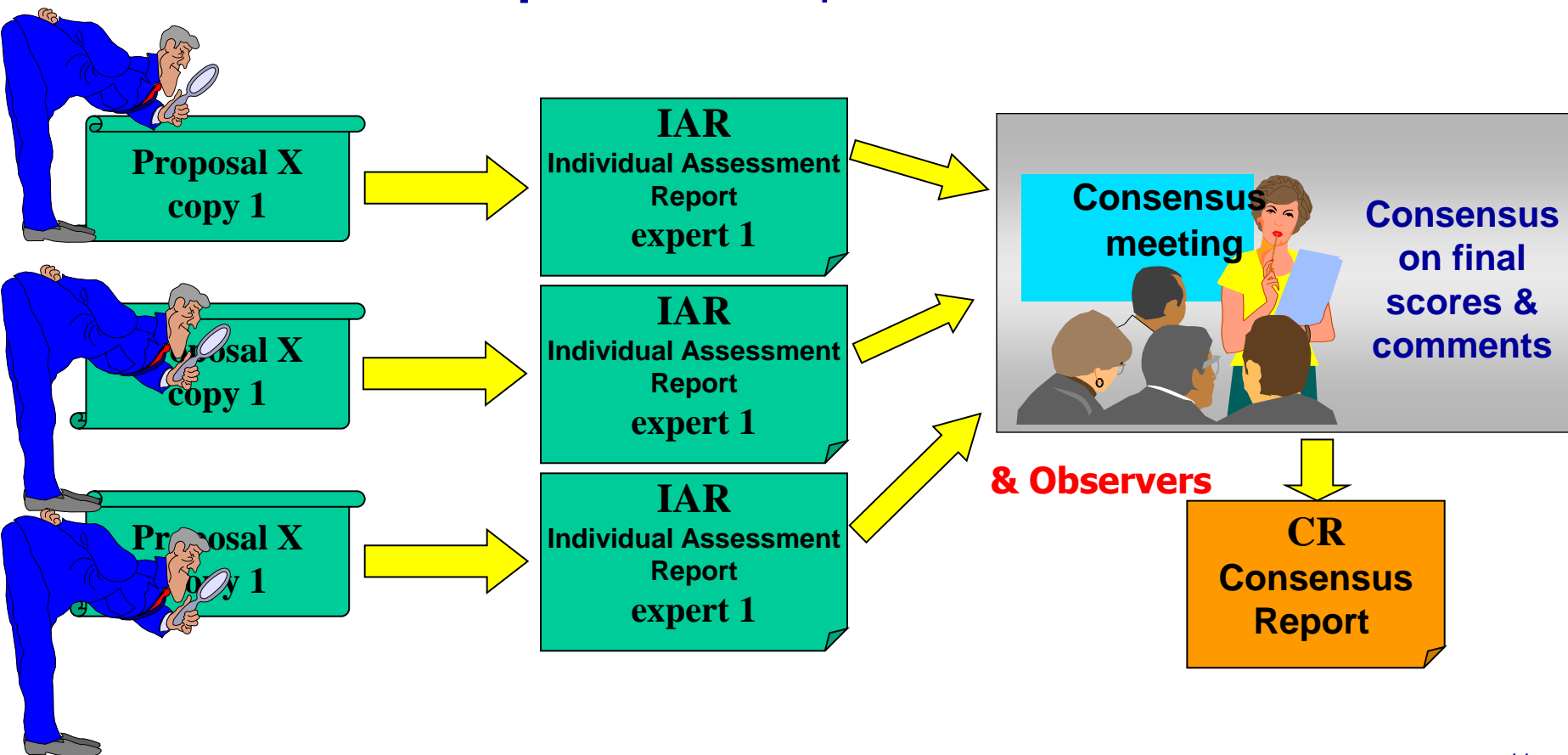
- European Air Transport System **scenario** elaboration and **trend** assessment **capability**
- **Attracting young** Europeans to future careers in the field of aeronautics
- Supporting organisation of **conferences** and events
- Assessment of the potential **insertion of unmanned aerial system** in the air transport system
- **Efficient airports** for Europe
- **Airport** centred **co-modality** and inter-modality
- Facilitating **access** to aircraft for **disabled people**

Total EC:
3 M€
Max EC
contribution per
project
600 k€

Evaluation of Proposals

Criteria:

- I. **S&T Excellence:** soundness, beyond state of the art,...
- II. **Implementation:** Partners, Resources, Management,...
- III. **Potential impact** at European / International level, ...



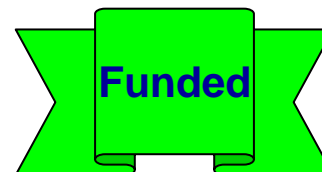
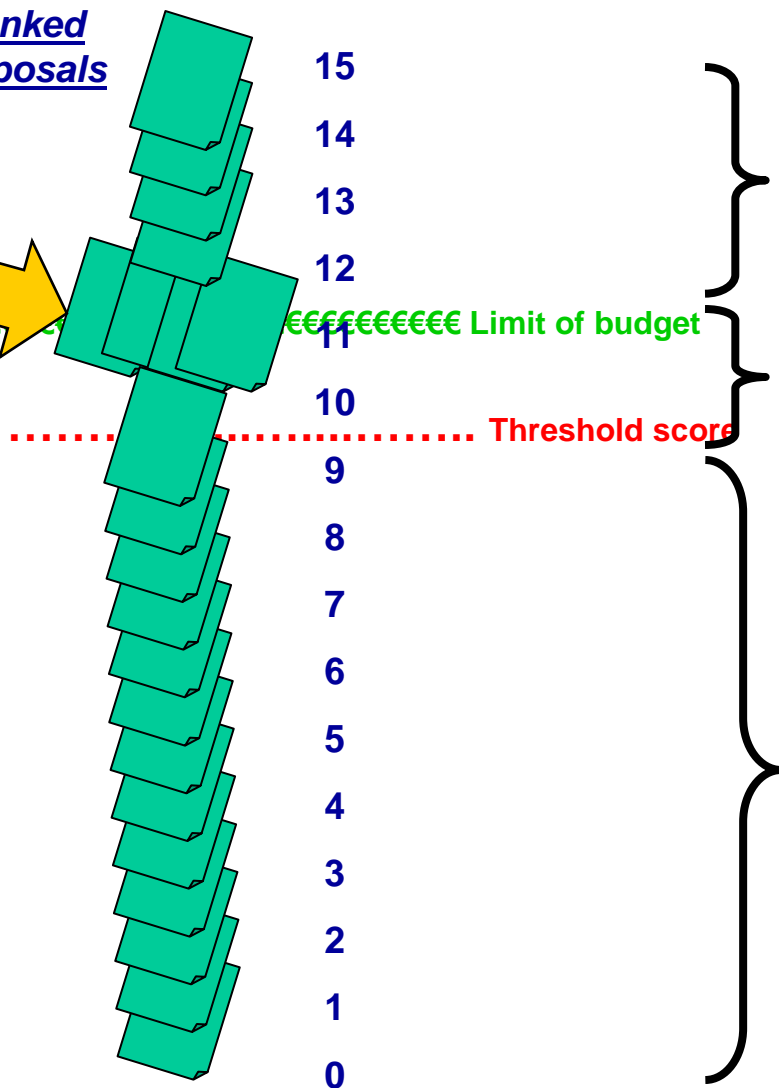
Score
re-calibrated

The ranked list

Panel

Ranked
proposals

Ex aequo
to be
prioritised



*unless selected via a reserve list



Finalisation

NB:if ex-aequo: 1. Coverage, 2. S&T, 3. Impact 4. Up to the panel (sme, international dimension, ...)



- Separate **Open Call**
- 2 Topics

AAT.2012.6.3-1. **Breakthrough and emerging technologies**

Emerging technologies or technologies **from other sectors** which have the potential to bring **radical new** approaches to the **vehicles**, the **propulsion** technology, the **energy** needed for the flight, the **tools** to provide **guidance and control** to the vehicles, the **ground infrastructures** for passengers and freights and the **impact of the air transport on the environment**.

AAT.2012.6.3-2. **Radical new concepts for air transport**

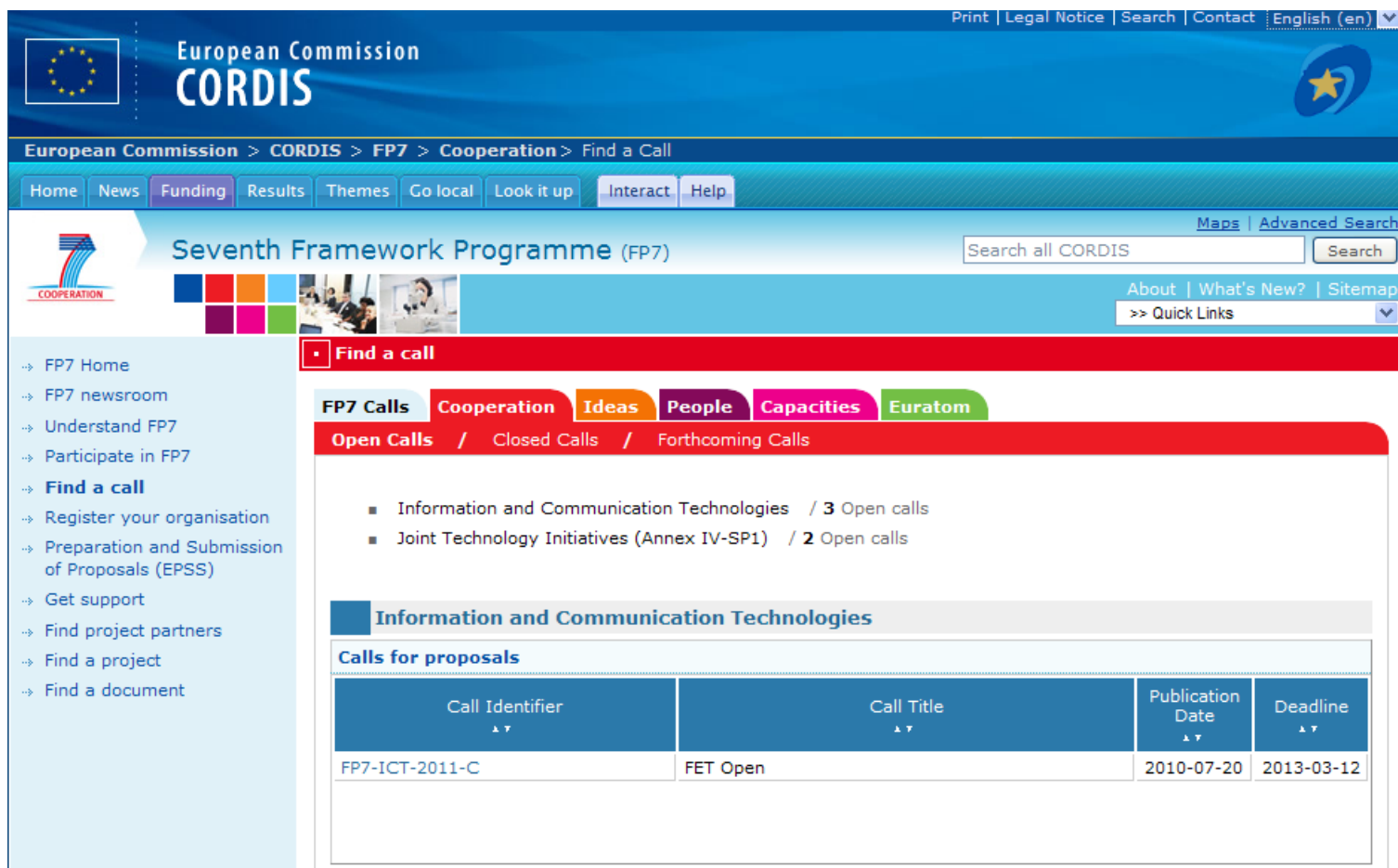
New approaches to systems for the air transport such as new approaches to the **control and guidance** of vehicles, the way passengers or freight **access the vehicle**, the way air transport is **connected with other modes** and the way **travel information** is handled.

- Provisional dates to launch the 1 stage evaluations: 15/10/2011 - 15/03/2012 - 15/10/2012 - 15/03/2013
- **600 kEur** max EC contribution
- Evaluation: weights of **70% on S&T**, 10% on Implementation, 20% on Impact
- Max **20 pages** of text
- Recommended duration: **24 m**, partnership ≤ 7

Total EC: 5 MEur

Max EC contribution
per project 600 kEur

More Information



European Commission
CORDIS

European Commission > CORDIS > FP7 > Cooperation > Find a Call

Home | News | **Funding** | Results | Themes | Go local | Look it up | Interact | Help

Seventh Framework Programme (FP7)

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Find a call

FP7 Calls | **Cooperation** | Ideas | People | Capacities | Euratom

Open Calls / Closed Calls / Forthcoming Calls

- Information and Communication Technologies / **3** Open calls
- Joint Technology Initiatives (Annex IV-SP1) / **2** Open calls

Information and Communication Technologies

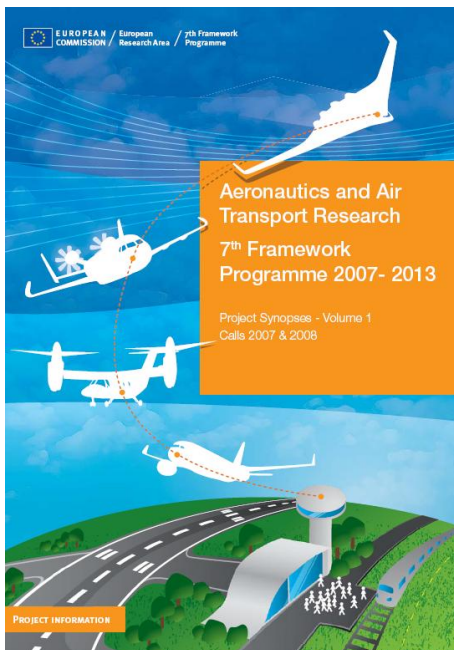
Calls for proposals

Call Identifier ▲ ▼	Call Title ▲ ▼	Publication Date ▲ ▼	Deadline ▲ ▼
FP7-ICT-2011-C	FET Open	2010-07-20	2013-03-12

Google: 'Cordis FP7 Find a Call Cooperation'

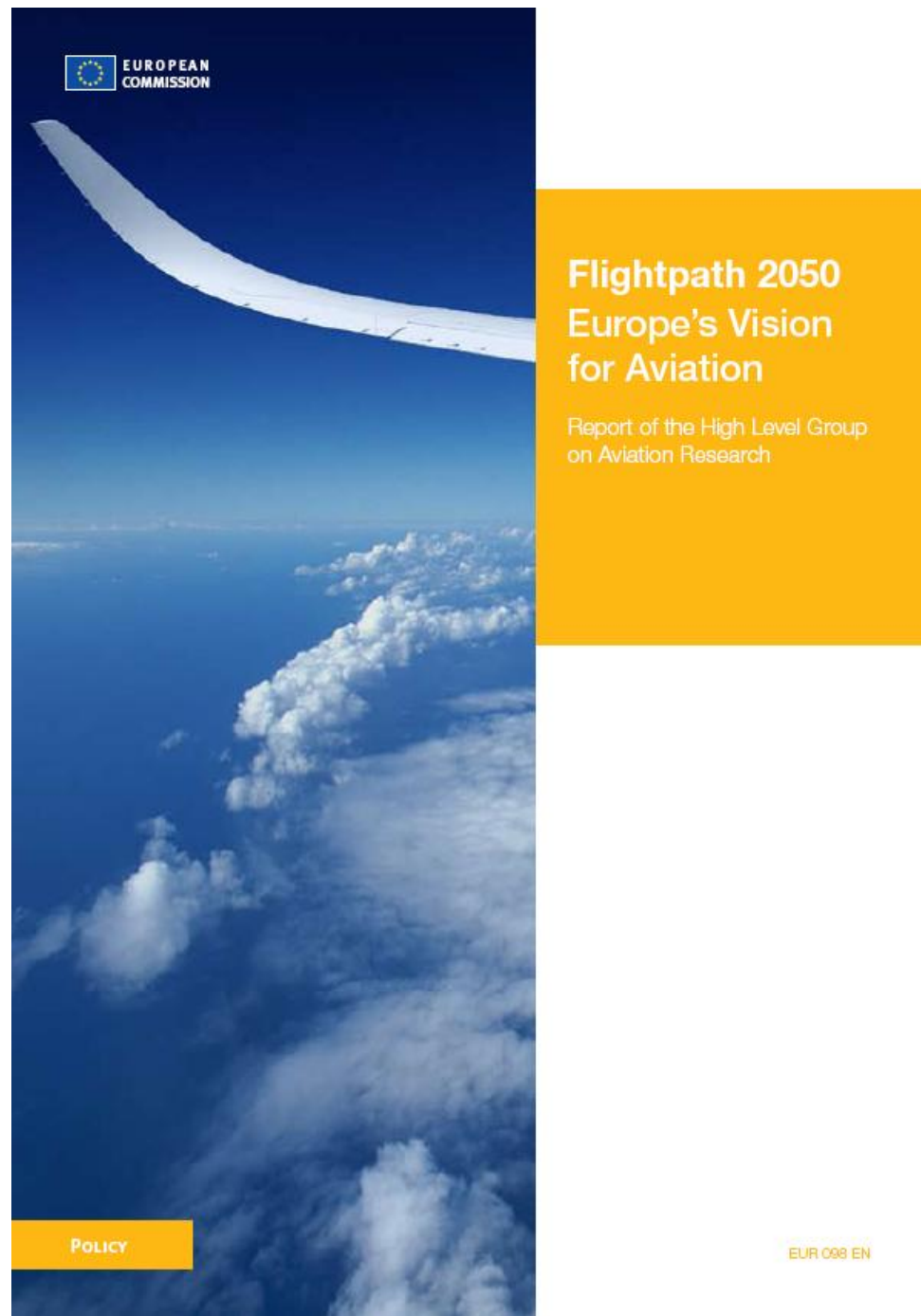
Look for FP7-AAT- calls (AAT: Aeronautics and Air Transport)

In the 'Information Package' section, download the Work Programme



Aeronautics and Air Transport Work Programme 2012

Info-Day: 18 July





BACK UP

Methodology

→ Call for Proposals

→ Workprogramme
(Greening, Cost Efficiency, etc.)

→ Topics
(Flight physics, Propulsion, etc.)

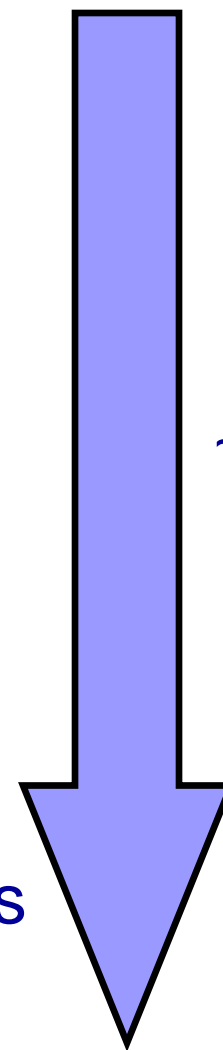
→ Proposals

→ Evaluation
(Peer Review)

→ Negotiation with Successful Projects

→ Project Starts

**Success Rate
of
CF-FP
in Aeronautics
Call 2010:
1 project
out of 5**



~1.5 year

L1 in Pioneering

Enhancing cooperation with Japan in the field of high speed aircraft
(see also Coordinated Call with Japan)

Conceptual design of a high speed aircraft with low emissions, market analysis, iterative multidisciplinary preliminary design, type of fuel selected in the light of its environmental performance, careful optimisation of on-board energy management, lightweight materials capable of resisting high levels of stress and temperature, sonic boom and noise reduction technologies...

Building agility and resilience of the ATM system beyond SESAR

Safe, agile and resilient by design concept for the air traffic management system beyond SESAR, analysis of the ability of the current system to recover and adapt from disruptions; innovative concept operating efficiently under optimum conditions and able to react to crisis...



FP7 COOPERATION AERONAUTICS R&T Structure and Schemes

◆◆◆ **Level 3: Combination**, final **proof** in fully **integrated** system of systems. PublicPrivatePartnerships: SESAR, **CLEANSKY**

◆◆ **Level 2: Downstream** R&TD,
Multidisciplinary **integration & validation**

- *Collaborative Projects < 30 M€ EC fund*

◆ **Level 1: Upstream** R&TD

Up to validation at component level

- *Collaborative Projects < 5M€ EC fund*

◆ **Level 0: Breakthrough exploratory** R&TD

- *Collaborative projects < 600 k€ EC fund*

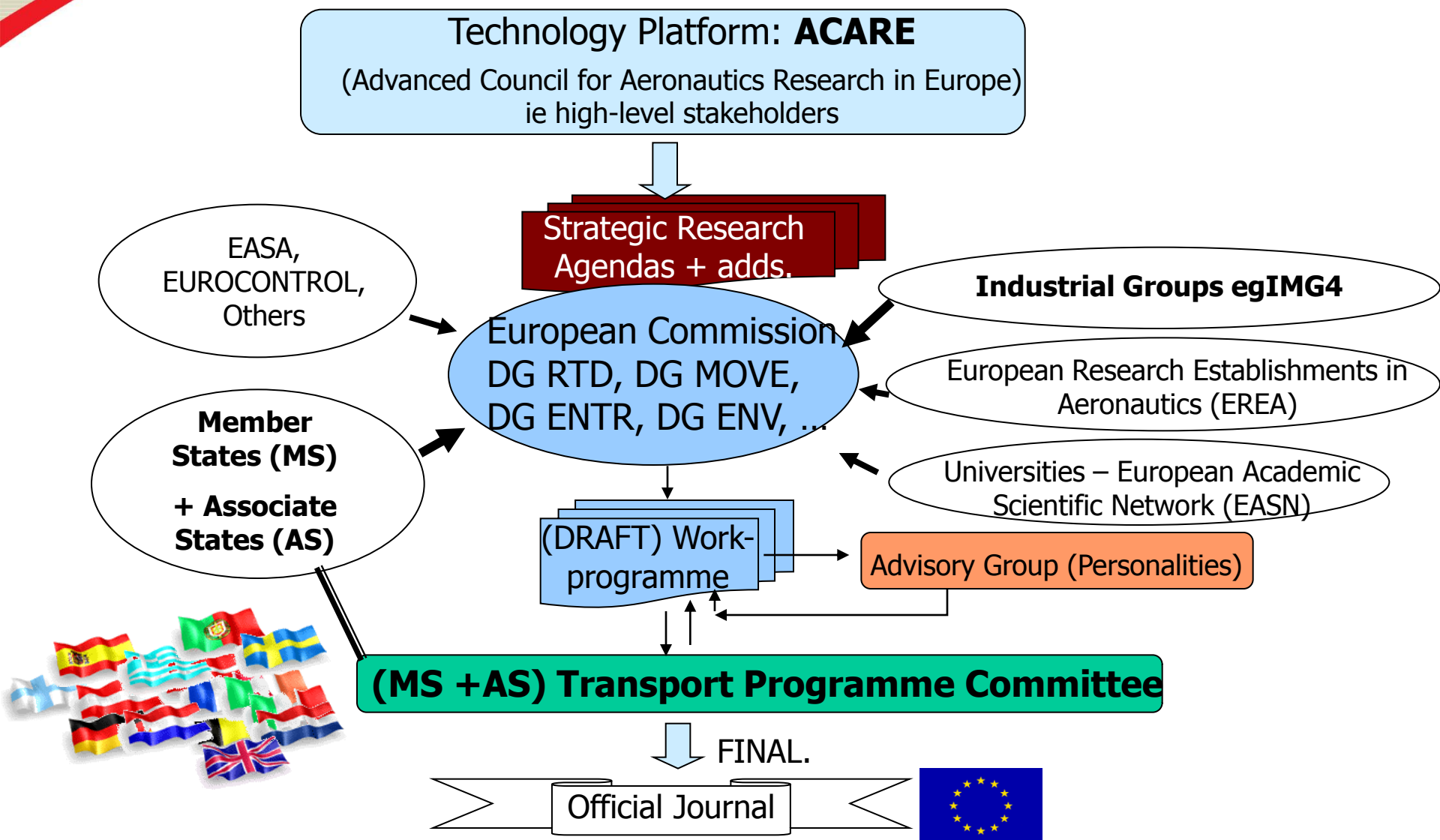
- **Coordination** Actions « CSA-CA » (no R&TD)

- **Support** Actions « CSA-SA » (no R&TD) < 600 k€

*Min. 3
entities from
different
Member or
Associate
States.*

*R&TD up to
50/75% EC
co-funded,
others up to
100%.*

Aeronautics & Air Transport Research Work-programme Preparation (DG RTD)



European Aeronautics: A Vision for 2020

The Goals for 2020

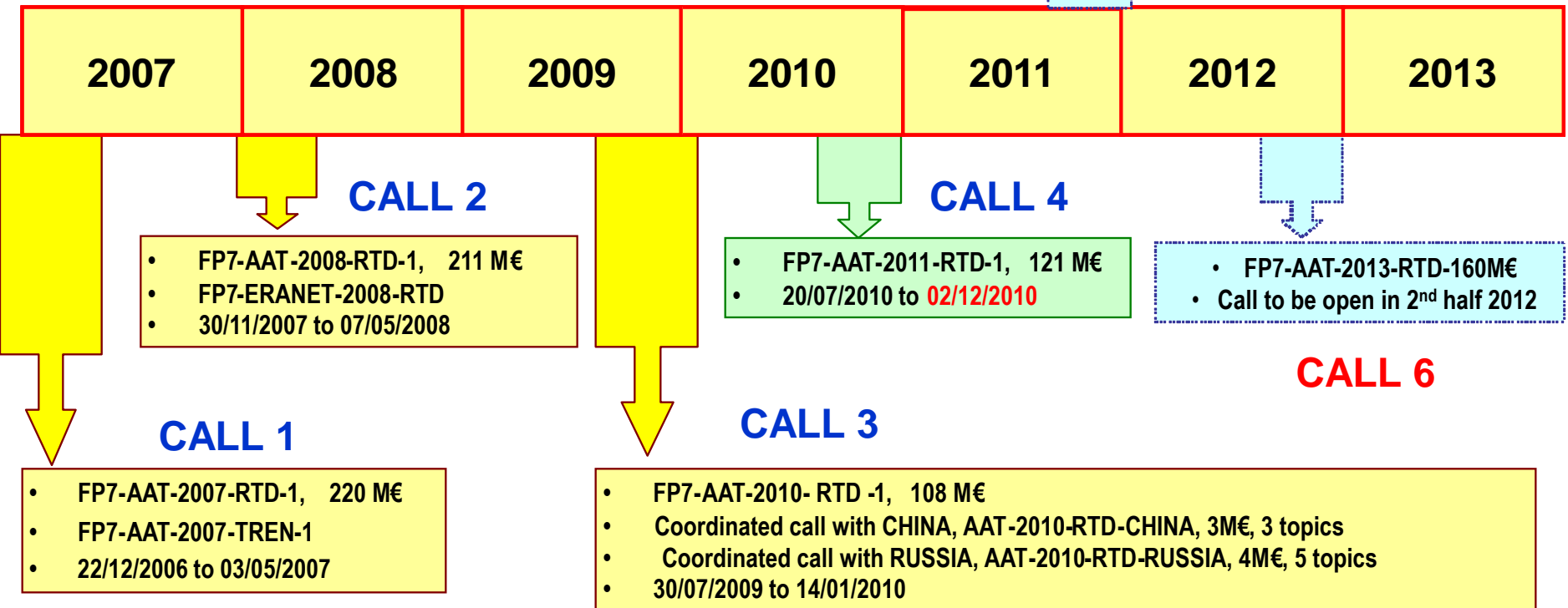
- **50%** cut in **CO₂** emissions per pass-Km
- **80%** cut in **NO_x** emissions per pass-Km
- **Halving** perceived aircraft **noise**
- **Five-fold** reduction in **accidents**
- Air traffic system **capable of handling 16 million** flights a year
- **99%** of all flights within **15 min of timetable**

Aeronautics Calls in FP7

2012-2013

CALL 5

- FP7-AAT-2012-RTD-1, PROVISIONAL BUDGET 150 M€
Including a coordinated call
- Call to be open ≈ July to Dec. 2011





International Cooperation in Aeronautics Research

HOW to cooperate in FP7 ? – Evolution

< 2007 2008 (2009) **2010** 2011 2012 2013

...OPENING.....

..... **SUPPORT ACTIONS**

TWINNING.....

COORDINATED CALLS

- Co-participation = approx. 50/50
- Co-funding = each-side-pays-its-nationals
- Co-evaluation = peer review from both sides

RECIPROCITY

... ASSOCIATE TO FP7 ?

- “Gov2Gov” e.g. EU-RU WG on Civil Aero Research; e.g. EU-US (FAA) MoC – Annex I ATM;
- 3rd Countries experts as evaluators: <https://cordis.europa.eu/emmfp7/>

