



Rolls-Royce

Preparation for FP8 Rolls-Royce experience of the Framework Programme

Royal Academy of Engineering
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Overview

- **Rolls-Royce experience with European research**
- **Framework funding perspective**
- **Lessons from FP7**
- **Opportunities and challenges for FP8**

Background

Rolls-Royce has been at the forefront of European research for 20 years

- ***EIMG & IMG3 formed in 1990**
- **Played a leading role in three very large projects in FP5 –successfully delivered**
- **Founder member in **ACARE**
- **Continue to work closely with EC**
- **Broader agenda in FP8: aeronautics, marine and energy**

***Engine Industry Management Group; Industry Management Groups x3**

**** Advisory Committee for Aviation Research in Europe**



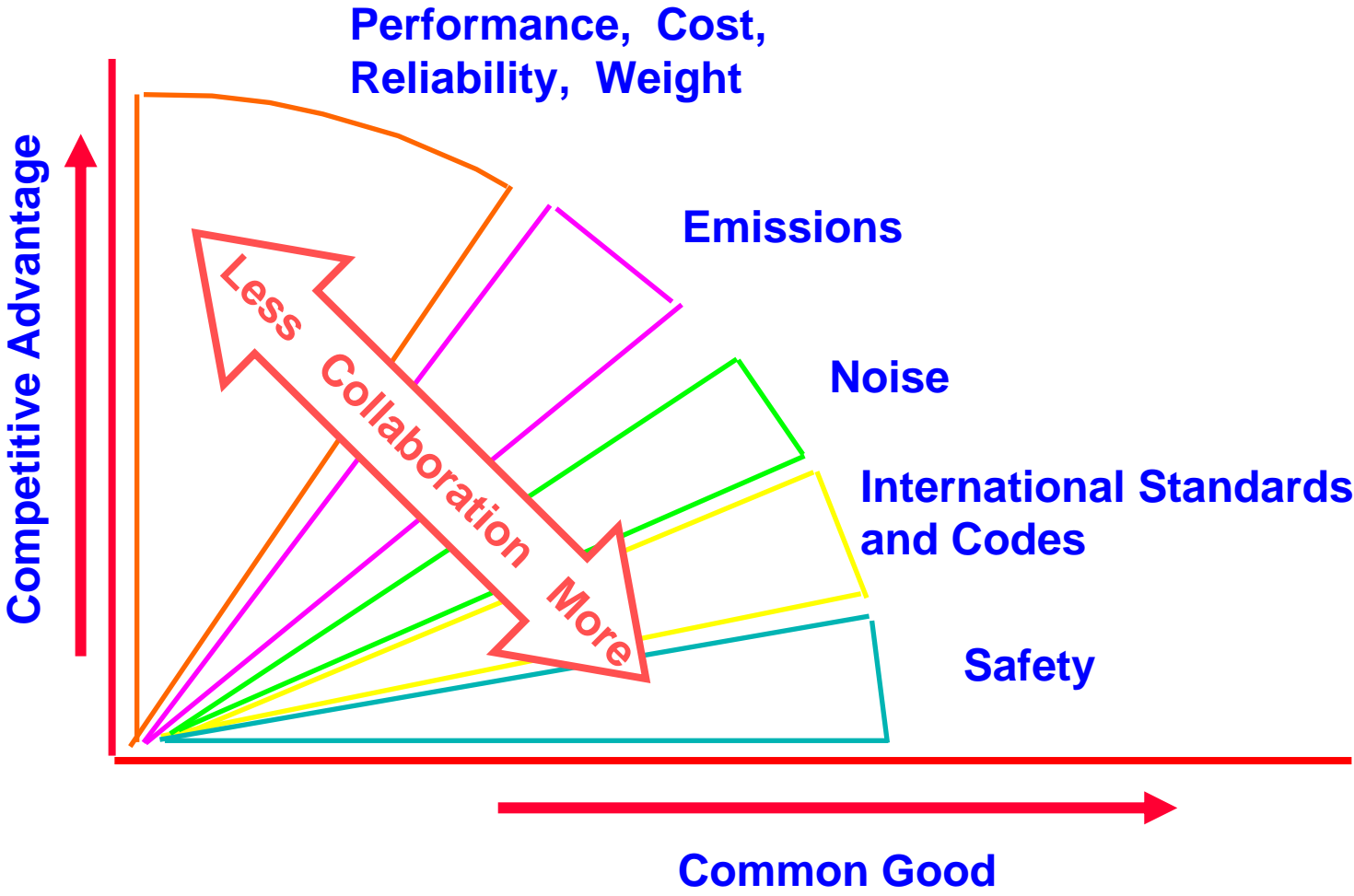
Rolls-Royce

Aerospace

Characterised by highly-developed products with very complex and long life-cycle



Areas for International Research Cooperation



Joined up research

Maximise opportunities using EC and National prog's

- **ANTLE engine demonstrator ran 3 times funded by EEFAE, SILENCER and POA in FP5 plus ATAP-10 in UK**
- **Critical competitive technologies can be developed in confidence nationally, whereas technologies developed with suppliers and OEMs can be researched in Europe**
 - **e.g. High temperature components in UK, noise reduction in Europe**

Technology validation – TRL6



ANTLE & POA – EU and DTI Funded Technology Validation Programme



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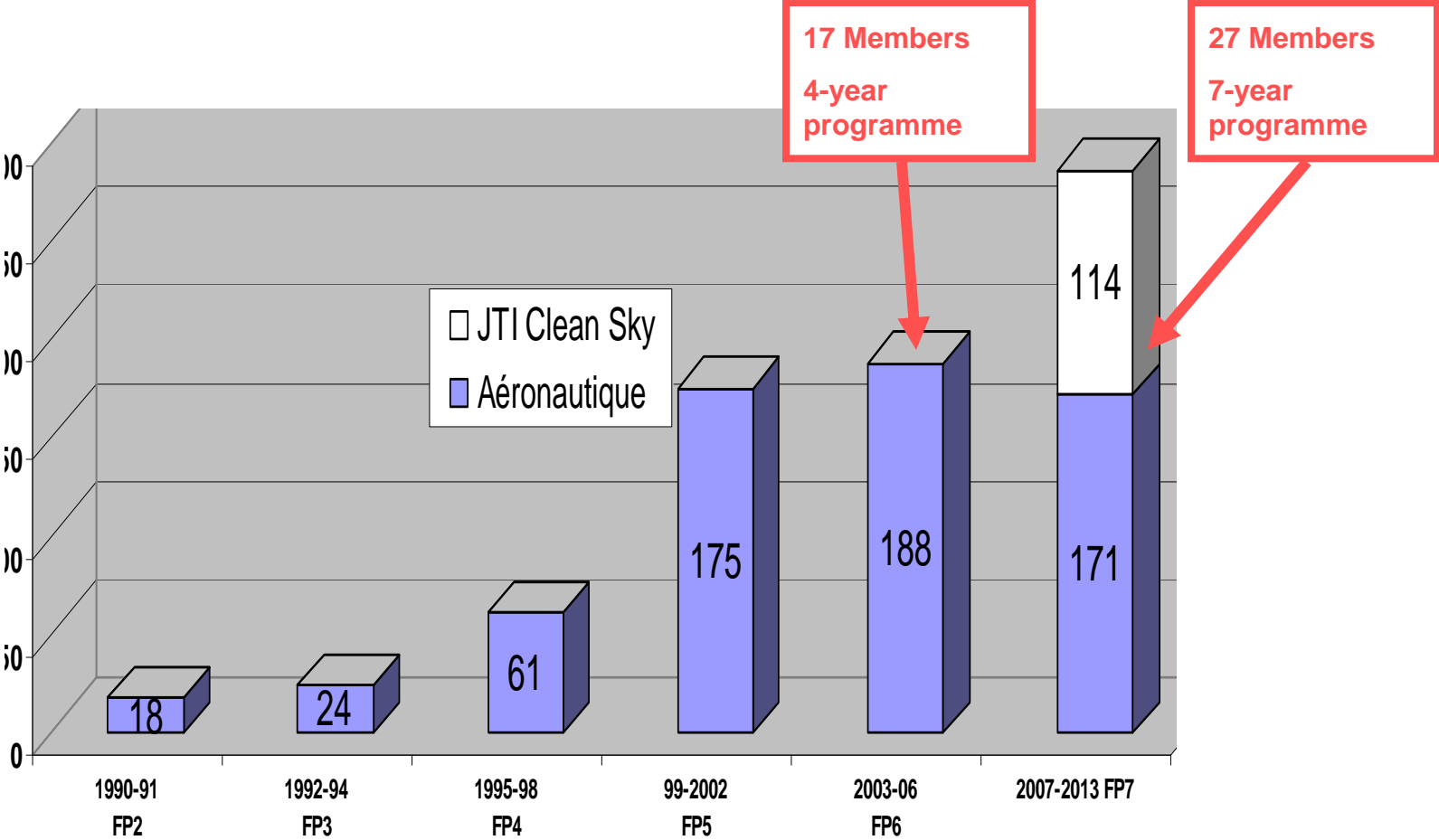
FP7 Funding overview

c.f European Industry Dimensions

	Aerospace	Automobile	Rail	Marine
Employees	0.6m	11.9m	1m	1.5m
Turnover	€113bn	€489bn	€37bn	€159bn
Research spend	€12.6b(11%)	€20b (4%)	€2b (5%)	€3.3b (2%)

- Transport budget in FP7 €4.15b (7.65%)
- Aeronautics budget in FP7 €1.9b (3.6%)

FP's : Annual aeronautical budgets



FP Budget (M€)

35

71

245

700

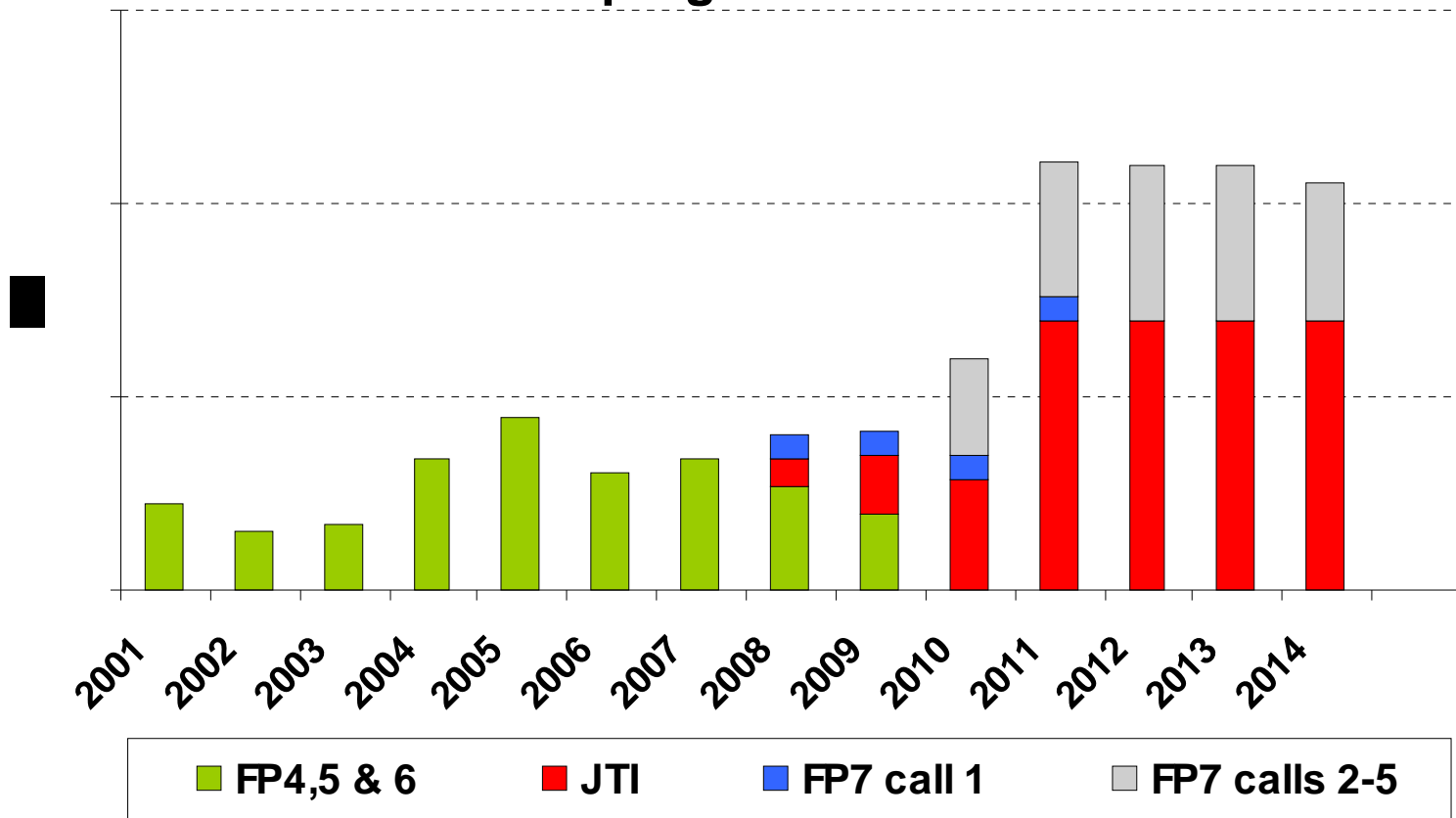
750

2300



Growing importance of EU Funding

EU Funding Contribution to Rolls-Royce UK programmes



Evolution from FP5 to FP8

- **FP5 – 1st large projects (>€100m) integrated with national programmes**
- **FP6 –Air Transport agenda driven by ACARE. Smaller projects**
- **FP7- Expanded EU with 27 Member States. 7 year programme. 5 JTIs launched. More rigorous interpretation of financial rules.**
- **FP8 - JTIs to continue possibly at expense of level 2 programmes?**

Benefits of FP6

● Partners

- **ITP, Safran and Volvo all major suppliers to Rolls-Royce.**
- **SMEs secured 13% of all FP6 funds**
- **Universities won 34% of FP6 funds (same as industry); UK gets lion's share**
- **Rolls-Royce able to use EU funding to support its University network**

*Joint Technology Initiative

FP7 Experience to date

- **Industry and EC objectives are quite different:**
 - Industry focus on content & delivery
 - EC focus on process and broadest participation
 - No compromises!
- **Arguments over claims and delays in payment getting worse**
- **Funding allocation unrelated to market need; industry needs can be a “force fit” to programme scope**
- **Clean Sky, *JTI – €1.6bn new vehicle**
 - Painful birth, but now up and running

Challenges for FP8

- **Aeronautics funding under pressure**
 - **Clean Sky needs to continue, but does not deliver everything required for EU competitiveness**
 - **Aeronautics environmental pressure continues**
 - **Recession impacting affordability for Companies**
- **Enlarged EU**
 - **New member states not aerospace-intensive**
- **New Commission Feb 1 2010**
- **ACARE credibility**
 - **ACARE was the “model” for Technology Platforms, but is not now like any of the others**
 - **Must be able clearly to articulate the “impact” of FP5-7**

Requirements for FP8

- **Aeronautics must survive as a recognisable sectoral programme**
 - **But with other transport programmes focusing on “intermodality”**
- **Arguments over claims and delays in payment getting worse**
 - **Must have rational (pragmatic) approach**
- **Funding allocation unrelated to market need**
 - **Lottery in terms of call topics**
- **JTI – hard slog, but now aloft (just)**
 - **Must be maintained in FP8, but not at cost of Level 2 programmes**
- **UK must ensure *FEC does not reduce UK University participation**

*Full Economic Cost

Summary

- **Content of FP8**
 - **Aeronautics under threat**
 - **Marine – “Waterborne” needs to grow**
 - **Nuclear & Energy – FP8 opportunity**
- **Funding**
 - **Stop the decline**
 - **Simpler, more pragmatic financial regulation**
- **Mechanisms & Instruments**
 - **JTIs are good, but full spectrum required**
- **Industry participation – reducing**
 - **Needs to be reversed**
- **UK university engagement vital**
- **Don't forget FP7!**