

# INNOVATION IN ACTION

JOINT  
TECHNOLOGY  
INITIATIVES



fuel cells & hydrogen for sustainability



Innovative Medicines Initiative



Joint Exhibition  
30 September - 4 October 2013

## Clean Sky : Innovation takes off



### Europe's largest Aeronautics Research Programme ever

- Environmental objectives, mainly CO2 and noise reduction
- €1.6B value, split 50/50 between the Commission (cash) and Clean Sky members and partners (in kind)
- 65% of the work achieved by end 2013
- 570 participants
- Integrated breakthrough technologies, up to full scale demonstrators



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Clean Sky Technology Evaluator

Eco-Design

Large Aircraft

Regional Aircraft

Rotorcraft

Systems and  
equipments

Engines

TECHNOLOGIES &  
DEMONSTRATORS

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One programme, with a set of coherent targets (e.g. 20 to 30% of CO2 reduction), cross-links between technological platforms, global management and governance

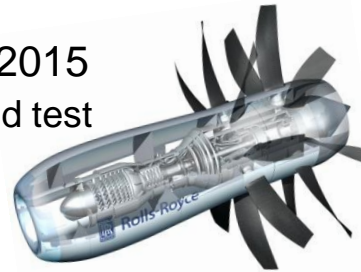
6 platforms  
20 large  
demonstrators  
100 key  
technologies



2012

Large engine, advanced low pressure spool

2015  
Ground test



Diesel powered  
light helicopter

2014

2015  
Regional Aircraft  
More electric  
systems



2015

High Speed Demonstrator for  
passive laminar-flow wing  
technologies

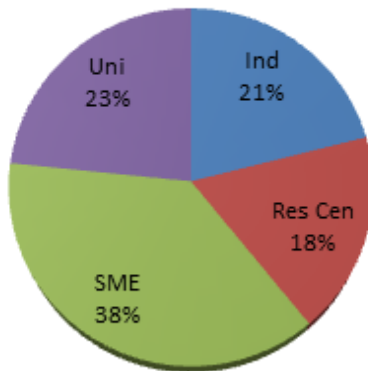
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A success story...

## Calls for Proposals

Total



> 570 participants



## Clean Sky 2: Meeting the Challenges set in Horizon 2020

- **Creating resource efficient transport that respects the environment:**  
Finishing the job for reaching ACARE 2020 targets beyond CS1 contribution, and paving the way for the 2035 intermediate step of the new Strategic Research and Innovation Agenda
- **Ensuring safe and seamless mobility:**  
With a global ATS vision, improve the use of small airports, bring new means to the air transport capabilities, provide for faster connections
- **Strengthening the whole European innovation chain** with a strong emphasis on SMEs



***Building on Clean Sky, with a wider approach:***  
***- Going further into integration  
at full aircraft level***  
***- And developing new technology streams  
for the next generations of aircraft***

## From technology to full-scale demonstration

Design Studies, Rig Testing, Modelling



	<i>Clean Sky 2 as proposed*</i>
CO <sub>2</sub> & Fuel Burn Reduction	-20% to -30% (2025/2035)
NO <sub>x</sub> reduction	-20% to -40% (2025/2035)
Population exposed / Noise footprint impact	Up to -75% (2035)

\* Baseline is best available performance in 2014

## Clean Sky 2: from a flagship to a force

- **4 bn€** programme, >55% private funding
- Up to 40% for Leaders (large integrators), at least 60% open to competition
- ~ 800 participants expected

*Clean Sky 2 will involve a significantly wider participation – nearly the entire aeronautics knowledge base in Europe and attract many newcomers.*

*It is a Clean Sky JTI ambition to explore routes and create a model for technological innovation in Europe*





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