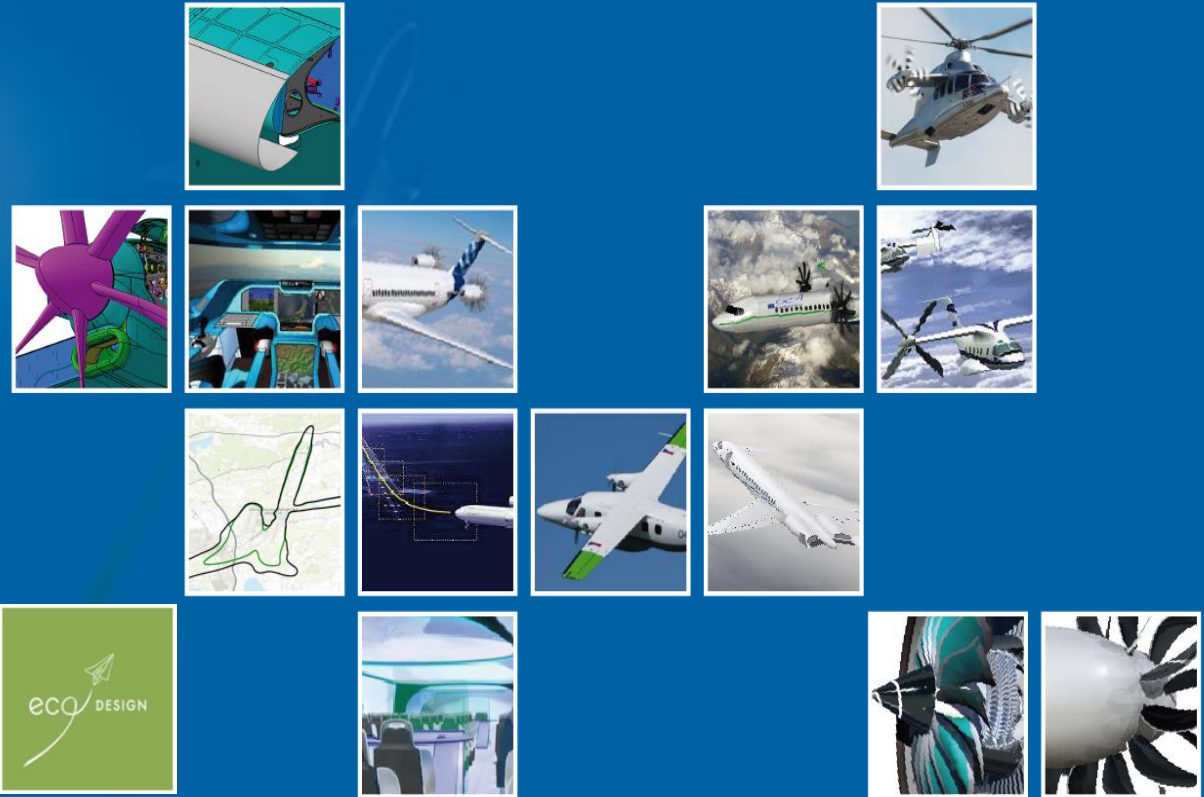


# *The Clean Sky 2 Programme: Progress overview and CfP11 Call*



*Info Day Toulouse,  
3 Feb 2020*

*Sebastien Dubois  
Programme Manager*

# Tackling key environmental challenges

## Environmental Objectives\*

-CO<sub>2</sub>

TO -20%  
TO -30%

-NO<sub>x</sub>

TO -20%  
TO -30%



TO -20%  
TO -30%

\* vs today's best aircraft



While building industrial leadership and ensuring mobility



# The CS2 'Family' - Impressive figures to date

**1477 participations** (over 800 unique entities)



**334**

INDUSTRY MEMBERS



**420**

SMES



**373**

RESEARCH CENTRES



**350**

UNIVERSITIES



**28**

COUNTRIES



**110**

REGIONS



**>466**

GRANTS



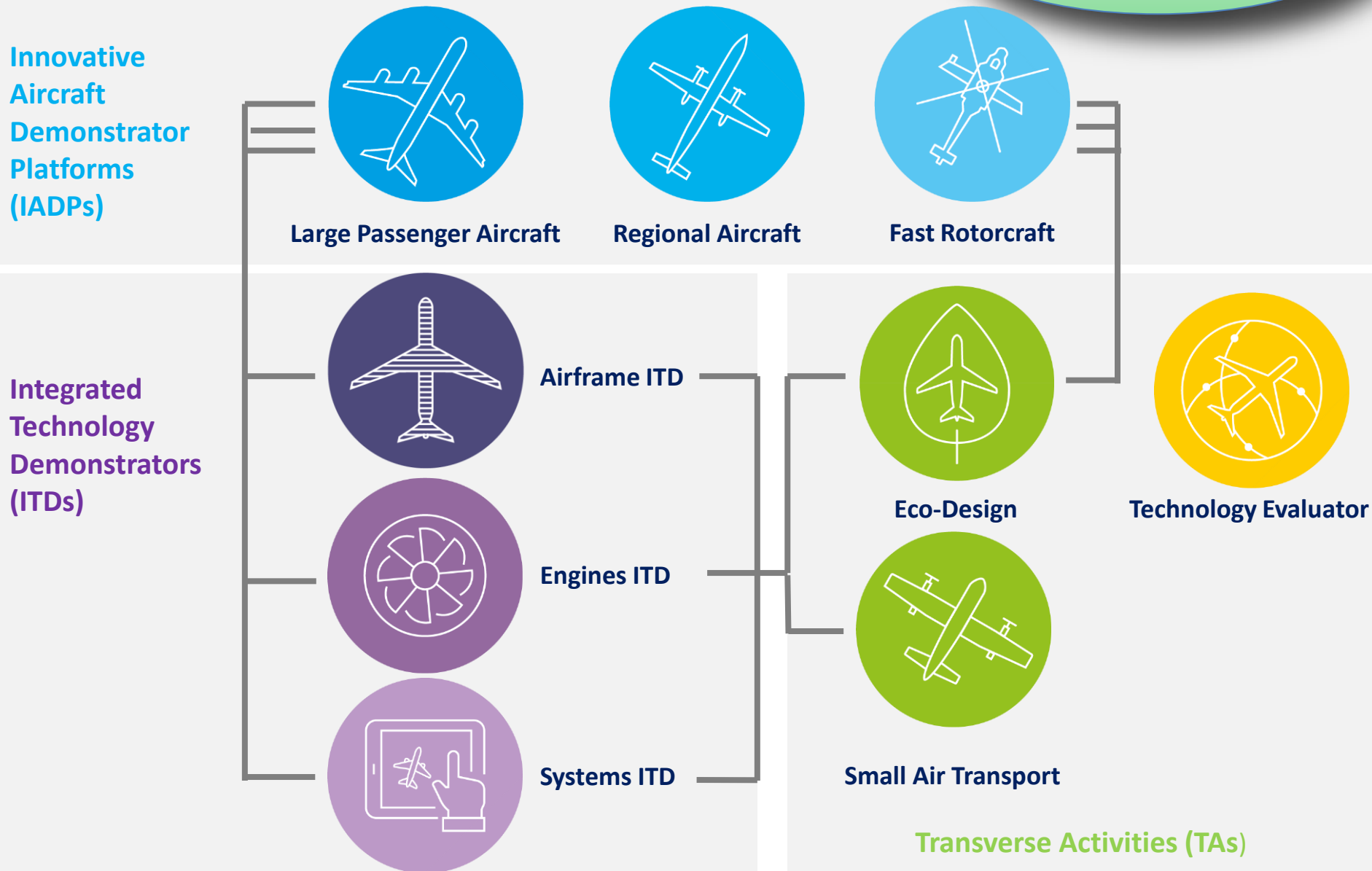
# Areas of Intervention

- Breakthroughs in Propulsion Efficiency
- Advances in Wings and Aerodynamics
- Novel Aircraft Configurations
- Innovative Structures and Production Systems
- Future Cockpit and Flight Guidance Systems
- More Electric Aircraft & Systems
- Optimal Passenger Environment



# Clean Sky 2 Programme Set-up





EU Funding: ~1.8bn€  
Private Members:  
~2.2bn€





# CS2 Major Demonstrators

## Breakthroughs in Propulsion Efficiency

	Very High Bypass Ratio (VHBR) Large Turbofan TRL 6 - 2023		Ultra-High Propulsive Efficiency (UHPE) TRL 5+ - mid-2022
	Advanced Geared Engine Configuration (HPC and LPT technology demonstration) TRL 5 - 2023		Business aviation / short range Regional Turboprop TRL 5 - 2022
	Light weight and efficient Jet-fuel reciprocating engine [Small Aero-Engine] TRL 6 - 2019		Reliable and more efficient operation of small turbine engines [Small Aero-Engine] TRL 6 - 2019
	Hybrid Propulsion Ground Test Bench 2020		Novel Aircraft Configuration & Scaled Flight Test 2021

## Advances in Wings and Aerodynamics

	Adaptive Wing Integrated Demonstrator Flying Test Bed 2022
	Integrated Wing Technologies Flying Test Bed 2020 & 2023
	Advanced Laminar Flow on Wings and Empennage
	Laminar Nacelle Virtual TRL 5 - 2019

## Innovative Structures and Production Systems

	Advanced Rear End Demonstrator 2023		Functional Cabin & Cargo Demonstrator of new integrated systems
	Next Generation Multifunctional Fuselage Demonstrator automated cabin assembly & structure integration		Advanced Lower Center Fuselage Demonstrator
	Regional Aircraft Fuselage / Pax Cabin Integrated Demonstrator		Affordable aerostructures for Small Air Transport
	Advanced Small Aircraft Wing Box in Out-of-Autoclave CFRP 2020		

## Future Cockpit and Flight Guidance Systems

	Disruptive Cockpit Demonstrator (Function preparation test) 2023
	Active Regional Cockpit 2020
	BizJet Enhanced Cockpit Concept 2022
	Avionics for Extended Cockpit Demonstrator - 2020
	Affordable SESAR Compliant cockpit for Small Aircraft

## More Electric Aircraft & Systems

	Regional Aircraft 'Iron Bird' Systems Integration - 2021
	Innovative Electrical Wing - 2021
	Electric Drive Landing Gear System [E-LDG]
	Advanced Electrical Environmental Control System [E-ECS] Demonstrator
	Full Chain demonstration: Electrical power generation, distribution and usage

## Novel Aircraft Configurations

	NextGenCTR demonstrator - Next Generation Civil
	RACER - Rapid And Cost-Effective Rotorcraft

## Optimal Passenger Environment

	Full Scale Mock-up of Business Jet Office Centered Cabin 2021
	Innovative Cabin & Cargo Systems Technologies 2021

# How does it work?

- Up to 40% of EU funding available for CS2 Leaders  
Up to 30% allocated to Core Partners (calls completed)  
**At least 30% for CfP (i.e. *Partners*)**
- **Over 500m€ will be awarded to Partners via CfP**



Enhancing and leveraging innovation capability across Europe, with a strong emphasis on SME participation



Leveraging private sector initiatives,  
**and building on MS national and regional efforts**

# 11<sup>th</sup> Call for Proposal at a glance

## Key dates to remember\*

- **Call Launch** ~14 January 2020
- **Call Closure** 28 April 2020, 17:00 (Brussels Time)
- **Evaluation Phase** May - July 2020
- **Q&A last publication\*\*** ~26 March 2020
- **Technical sessions & GAP preparation** Q3-Q4 2020
- **Indicative Start date of activities** > Q4 2020

\* Dates are provided as indicative/target dates.

\*\* Questions received until 13<sup>th</sup> March 2020, 17.00 (Brussels Time) will be answered after analysis and published when appropriate.

### **IMPORTANT:**

The Call is currently open and all background documents related to this Call are available via the [H2020 Funding & Tenders Portal](#) since 14 January 2020. Applicants are invited to check regularly the Portal for the Call latest updates incl. Q&A releases.





# CfP11 - Call Overview

The call contains **35 Topics** with total available funding of ~ **45 M€** (including **4 Thematic Topics**):

SPD Area	No. of topics	Ind. topic Funding (in M€)
IADP Large Passenger Aircraft	16	19.60
IADP Regional Aircraft	1	0.80
IADP Fast Rotorcraft	0	0
ITD Airframe	4	2.85
ITD Engines	0	0
ITD Systems	7	5.35
Technology Evaluator	3	1.50
<u>TOTAL</u>	<u>31</u>	<u>30.10</u>
Thematic Topics	# of topics	Ind. topic funding (M€)
<u>TOTAL</u>	<u>4</u>	<u>15</u>



# CfP11 Overview – Thematic Topics

## List of Topics for Calls for Proposals (CFP11) – Part B

Identification Code	Title	Type of Action	Value (Funding in M€)
JTI-CS2-2020-CFP11-THT-11	High power density/multifunctional electrical energy storage solutions for aeronautic applications	RIA	1.20
JTI-CS2-2020-CFP11-THT-12	Advanced High Power Electrical Systems for High Altitude Operation	RIA	1.00
JTI-CS2-2020-CFP11-THT-13	Sustainability of Hybrid-Electric Aircraft System Architectures	RIA	1.60
JTI-CS2-2020-CFP11-THT-14	Scalability and limitations of Hybrid Electric concepts up to large commercial aircraft	RIA	0.80

# Questions?

**[Info-Call-CFP-2020-01@cleansky.eu](mailto:Info-Call-CFP-2020-01@cleansky.eu)**

Last deadline to submit your  
questions:

13<sup>th</sup> March 2020, 17:00 (Brussels time)



## Follow us



Twitter



Linkedin



Youtube



Flickr



RSS



Clean Sky 2  
JOINT UNDERTAKING

Sign up for our e-news via the website: [www.cleansky.eu](http://www.cleansky.eu)

Disclaimer