

Infoday 4ª CfP Aeronáutica y Transporte Aéreo

Actualización convocatorias JTI Clean Sky



14 de septiembre - CDTI

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Dpto. Programas Europeos, CDTI

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ESTRUCTURA JTI CLEAN SKY 1/4



Technology Evaluator

ITD	Smart Fixed Wing Aircraft	Green Regional	Green Rotorcraft	Sustainable & Green Engines	Systems for Green Operations	Eco Design
Activities	Active Wing New Aircraft Configurations	Advanced Aerodynamics (Low Drag & Noise) Low Weight Structures	New Powerplants Innovative Blades & Rotors New Aircraft Configurations	Advanced LP & HP System Technology New Engine Concepts (i.e. Open Rotor)	Mission & Trajectory Management Aircraft Energy Management	Whole Life Cycle Environmental Impact Analysis
Targets	CO ₂ ~12 to 20% Noise ~10dB	CO ₂ ~10 to 20% Noise ~10dB	CO ₂ ~26 to 40% NO _x ~53 to 65% Noise ~10dB	CO ₂ ~15 to 20% NO _x ~15 to 40% Noise ~15dB	CO ₂ ~10 to 15% Noise ~17dB	CO ₂ ~10% Noise ~10dB

Products	Widebody 2020	Narrowbody 2015	Regional 2020	Corporate 2020	Rotorcraft 2020
					
	CO ₂ -30% NO _x -30% Noise -20dB	CO ₂ -20% NO _x -20% Noise -15dB	CO ₂ -40% NO _x -40% Noise -20dB	CO ₂ -30% NO _x -30% Noise -10dB	CO ₂ -30% NO _x -60% Noise -10dB

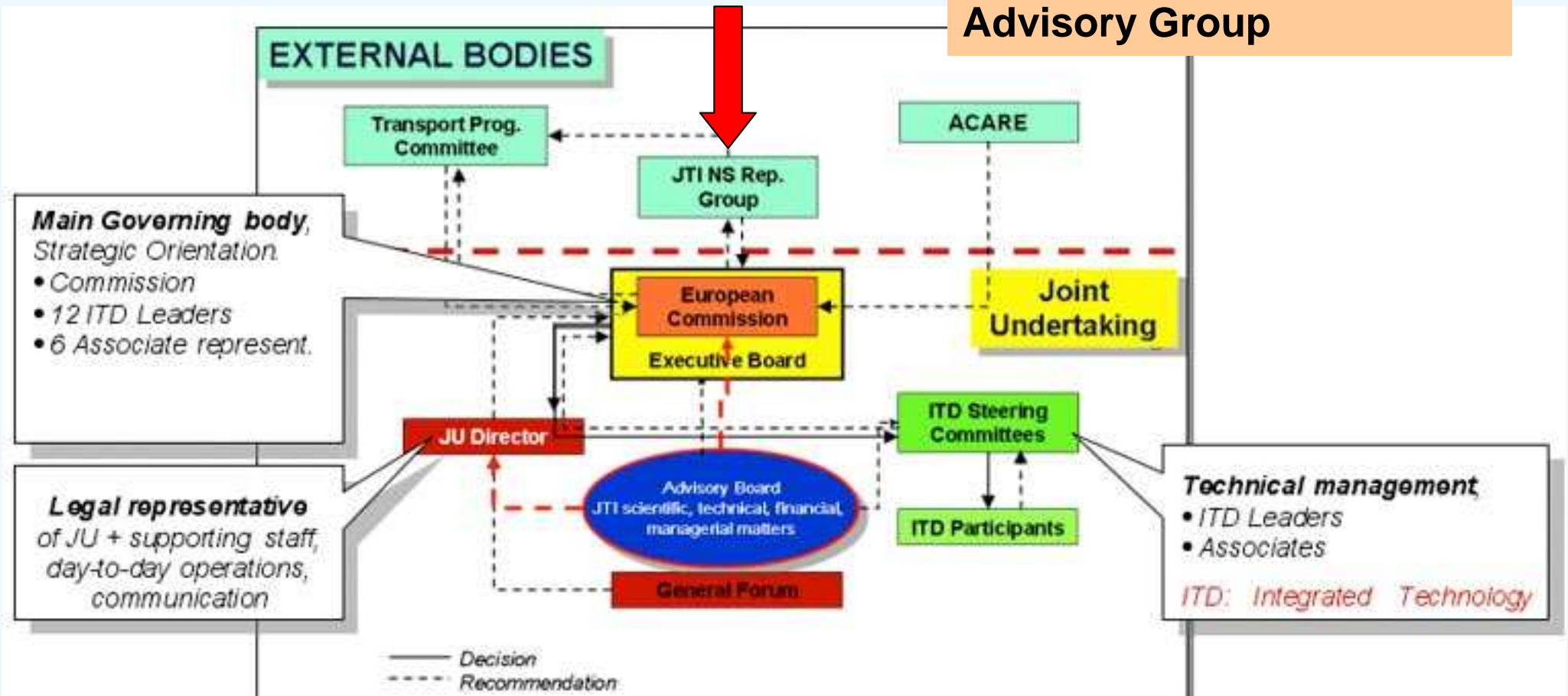
Note: Targets shown represent the **incremental impact** of JTI

ESTRUCTURA JTI CLEAN SKY 2/4



CDTI

**Scientific & Technology
Advisory Group**





❖ SMART Fixed Wing:

- ▶ Airbus (F, D, UK, E) + SAAB (SE)

AERNNOVA

❖ Green Regional Aircraft

- ▶ Alenia Aeronautica (I) + EADS CASA (E)

❖ Green Rotorcraft

- ▶ AgustaWestland (I, UK) + Eurocopter (F, D)

❖ Green Engines

- ▶ Rolls-Royce (UK) + Safran (F)

ITP

❖ Systems for Green Operation

- ▶ Thales (F) + Liebherr (D)

ANOTEC

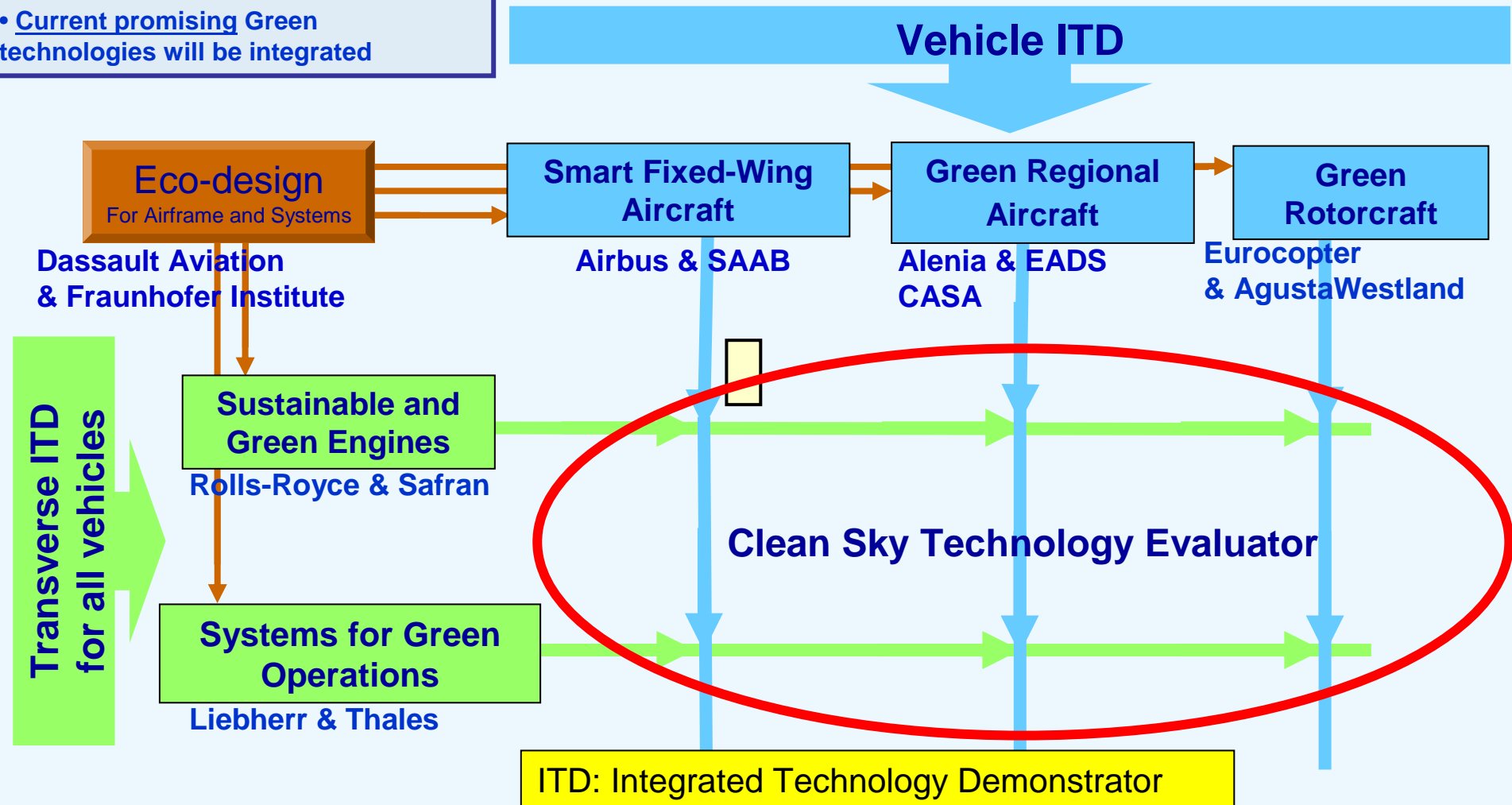
❖ Ecodesign

- ▶ Dassault Aviation (F) + Fraunhofer Gesellschaft (D)

ESTRUCTURA JTI CLEAN SKY 4/4



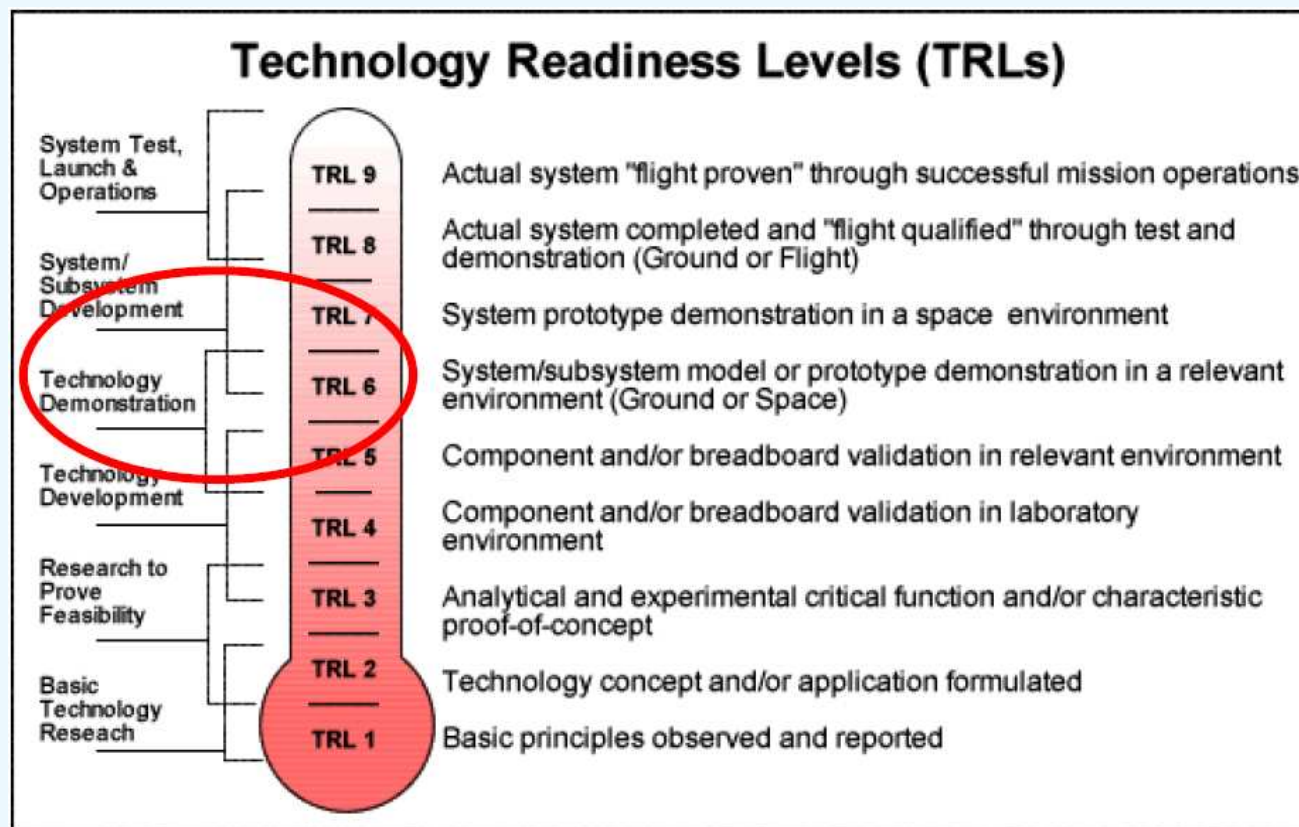
- All market segments addressed
- Current promising Green technologies will be integrated





Tipos de proyectos:

- Convocatorias para socios: son convocatorias abiertas desde los diferentes ITDs para cubrir tareas técnicas específicas dentro de los objetivos de cada demostrador.
- Preparadas y “ofertadas” por los líderes y asociados
- Bajo principios de excelencia técnica, transparencia y selección competitiva
- Lanzadas durante toda la duración de la JTI (7 años)
- Socios: entidades legales seleccionadas mediante las diferentes convocatorias ofertadas para desarrollar tareas específicas dentro de los ITDs
- Elegibles para financiación: cualquier entidad pública o privada establecida en un país miembro o asociado del FP7 Industria, Pyme, Centro de Investigación, Universidad, etc...
- Grant agreement con la JU Clean Sky



**A diferencia de las convocatorias del VII PM, no hay número mínimo de socios:
pueden presentarse entidades individualmente**

CONVOCATORIAS PARA SOCIOS DE LA JTI CLEAN SKY 3/4



Actividad	Empresas	Pymes, Universidad, CT
Actividades I+D	50%	75%
Demonstracion	50%	
Otros (Gestión)	50%	75%



- Las propuestas deben cubrir totalmente las tareas descritas en los topics ofertados -> **El topic debe ser cubierto en su totalidad**
- En caso de no poder realizar todas las tareas pedidas, se debe crear un consorcio adecuado para poder cubrir lo pedido en el topic
- Se debe especificar correctamente el topic seleccionado

Responder a varios topics con una sola propuesta no es posible -> Esto supondría considerar la propuesta directamente no elegible

CONVOCATORIAS PARA SOCIOS DE LA JTI CLEAN SKY 4/4



- No se puede exceder bajo ningún concepto el presupuesto máximo especificado
Esto supondría considerar la propuesta directamente no elegible

Proposal Submission Forms										
 EUROPEAN COMMISSION 7 th Framework Programme for Research, Technological Development and Demonstration			Collaborative Project					A3.2: Budget		
Proposal Number			nnnnnnn			Proposal Acronym			yyyyyyyyyy	
Participant number	Organisation short name	Country	Estimated budget (whole duration of the project)					Total receipts	Requested JU contribution	
			RTD	Demonstration	Management	Other	TOTAL			
1	ZZZZZZZZZ	CH	564 286	0	35 714	0	600 000	0	450 000	
TOTAL			564 286	0	35 714	0	600 000	0	450 000	

Asegurarse de que esta cantidad es menor al valor máximo asignado al topic

➤ **mantener un margen del 5%, la cantidad final puede ser discutida durante la fase de negociación**



- Calendario de convocatorias 2009 / 2010:

Call-01: SP1-JTI-CS-2009-01. Abierta 15-06-2009; Cierre 31-08-2009

Call-02: SP1-JTI-CS-2009-02. Abierta 25-11-2009; Cierre 23-02-2010

Call-03: SP1-JTI-CS-2010-01. Abierta 29-01-2010; Cierre 27-04-2010

Call-04: SP1-JTI-CS-2010-02. Abierta 30-03-2010; Cierre 30-06-2010

Call-05: SP1-JTI-CS-2010-03. Abierta 30-04-2010; Cierre 20-07-2010

Evaluación semana 13-17 septiembre

Call-06: SP1-JTI-CS-2010-04. Abierta 27-07-2010; Cierre 12-10-2010

Evaluación semana 08-12 noviembre

Call-07: SP1-JTI-CS-2010-05. Abierta 21-09-2010; Cierre TBD



- Resultados de las primeras convocatorias

Call-01: SP1-JTI-CS-2009-01. Abierta 15-06-2009; Cierre 31-08-2009

Call-02: SP1-JTI-CS-2009-02. Abierta 25-11-2009; Cierre 23-02-2010

Call-03: SP1-JTI-CS-2010-01. Abierta 29-01-2010; Cierre 27-04-2010

Resultado Retorno 10,8% del presupuesto distribuido

4º lugar por países, por detrás de Alemania (35.6%), Reino Unido (15.6%) e Italia (11%)

Call-04: SP1-JTI-CS-2010-02. Abierta 30-03-2010; Cierre 30-06-2010

Pendiente de recibir resultados de la evaluación, con notable participación de entidades españolas



- Contenido 4ª convocatoria 2010

Apertura 27 julio – cierre **12 octubre** (17:00 pm Bruselas)

Infoday celebrado el **10 de septiembre** en Bolonia

info-call-2010-04@cleansky.eu

Compromiso de respuesta de todas las dudas recibidas hasta el **17/09**

Total de **29 topics** / Financiación comunitaria aproximada de **14,115 M€**

ITDs que ofertan topics:

Eco Design - 3

Green Regional Aircraft – 4

Green Rotorcraft – 3

Sustainable and Green Engines – 10

Smart Fixed Wing Aircraft – 5

Systems for Green Operations - 4

4ª CONVOCATORIA SP1-JTI-CS-2010-04 2/3



Identification	ITD - AREA - TOPIC	topics	VALUE	MAX FUND
JTI-CS-ECO	Clean Sky - EcoDesign	3	2,200,000	1,650,000
JTI-CS-ECO-01	Area-01 - EDA (Eco-Design for Airframe)		500,000	
JTI-CS-2010-4-ECO-01-008	Development of thermoplastic polymer blend with low melting point and properties close to PEEK ones		200,000	
JTI-CS-2010-4-ECO-01-009	Moisture aging of composites - Time-Temperature - Moisture superposition principle - Hydric fatigue		300,000	
JTI-CS-ECO-02	Area-02 - EDS (Eco-Design for Systems)		1,700,000	
JTI-CS-2010-4-ECO-02-005	Development, Construction and Integration of Systems for Ground Thermal Test Bench		1,700,000	
JTI-CS-GRA	Clean Sky - Green Regional Aircraft	4	2,650,000	1,987,500
JTI-CS-GRA-01	Area-01 - Low weight configurations			
JTI-CS-GRA-02	Area-02 - Low noise configurations		150,000	
JTI-CS-2010-4-GRA-02-013	Novel nose wheel evolution for noise reduction		150,000	
JTI-CS-GRA-03	Area-03 - All electric aircraft		500,000	
JTI-CS-2010-4-GRA-03-002	Energy Management - Electrical motors power control. Analytical studies and modeling		350,000	
JTI-CS-2010-4-GRA-03-003	Development of Numerical Models of Aircraft Systems to be used within the JTI/GRA Shared Simulation Environment		150,000	
JTI-CS-GRA-04	Area-04 - Mission and trajectory Management			
JTI-CS-GRA-05	Area-05 - New configurations		2,000,000	
JTI-CS-2010-4-GRA-05-005	Aero-acoustic noise emissions measure for advanced Regional Open Rotor A/C configuration.		2,000,000	
JTI-CS-GRC	Clean Sky - Green Rotorcraft	3	1,165,000	873,750
JTI-CS-GRC-01	Area-01 - Innovative Rotor Blades		575,000	
JTI-CS-2010-4-GRC-01-005	Gurney flap actuator and mechanism for a full scale helicopter rotor blade		575,000	
JTI-CS-GRC-02	Area-02 - Reduced Drag of rotorcraft		590,000	
JTI-CS-2010-4-GRC-02-003	Contribution to optimisation of heavy helicopter engine installation design		440,000	
JTI-CS-2010-4-GRC-02-005	Helicopter hub and fuselage drag investigation by means of hybrid URANS/LES methods		150,000	
JTI-CS-GRC-03	Area-03 - Integration of innovative electrical systems			
JTI-CS-GRC-04	Area-04 - Installation of diesel engines on light helicopters			
JTI-CS-GRC-05	Area-05 - Environmentally friendly flight paths			
JTI-CS-SAGE	Clean Sky - Sustainable and Green Engines	10	7,950,000	5,962,500
JTI-CS-SAGE-01	Area-01 - Geared Open Rotor			
JTI-CS-SAGE-02	Area-02 - Direct Drive Open Rotor			
JTI-CS-SAGE-03	Area-03 - Large 3-shaft turbocfan		3,800,000	
JTI-CS-2010-4-SAGE-03-003	High Efficiency Fuel Pumping		1,500,000	
JTI-CS-2010-4-SAGE-03-004	Fuel Control System Sensors and Effectors		1,300,000	
JTI-CS-2010-4-SAGE-03-005	High Temperature Electronics		1,500,000	
JTI-CS-2010-4-SAGE-03-006	Ring Rolling of IN718		1,000,000	

4ª CONVOCATORIA SP1-JTI-CS-2010-04 3/3



JTI-CS-SAGE-04	Area-04 - Geared Turbofan		4,150,000	
JTI-CS-2010-4-SAGE-04-001	Development of low cost near conventional hot die forging process for gamma-TiAl low pressure turbine blades		650,000	
JTI-CS-2010-4-SAGE-04-002	Development of near net shape isothermal forging process for gamma-TiAl low pressure turbine blades		600,000	
JTI-CS-2010-4-SAGE-04-003	Development and validation of an integrated methodology to establish future production concepts		1,000,000	
JTI-CS-2010-4-SAGE-04-004	Development of low cost casting process for gamma - TiAl billets		550,000	
JTI-CS-2010-4-SAGE-04-005	Development & Manufacture of High Temperature Carbon Fibre Reinforced Plastic (CFRP) Aero engine Parts for Continuous Use at Temperatures above 350°C		850,000	
JTI-CS-2010-4-SAGE-04-006	Machining of highly stressed components: Development of Precise Electrochemical Machining (PECM) Simulation		500,000	
JTI-CS-SAGE-05	Area-05 - Turboshift			
JTI-CS-SFWA	Clean Sky - Smart Fixed Wing Aircraft	5	2,105,000	1,578,750
JTI-CS-SFWA-01	Area01 - Smart Wing Technology		1,455,000	
JTI-CS-2010-4-SFWA-01-013	Active Flow Control (AFC) techniques on trailing edge shroud for improved high lift configurations - design		460,000	
JTI-CS-2010-4-SFWA-01-028	Structural tests on smart droop nose device with regards to aircraft level		745,000	
JTI-CS-2010-4-SFWA-01-029	Development, design and manufacture and test of AFC actuator controller wrt industrial purposes and		250,000	
JTI-CS-SFWA-02	Area02 - New Configuration		650,000	
JTI-CS-2010-4-SFWA-02-010	Innovative shield design and manufacturing		250,000	
JTI-CS-2010-4-SFWA-02-011	Impact test campaign		400,000	
JTI-CS-SFWA-03	Area03 - Flight Demonstrators			
JTI-CS-SGO	Clean Sky - Systems for Green Operations	4	2,750,000	2,062,500
JTI-CS-SGO-01	Area-01 - Definition of Aircraft Solutions and exploitation strategies			
JTI-CS-SGO-02	Area-02 - Management of Aircraft Energy		2,250,000	
JTI-CS-2010-4-SGO-02-014	Construction of evaluation Power Modules (10) to a given design		250,000	
JTI-CS-2010-4-SGO-02-030	Test rig for endurance and reliability trials applied on TRL growth of high power Starter / Generators		2,000,000	
JTI-CS-SGO-03	Area-03 - Management of Trajectory and Mission		500,000	
JTI-CS-2010-4-SGO-03-009	Propfan equipped aircraft noise model		350,000	
JTI-CS-2010-4-SGO-03-010	High speed numerical integration techniques for precise prediction		150,000	
JTI-CS-SGO-04	Area-04 - Aircraft Demonstrators			
JTI-CS-SGO-05	Area-05 - Aircraft-level assessment and exploitation			
JTI-CS-TEV	Clean Sky - Technology Evaluator	0		
		topics	VALUE	FUND
		totals (€)	29	18,820,000
				14,115,000



- Contenido preliminar 5ª convocatoria 2010

Lista de topics para esta convocatoria, formulario de inscripción y agenda

<http://www.cleansky.eu/>

El programa de trabajo definitivo se publicará el **21 de septiembre**

Se prevén un total de **20 topics** / Financiación comunitaria aproximada **23 M€**

ITDs que ofertarán topics:

Green Regional Aircraft - 2

Sustainable & Green Engines - 4

Smart Fixed Wing Aircraft - 8

Systems for Green Operations – 6

Infoday **11 de octubre** en Bruselas

La fecha límite para inscripción **6 de octubre**

PREVISIÓN 5ª CONVOCATORIA SP1-JTI-CS-2010-05 2/3



Identification	ITD - AREA - TOPIC	topics	VALUE	MAX FUND
JTI-CS-ECO	Clean Sky - EcoDesign	11	5.230.000	3.922.500
JTI-CS-ECO-01	Area-01 - EDA (Eco-Design for Airframe)		3.030.000	
JTI-CS-2010-5-ECO-01-010	Study of cyanate ester based composites in a high service temperature environment		400.000	
JTI-CS-2010-5-ECO-01-011	Bicarbonate media blasting for paint-varnish removal and dry surface treatment		300.000	
JTI-CS-2010-5-ECO-01-012	Development of more eco-efficient aluminium alloys for aircraft structures		500.000	
JTI-CS-2010-5-ECO-01-013	Development and implementation of conductive coating for Magnesium sheets in a/c		160.000	
JTI-CS-2010-5-ECO-01-014	Infusion system development for primary structure		200.000	
JTI-CS-2010-5-ECO-01-015	Development of advanced preforms for LCM technologies		250.000	
JTI-CS-2010-5-ECO-01-016	Surface mapping to improve reliability of dry treatment on metallic and organic surfaces		250.000	
JTI-CS-2010-5-ECO-01-017	Production of yarns and fabrics based on recycled carbon fibres (CFs).		250.000	
JTI-CS-2010-5-ECO-01-018	Environmental Data Models and Interface development		720.000	
JTI-CS-ECO-02	Area-02 - EDS (Eco-Design for Systems)		2.200.000	
JTI-CS-2010-5-ECO-02-006	Electrical Test Bench Power Center		700.000	
JTI-CS-2010-5-ECO-02-007	Electrical Test Bench Control System, Instrumentation and Cabling		1.500.000	
JTI-CS-GRA	Clean Sky - Green Regional Aircraft	2	620.000	465.000
JTI-CS-GRA-01	Area-01 - Low weight configurations		170.000	
JTI-CS-2010-5-GRA-01-034	Design, manufacturing and impact test on selected panels with advanced composite material		170.000	
JTI-CS-GRA-02	Area-02 - Low noise configurations		450.000	
JTI-CS-2010-5-GRA-02-014	Wing loads control/alleviation system design for advanced regional Turbo-Fan A/C configuration		450.000	
JTI-CS-GRA-03	Area-03 - All electric aircraft			
JTI-CS-GRA-04	Area-04 - Mission and trajectory Management			
JTI-CS-GRA-05	Area-05 - New configurations			
JTI-CS-GRC	Clean Sky - Green Rotorcraft	7	11.580.000	8.685.000
JTI-CS-GRC-01	Area-01 - Innovative Rotor Blades			
JTI-CS-GRC-02	Area-02 - Reduced Drag of rotorcraft			
JTI-CS-GRC-03	Area-03 - Integration of innovative electrical systems		930.000	
JTI-CS-2010-5-GRC-03-004	Innovative management of energy recovery for reduction of electrical power consumption on fuel consumption		500.000	
JTI-CS-2010-5-GRC-03-005	Adaptation kit design & manufacturing: APU Driving System		430.000	
JTI-CS-GRC-04	Area-04 - Installation of diesel engines on light helicopters		9.950.000	
JTI-CS-2010-5-GRC-04-003	Optimised Diesel engine design matching a new light helicopter architecture		650.000	
JTI-CS-2010-5-GRC-04-004	Diesel Power-pack Integration on a light helicopter demonstrator		9.300.000	
JTI-CS-GRC-05	Area-05 - Environmentally friendly flight paths		300.000	
JTI-CS-2010-5-GRC-05-004	Tuning of simplified rotorcraft noise models. Preliminary acoustic measurement test campaign		300.000	
JTI-CS-GRC-06	Area-06 - Eco Design for Rotorcraft		400.000	
JTI-CS-2010-5-GRC-06-001	Manufacturing of a Thermoplastic Composite Feasibility Article for a Helicopter Door		200.000	
JTI-CS-2010-5-GRC-06-002	Manufacturing of thermoplastic structural demonstrators		200.000	

PREVISIÓN 5ª CONVOCATORIA SP1-JTI-CS-2010-05 3/3



JTI-CS-SAGE	Clean Sky - Sustainable and Green Engines	4	5.400.000	4.050.000
JTI-CS-SAGE-01	Area-01 - Geared Open Rotor		0	
JTI-CS-SAGE-02	Area-02 - Direct Drive Open Rotor		0	
JTI-CS-SAGE-03	Area-03 - Large 3-shaft turbofan		2.600.000	
JTI-CS-2010-5-SAGE-03-007	Large 3-shaft Demonstrator – Core Turbomachinery – High Temperature Flexible PCB		600.000	
JTI-CS-2010-5-SAGE-03-008	Large 3-shaft Demonstrator – Structural Surface Cooler development		2.000.000	
JTI-CS-SAGE-04	Area-04 - Geared Turbofan		2.800.000	
JTI-CS-2010-5-SAGE-04-002	Development of Innovative SLM-Machinery for High Temperature Aero Engine Applications		1.800.000	
JTI-CS-2010-5-SAGE-04-007	Development of Selective Laser Melting (SLM) Simulation tool for Aero Engine applications		1.000.000	
JTI-CS-SAGE-05	Area-05 - Turboshaft		0	
JTI-CS-SFWA	Clean Sky - Smart Fixed Wing Aircraft	8	3.999.000	2.999.250
JTI-CS-SFWA-01	Area01 – Smart Wing Technology		1.842.000	
JTI-CS-2010-5-SFWA-01-007	In field surface inspection tool for contamination detection before bonded composite repair		250.000	
JTI-CS-2010-5-SFWA-01-014	Final design and manufacturing of a test set up for the investigation of gust load alleviation		400.000	
JTI-CS-2010-5-SFWA-01-030	Quantification of the degradation of microstructured coatings		200.000	
JTI-CS-2010-5-SFWA-01-031	Assessment of the interaction of a passive and an active load alleviation scheme for a transport aircraft		200.000	
JTI-CS-2010-5-SFWA-01-032	Technology evaluation and manufacturing of microtechnology-based Active Flow Control actuators		300.000	
JTI-CS-2010-5-SFWA-01-033	Numerical Simulation of the Assembly Tolerances for NLF Wings		492.000	
JTI-CS-SFWA-02	Area02 – New Configuration			
JTI-CS-SFWA-03	Area03 – Flight Demonstrators		2.157.000	
JTI-CS-2010-5-SFWA-03-004	A340 Outer Wing Metrology		1.457.000	
JTI-CS-2010-5-SFWA-03-005	Surface quality measurement in flight		700.000	
JTI-CS-SGO	Clean Sky - Systems for Green Operations	6	3.700.000	2.775.000
JTI-CS-SGO-01	Area-01 - Definition of Aircraft Solutions and exploitation strategies		0	
JTI-CS-SGO-02	Area-02 - Management of Aircraft Energy		550.000	
JTI-CS-2010-5-SGO-02-027	Simulation and Analysis Tool Development Part I		400.000	
JTI-CS-2010-5-SGO-02-031	Qualification of insulation materials to engine oils		150.000	
JTI-CS-SGO-03	Area-03 - Management of Trajectory and Mission		1.150.000	
JTI-CS-2010-5-SGO-03-011	Recruitment of qualified flight crew (test, airline) and expenses for tests		250.000	
JTI-CS-2010-5-SGO-03-012	SOG Wheel Actuator development for existing aircraft		650.000	
JTI-CS-2010-5-SGO-03-013	Economical analysis according to business jets operatorsprofile		250.000	
JTI-CS-SGO-04	Area-04 - Aircraft Demonstrators		2.000.000	
JTI-CS-2010-5-SGO-04-001	Design and manufacture of an aircraft tractor compliant with specifications for Smart Operations on ground		2.000.000	
JTI-CS-SGO-05	Area-05 - Aircraft-level assessment and exploitation		0	
JTI-CS-TEV	Clean Sky - Technology Evaluator	0		
		topics	VALUE	FUND
		totals (€)	38	30.529.000
				22.896.750

Posicionamiento estratégico
Contactos a nivel internacional
Proveedores de grandes integradores
Desarrollo I+D con financiación ventajosa
¿Qué hace la competencia?

REFERENCIAS

Transport Research Knowledge Centre

www.transport-research.info



JTI Clean Sky

www.cleansky.eu



JU SESAR

www.sesarju.eu



Seventh Framework Programme

<http://cordis.europa.eu/fp7>



Calls for proposals

<http://cordis.europa.eu/fp7>



TecnoEuropa

www.cdti.es



RECURSOS DE INFORMACIÓN DE LA COMISIÓN EUROPEA

General sources of help

FP7 Enquiry service: <http://ec.europa.eu/research/enquiries>
Nat. Contact Points: http://cordis.europa.eu/fp7/ncp_en.html

Specialised and technical assistance

EPSS Helpdesk support@epss-fp7.org
IPR helpdesk <http://www.ipr-helpdesk.org>
CORDIS Helpdesk
http://cordis.europa.eu/guidance/helpdesk/home_en.html

Inscripción en Lista Distribución CDTI
www.cdti.es -> Mantenerse informado



Gracias a todos por su atención!

Juan Antonio Tébar
Dpto. Programa Marco de I+D, CDTI