OPORTUNIDADES H2020 NOS TRANSPORTES (incluindo CLEAN SKY)

Gabinete de Promoção dos Programa Quadro ID&I H2020
Fundação para a Ciência e Tecnologia | Agência de Inovação

OPORTUNIDADES PARA AVIAÇÃO (INCLUINDO CLEAN SKY) WP 2016 - 2017

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- **CFP02 (Clean Sky2) - *Draft***

3 programas Aviação da UE

TRANSPORTES/Aviação - Clean Sky – SESAR

Call Mobility for Growth

2016 – 2017

Foco em atividades RIA e IA de médio longo prazo.

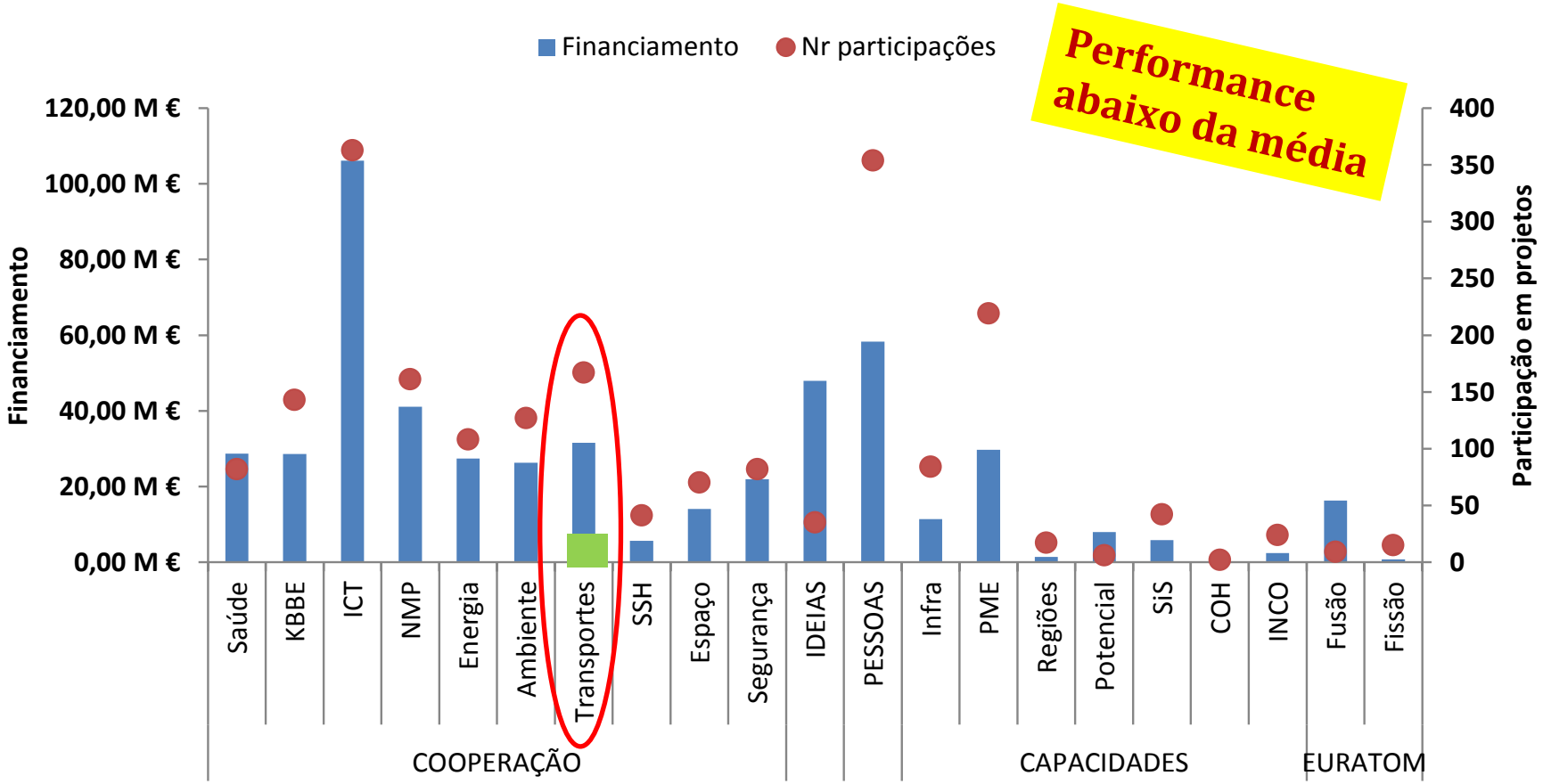
Atividades Bottom-up para tecnologias inovadoras não cobertas pelo CLEAN SKY e fora âmbito SESAR.

Atividades em TRL 1-6.

Resultados FP7

Resultados PT no FP7 (2007-2013) - Aeronáutica

Retorno PT Aeronáutica = 7,4 M€ (taxa retorno 0,9%)



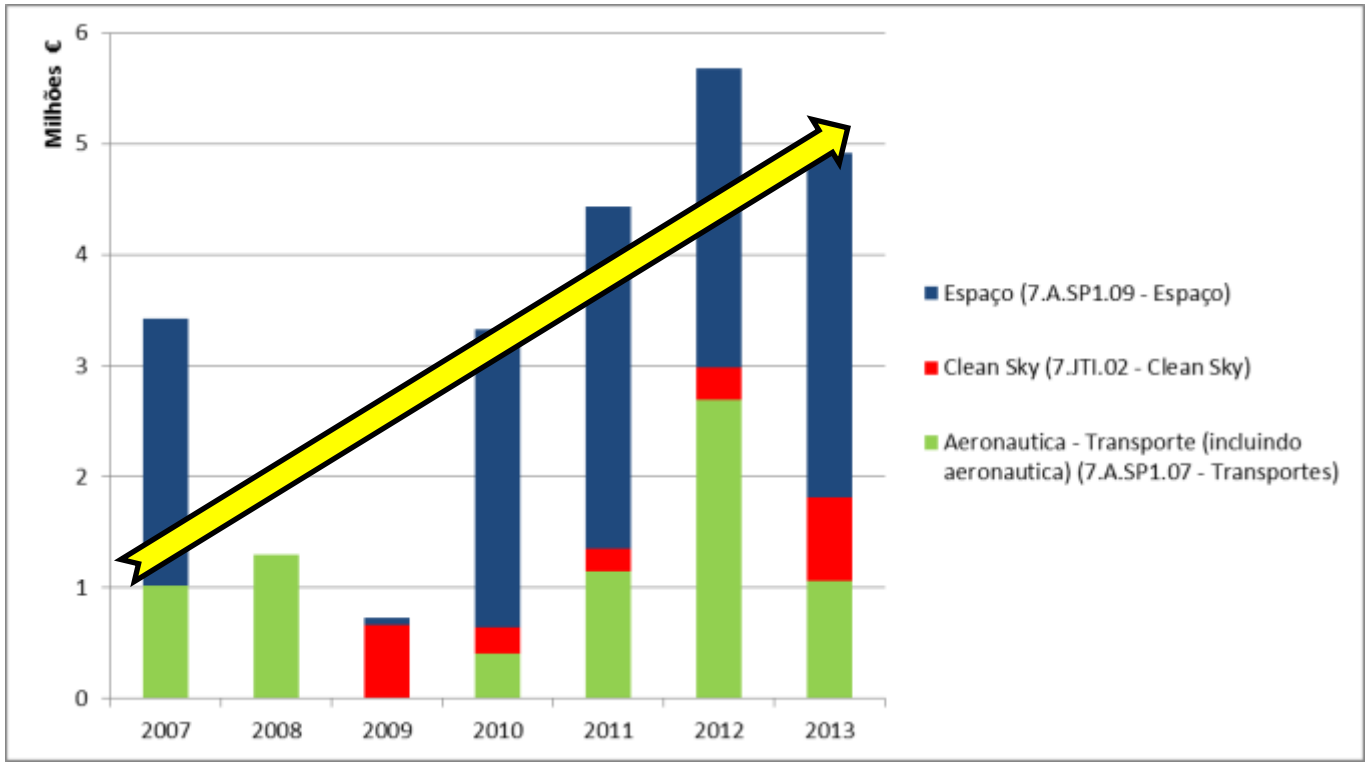
Resultados FP7

Retorno PT nos 3 programas para setor Aeroespacial [2007-2013]

Transportes/Aeronáutica
(Level 0, 1, 2)

Cleansky Aeronáutica
(Level 3)

ESPAÇO
(TRL 1 – 6)



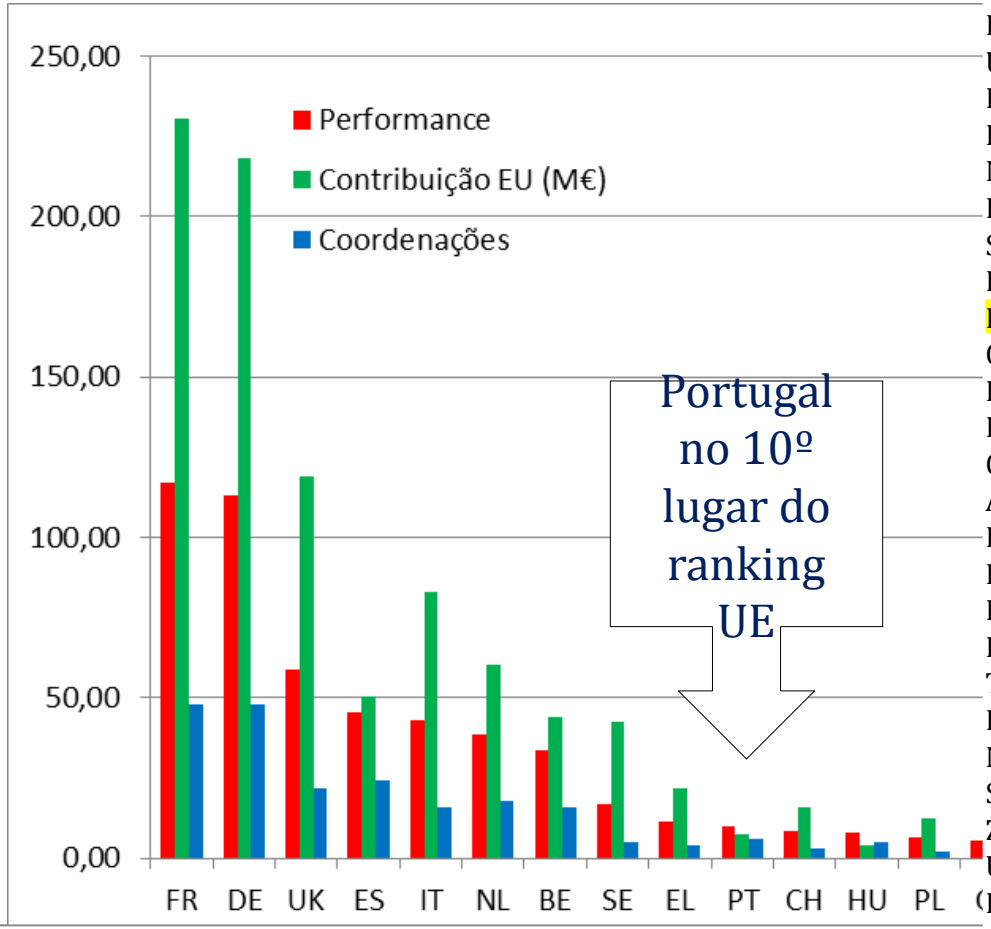
Acumulado
24M€

Média
4M€/ano

Espaço = 14M€
Aeronáutica = 7,6M€
Clean Sky = 2,1M€

Resultados FP7

Retorno PT programa TRANSPORTES/Aeronáutica [2007-2013]



Pais	Contribuição EU (M€)	Participações	Coordenações	Performance(M€)
FR	230,48	595	48	117,09
DE	218,24	525	48	112,93
UK	118,89	364	22	58,68
ES	50,51	200	24	45,54
IT	82,84	292	16	43,03
NL	60,48	182	18	38,63
BE	44,02	180	16	33,46
SE	42,49	113	5	16,68
EL	21,68	90	4	11,46
PT	7,61	35	6	10,13
CH	15,98	57	3	8,21
HU	4,06	26	5	7,99
PL	12,31	64	2	6,58
CZ	16,81	52	1	5,56
AT	10,68	34	2	5,34
RU	15,59	79	0	4,96
IL	6,16	27	2	4,43
IE	7,00	17	2	4,23
RO	5,76	28	1	3,10
TR	4,69	22	1	2,74
FI	2,02	10	1	1,94
NO	2,67	5	1	1,87
SI	2,59	4	1	1,83
ZA	1,12	8	1	1,74
UA	3,14	12	0	0,87
DK	2,37	9	0	0,66
MT	1,05	5	0	0,32

Resultados FP7

Beneficiários PT programa TRANSPORTES/Aeronáutica [2007-2013]

Entidade (posição no ranking global aeronáutica)	Participações
INSTITUTO SUPERIOR TECNICO (150º)	5
GMVIS SKYSOFT SA (187º)	5
INSTITUTO DE SOLDADURA E QUALIDADE (199º)	2
TEKEVER ASDS (201º)	3
UNIVERSIDADE DA BEIRA INTERIOR (207º)	4
UNINOVA - INSTITUTO DE DESENVOLVIMENTO DE NOVAS TECNOLOGIAS (258º)	1
INSTITUTO DE ENGENHARIA MECANICA E GESTAO INDUSTRIAL	2
INESC PORTO	1
AVANSSA LDA	1
PEDECE	1
UNIVERSIDADE DE AVEIRO	1
FUNDACAO D. ANNA SOMMER CHAMPALIMAUD E DR. CARLOS MONTEZ CHAMPALIMAUD	1
ANA - AEROPORTOS DE PORTUGAL, SA	1
INOVAMAIS - SERVICOS DE CONSULTADORIA EM INOVACAO TECNOLOGICA S.A.	1
CRITICAL MATERIALS SA	2
INESC ID - LISBOA	1
INOV INESC INOVACAO - INSTITUTO DE NOVAS TECNOLOGIAS	1
ACTIVE SPACE TECHNOLOGIES, Atividades Aeroespaciais S.A.	1
PEMAS-ASSOCIACAO EMPRESAS NACIONAIS PARA O SECTOR AERONAUTICO	1
Total de participações em projetos	**35**

1020 entidades beneficiárias na UE
19 entidades beneficiárias em PT (rankingº)

Resultados FP7

Top 100 empresas EU nos TRANSPORTES/Aeronáutica [2007-2013]

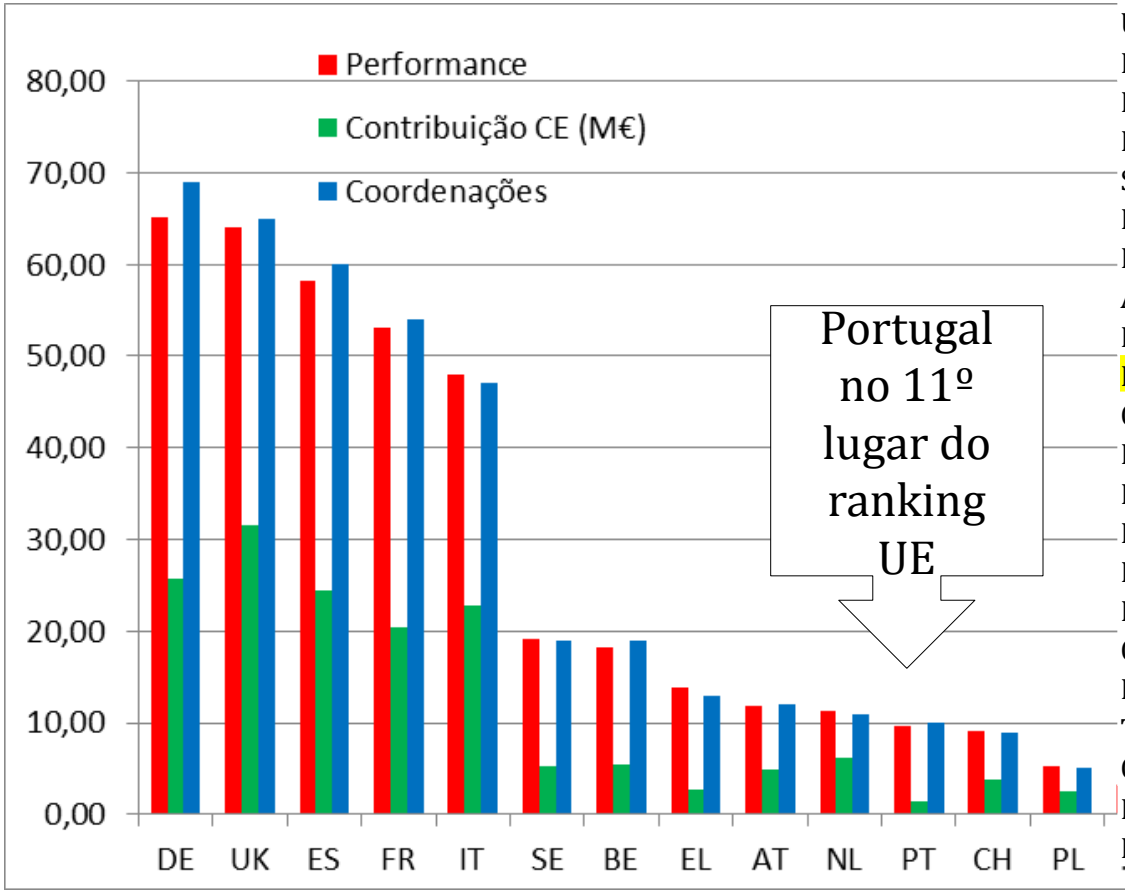
Entidade	#	M€
THALES AVIONICS SAS	20	22,64
SNECMA SA	35	21,95
AIRBUS OPERATIONS SAS	40	20,33
EADS DEUTSCHLAND GMBH	48	18,51
ROLLS-ROYCE PLC	30	17,78
AIRBUS OPERATIONS GMBH	29	14,22
ALENIA AERMACCHI SPA	36	14,10
MTU AERO ENGINES AG	25	12,63
GKN AEROSPACE SWEDEN AB	18	11,20
ROLLS-ROYCE DEUTSCHLAND LTD & CO KG	19	10,94
EADS FRANCE SAS	26	10,73
ARTTIC	23	9,68
DASSAULT AVIATION SA	33	8,74
TURBOMECA SA	18	7,82
Airbus Operations Limited	21	6,98
AVIO S.P.A	20	6,98
DIEHL AEROSPACE GMBH	7	5,60
SAAB AKTIEBOLAG	11	5,03
INDUSTRIA DE TURBO PROPULSORES S.A.	12	5,03
SAGEM DEFENSE SECURITE SA	5	4,84
AGUSTAWESTLAND LIMITED	2	4,50
INASCO O.E.	15	3,65
SELEX ES SPA	10	3,50
BAE Systems (Operations) Ltd	7	3,47
ISRAEL AEROSPACE INDUSTRIES LTD.	16	3,47
DASSAULT SYSTEMES SA	5	3,44
DEEP BLUE SRL	6	3,29
SHORT BROTHERS PLC	9	3,12
SONACA SA	5	3,07
GE AVIATION SYSTEMS LTD	4	3,05
ZODIAC AEROTECHNICS SAS	4	2,80
AIRCELLE SA	4	2,77
SAMTECH SA	5	2,77
GKN Aerospace Services Limited	7	2,65
GOODRICH ACTUATION SYSTEMS SAS	2	,53

Entidade	#	M€
EUROCOPTER DEUTSCHLAND GMBH	7	2,50
CORFACS	13	2,46
PRVNI BRNENSKA STROJIRNA VELKA BITES A.S.	2	2,37
RZESZOW SA	9	2,36
SIEMENS AG	4	2,31
MESSIER-BUGATTI-DOWTY SA	6	2,25
PIAGGIO AERO INDUSTRIES SPA	16	2,21
NUMERICAL MECHANICS APPLICATIONS SA	11	2,20
HELLENIC AEROSPACE INDUSTRY SA	10	2,08
TUSAS-TURK HAVACILIK VE UZAY SANAYII AS	7	2,06
LATECOERE	3	1,96
TriaGnoSys GmbH	2	1,92
D'APPOLONIA SPA	3	1,86
PIPISTREL PODJETJE ZA	2	1,85
IMA MATERIALFORSCHUNG GMBH	1	1,84
UNIS AS	3	1,83
ISDEFE SA	7	1,79
THALES RESEARCH & TECHNOLOGY (UK) LIMITED	1	1,74
AGUSTAWESTLAND SPA	2	1,73
DEIMOS SPACE SOCIEDAD LIMITADA UNIPERSONAL	4	1,72
HONEYWELL INTERNATIONAL SRO	6	1,70
ACQ INDUCOM	4	1,69
FACC AG	3	1,68
I.N.C.A.S. SA	9	1,60
TECHSPACE AERO SA	6	1,58
USE2ACES BV	3	1,57
Goodrich Actuation Systems Limited	1	1,55
ASD EUROPE	7	1,54
AIRBUS OPERATIONS SL	11	1,54
AIRBUS SAS	11	1,51
Eurostep AB	2	1,50
INVENT GMBH*	3	1,48
PROGESA S.R.L.	3	1,45
MSC Software GmbH	3	1,43
QINETIQ LIMITED	5	1,42

Entidade	#	M€
GTD SISTEMAS DE INFORMACION SA	3	1,38
BCT STEUERUNGS UND DV-SYSTEME GMBH	3	1,36
INGENIERIA Y ECONOMIA DEL TRANSPORTE S.A.	4	1,36
SMR ENGINEERING & DEVELOPMENT SA	5	1,30
EASN Technology Innovation Services BVBA	16	1,30
S.A.B.C.A.	4	1,28
SLOT CONSULTING LTD	13	1,23
SYSGO AG	3	1,19
SCITEK CONSULTANTS LTD	3	1,19
DAHER AEROSPACE SAS	3	1,18
AXESSIM SAS	1	1,15
KITE SOLUTIONS SRL	3	1,15
Jeppesen GmbH	4	1,14
GAS DYNAMICS LTD	4	1,13
ZAPOROZHYE MACHINE	2	1,12
EUROCOPTER SAS	6	1,11
ALTRAN AVIATION ENGINEERING GMBH	1	1,06
AERNNOVA ENGINEERING SOLUTIONS IBERICA SA	3	1,04
RHEINMETALL DEFENCE ELECTRONICS GMBH	1	1,03
EADS - CONSTRUCCIONES AERONAUTICAS S.A.	5	0,97
TELETEL S.A.	2	0,97
GMVIS SKYSOFT SA	5	0,97
MBDA FRANCE SAS	4	0,95
HISPANO-SUIZA SA	4	0,95
LMS INTERNATIONAL NV	4	0,91
MOTOR SICH JSC	1	0,90
ADVANCED LOGISTICS GROUP SAU	2	0,89
EUROPEAN VIRTUAL INSTITUTE FOR INTEGRATED RISK MANAGEMENT	1	0,89
TEEM PHOTONICS SA	1	0,85
TEKEVER ASDS	3	0,85
BOEING RESEARCH & TECHNOLOGY EUROPE	7	0,84

Análise FP7

Retorno PT programa CLEAN SKY [2007-2013]



Pais	Contribuição CE (M€)	Participações	Coordenações	Performance (M€)
DE	25,64	114	69	65,22
UK	31,53	128	65	64,01
ES	24,45	111	60	58,19
FR	20,36	106	54	53,13
IT	22,83	106	47	47,96
SE	5,30	41	19	19,16
BE	5,44	34	19	18,28
EL	2,73	34	13	13,85
AT	4,93	24	12	11,86
NL	6,16	25	11	11,25
PT	1,39	18	10	9,64
CH	3,72	19	9	9,02
PL	2,54	13	5	5,32
RO	1,36	8	3	3,22
IE	0,63	4	3	2,72
HU	0,47	3	2	1,85
IL	0,17	2	2	1,73
CZ	0,17	3	1	1,11
NO	0,60	2	1	0,99
TR	0,19	1	1	0,86
CY	0,07	3	0	0,37
BG	0,05	1	0	0,12
FI	0,03	1	0	0,12

Resultados FP7

Beneficiários PT programa CLEAN SKY [2007-2013]

453 entidades beneficiárias na UE
11 entidades beneficiárias em PT (rankingº)

Entidade (posição no ranking global Clean Sky)	Participações
Active Space Technologies, Actividades Aeroespaciais S.A. (78º)	2
FIBERSENSING-SISTEMAS AVANCADOS DEMONITORIZACAO SA (184º)	3
CRITICAL MATERIALS SA (191º)	1
EDISOFT-EMPRESA DE SERVICOS E DESENVOLVIMENTO DE SOFTWARE SA (267º)	1
GMVIS SKYSOFT SA (294º)	4
CRITICAL SOFTWARE SA (321º)	1
Spin.Works Lda	2
FUNDACAO DA FACULDADE DE CIENCIAS DA UNIVERSIDADE DE LISBOA	1
Optimal Structural Solutions Lda	1
INSTITUTO DE SOLDADURA E QUALIDADE	1
INSTITUTO DE ENGENHARIA MECANICA E GESTAO INDUSTRIAL	1
Total de participações	**18**

Resultados FP7

Top 70 empresas EU no CLEAN SKY [2007-2013]

Entidade	#	M€
GKN Aerospace Services Limited	9	4,56
FUNDACIO PRIVADA ASCAMM	8	4,38
STICHTING DUITS-NEDERLANDSE WINDTUNNELS	2	3,90
SERVICIOS DE TECNOLOGIA INGENIERIA E INFORMATICA	2	3,75
IBK-INNOVATION GMBH & CO. KG	5	3,56
FUNDACION TECNALIA	19	3,55
REVOIND INDUSTRIALE	6	3,25
TEOS SA	1	3,22
AIRCRAFT RESEARCH ASSOCIATION LIMITED	9	2,64
TECHNISCHE UNIVERSITAET MUENCHEN	11	2,53
POLITECNICO DI MILANO	8	2,47
UNIVERSITY OF BRISTOL	9	2,43
SHORT BROTHERS PLC	1	2,40
EUROPEAN TRANSONIC WINDTUNNEL GMBH	2	2,37
AUSTRO ENGINE GMBH	1	2,23
Rolls-Royce Goodrich Engine Control Systems Limited	4	1,80
TWI LIMITED	9	1,67
THE UNIVERSITY OF MANCHESTER	8	1,58
UNIVERSITAET STUTTGART	7	1,56
OFFICINE MECCANICHE IRPINE SRL	1	1,47
THE UNIVERSITY OF NOTTINGHAM	4	1,41
VALLET SAS	1	1,35
AEROTEX UK LLP	5	1,24
IMPERIAL COLLEGE	6	1,21
AM TESTING SRL	2	1,14
TOTALFORSVARETS FORSKNINGSINSTITUT	8	1,14
HIT09 Srl	4	1,13
STREIT-TGA-GMBH&CO.KG	1	1,03
CATARSI ING.PIERO E C SRL	1	1,01
COMOTI	5	0,97
SWEREA SICOMP AB	6	0,97
CSEM	4	0,96
EOS GMBH ELECTRO OPTICAL SYSTEMS	1	0,96
TLD EUROPE SAS	1	0,95
FUNDACION CENTRO DE TECNOLOGIAS AERONAUTICAS	3	0,93
ARITEX CADING,S.A.	1	0,90
INSTYTUT LOTNICTWA	5	0,90
CENTRO DE ESTUDIOS E INVESTIGACIONES TECNICAS	4	0,89
TECHNISCHE UNIVERSITAT BERLIN	6	0,86
FUNDACION CIDAUT	5	0,81
BIAS - BREMER INSTITUT FUR ANGEWANDTE STRAHLTECHNIK GMBH	2	0,80
KUNGLIGA TEKNISKA HOEGSKOLAN	6	0,80
I.D.S. - INGEGNERIA DEI SISTEMI - S.P.A.	5	0,79
FUNDACION PARA LA INVESTIGACION, DESARROLLO DE MATERIALES COMPUESTOS	5	0,75
NTN-SNR ROULEMENTS SA	1	0,75
CEDRAT TECHNOLOGIES SA	3	0,74
SOCIETE NATIONALE DE CONSTRUCTION AEROSPATIALE SONACA SA	1	0,74
ING. JOACHIM MILBERGINSTITUT FUR PRODUKTION UND LOGISTIK GMBH & CO. KG	1	0,72
GE AVIATION SYSTEMS LTD	3	0,71
ADENEO AS	1	0,69
EUROTECH DI MARIO AMOROSO SAS	2	0,69
UNIVERSITY OF SOUTHAMPTON	5	0,66
TEKNOSUD S.R.L	2	0,66
CONSORZIO SICTA SISTEMI INNOVATIVIPER IL CONTROLLO DELTRAFFICO AEREO	2	0,64
CISSOID S.A.	2	0,62
FUNDACION IMDEA MATERIALES	1	0,62
BOEHLER SCHMIEDETECHNIK GMBH & CO KG	3	0,61
INASCO - INTEGRATED AEROSPACE SCIENCES CORPORATION O.E.	4	0,61
Eaton Aerospace Limited	1	0,59
UNIVERSITY OF PATRAS	7	0,58
SIGMA PRECISION COMPONENTS UK LTD	1	0,58
GENERAL ELECTRIC COMPANY POLSKA	2	0,57
FRAUNHOFER E.V	3	0,57
DOLPHIN INTEGRATION SA	1	0,57
TRONIC S MICROSYSTEMS SA	1	0,57
Oxsensis Limited	1	0,57
CONSORZIO NAZIONALE INTERUNIVERSITARIO PER LE TELECOMUNICAZIONI	1	0,56
SENER INGENIERIA Y SISTEMAS S.A.	2	0,55
UMBRA CUSCINETTI SPA	3	0,53
GMI AERO SAS	8	0,53

Calls 2014-2015 (H2020)

Resultados participação PT na call 2014 H2020 - Aviação

3 beneficiários PT em 2 projetos - retorno total 1,2M€

Future Sky Safety

CEIIA - Centro para a excelência e inovação na industria automóvel

Embraer Portugal Estruturas em Compósitos S.A.

PASSME

Almadesign, Conceito e Desenvolvimento de Design, Lda

Performance abaixo da média

		Propostas Apresentadas											Projetos						Financiamento			Taxa de Sucesso			
		Nr. Propostas				Nr de participações			Reservelist		Ilegíveis		Nr. Projetos			Nr de participações						Nr. Projetos		Nr Part.	
		UE	PT	% PT	Coord. PT	UE	PT	% PT	UE	PT	UE	PT	UE	PT	% PT	UE	PT	% PT	UE	PT	% PT	UE	PT	UE	PT
H2020-GV-2014	28-08-2014	76	4	5,26%	0								15	1	6,67%		1		134,96 ME	0,26 ME	0,19%	19,74%	25,00%		
H2020-MG-2014_SINGLESTAGE_A	27-03-2014	55	17	30,91%	5	435	25	5,75%	4	1	0	0	8	2	25,00%	85	4	4,71%	22,04 ME	1,12 ME	5,06%	14,55%	11,76%	19,54%	16,00%
H2020-MG-2014_TWOSTAGES	28-08-2014	241	41	17,01%	4								66	9	13,64%		15		374,31 ME	3,54 ME	0,94%	27,39%	21,95%		
H2020-SMEINST-1-2014 pme	18-06-2014	227	2	0,88%	2	243	2	0,82%	0	0	0	0	26	1	3,85%	27	1	3,70%	1,30 ME	0,05 ME	3,85%	11,45%	50,00%	11,11%	50,00%
Total		599	64	10,68%	11	678	27	3,98%	4	1	0	0	115	13	11,30%	112	21	18,75%	532,61 ME	4,96 ME	0,93%	19,20%	20,31%	16,52%	77,78%

Calls 2014-2015 (H2020)

Call Mobility for Growth – WP2015 (Ainda há calls abertas…)

D54 - Transportes Inteligentes, Ecológicos e Integrados (4)

H2020-CS2-CPW02-2015-01 | 91,50 M€ — De 17-05-2015 a 30-07-2015

Galileo (Other Actions - by GSA/ESA)

H2020-Galileo PRS-2014 | 20,00 M€ — De 17-05-2015 a 20-08-2015

Galileo Public Regulated Service R&D activities — Link para a página oficial

The European GNSS will offer a solution for governmental usage of Galileo through the Galileo Public Regulated Service (PRS), which will be using the most secure cryptology together with the associated command and control structures.

H2020-GV-2014-2015

H2020-GV-2015 | 30,00 M€ — De 22-07-2014 a 15-10-2015

GREEN VEHICLES 2015 — Link para a página oficial

Consulte abaixo os detalhes de cada Tópico a concurso neste Call. O link para a página oficial (acima) dá acesso ao documento oficial e completo, com todos os detalhes deste Call.

GREEN VEHICLES 2015

GV-6-2015 - Powertrain control for heavy-duty vehicles with optimised emission

GV-8-2015 - Electric vehicles' enhanced performance and integration into the transport system and the grid

H2020-MG-2014-2015

H2020-MG-2015-Singlestage-B | 18,50 M€ — De 24-06-2015 a 15-10-2015

MOBILITY FOR GROWTH 2014-2015 — Link para a página oficial

Consulte abaixo os detalhes de cada Tópico a concurso neste Call. O link para a página oficial (acima) dá acesso ao documento oficial e completo, com todos os detalhes deste Call.

MOBILITY FOR GROWTH 2014-2015

Road

MG-3.6b-2015 - Safe and connected automation in road transport

Urban Mobility

MG-5.5b-2015 - Demonstrating and testing innovative solutions for cleaner and better urban transport and mobility

Infrastructure

MG-8.3-2015 - Facilitating market take up of innovative transport infrastructure solutions

MG-8.4b-2015 - Smart governance, network resilience and streamlined delivery of infrastructure innovation

Para o devido enquadramento de qualquer candidatura, esta informação não dispensa a consulta da versão integral do Programa de Trabalho e do Guia dos Candidatos de cada Tema.

Escolha no topo da página o Tema do seu interesse para aceder à informação específica do mesmo. Neste caso, poderão ser mostrados tópicos de Calls de outros temas, mas relevantes para o que estiver selecionado.

Data limite
15-10-2015

2 tópicos relevantes
para aviação (PCP; CSA)

Calls 2016-2017 (H2020)

(…novas calls MG H2020 previstas abrir em Novembro 2015)

http://ec.europa.eu/programmes/horizon2020/en/h2020-section/smart-green-and-integrated-transport

Consulte websites COMISSÃO e GPPQ

http://www.gppq.fct.pt/h2020/calls_abertas.php

Calls 2016-2017 (H2020) (dividida em 3 áreas)

DRAFT

- *Mobility for Growth (MG)*

  1. **Aviation**
  2. **Waterborne**
  3. **Safety**
  4. **Urban**
  5. **Logistics**
  6. **ITS**
  7. **Infrastructure**
  8. **Socio-economics**

- *Automated Road Transport (ART)*

- *European Green Vehicles Initiative (EGVI)*

Calls 2016-2017 (H2020)
(âmbito para aviação)

DRAFT

This Work Programme addresses mainly **medium to long term** research and innovation actions with a **bottom-up approach** for innovative technologies that will **complement Clean Sky 2** and are **outside the scope of SESAR**.

Topics in-line Strategic Research and Innovation Agenda (SRIA) of the Advisory Council for Aviation Research and Innovation in Europe (ACARE):

- Reducing energy consumption and environmental impact
- Reducing noise
- Maintaining industrial leadership
- Breakthrough innovations

Calls 2016-2017 (H2020)

(Número de tópicos por área e por call)

DRAFT

Call

CALLS IN 2016-2017		Number topics	TYPE OF ACTIONS				
			RIA	IA	CSA	Other	Total
MOBILITY FOR GROWTH	1. Aviation 7	7	4		4		8
	2. Waterborne	4	1	3			4
	3. Safety 2	6	6		1		7
	4. Urban	5	1	2	2		5
	5. Logistics 1	4	3		1		4
	6. ITS	3	1	1	1		3
	7. Infrastructure 2	3	3		1		4
	8. Socio-economics 1	6	3		3		6
	Total MG	38	22	6	13	0	41
AUTOMATED ROAD TRANSPORT		7	3	3	1	0	7
GREEN VEHICLES		12	4	6	1	1	12
OTHER ACTIONS		6	0	0	0	6	6
TOTAL		63	29	15	15	7	66
			44%	23%	23%	11%	100%

Áreas com tópicos aviação

Nº tópicos previstos

Calls 2016-2017 (H2020)
(orçamento por área)

DRAFT

Aviation	**Clean Sky 2**	404
	SESAR 2	140
	Mobility for Growth	140-150
	Total	**684-694**
Rail	Shift2Rail	99
	Total	**99**
Road	European Green Vehicles Initiative	200-205
	Automated Road Transport	75-80
	The Cleanest Engine (inducement prize)	5
	Total	**280-290**
Waterborne	**Mobility for Growth**	73-78
	Contribution to Blue Growth	17
	Total	**90-95**
Safety	**Mobility for Growth**	60-70
	Total	**60-70**

Calls 2016-2017 (H2020)
(orçamento por área)

DRAFT

Urban	Mobility for Growth	33-45
	Contribution to Smart Cities	0-20
	Other actions (incl. ELENA Facility)	17-25
	Total	**50-90**
Logistics	**Mobility for Growth**	20-30
	Total	**20-30**
ITS	**Mobility for Growth**	20-30
	Total	**20-30**
Infrastructure	**Mobility for Growth**	35-54
	Automated Road Transport	10-15
	Other actions	1
	Total	**45-70**
Socio-economics	**Mobility for Growth**	12-15
	Other actions	5
	Total	**17-20**

Calls 2016-2017 (H2020)
(orçamento global)

DRAFT

Contributo para atividades Aviação

Blue Growth	**17**
Shift2RAIL	**99**
Clean Sky 2	**404**
SESAR 2	**140**

Transport Work Programme	**Mobility for Growth**	**425-440**
	European Green Vehicles Initiative	200-205
	Automated Road Transport	85-95
	SME instrument	115-120
	Fast Track to Innovation	30
	Other actions	30-40
	Total	**900-920**

Calls 2016-2017 (H2020)
(tópicos previstos)

DRAFT

Tópicos Área AVIATION			
2016		2017	
1.1 Reducing energy consumption and environmental impact of aviation	RIA		
		1.2 Reducing aviation noise	RIA
		1.3 Maintaining industrial leadership in aeronautics	RIA
1.4 Breakthrough innovation	RIA	1.4 Breakthrough innovation	RIA
1.5 Identification of gaps, barriers and needs in the aviation research	CSA	1.5 Identification of gaps, barriers and needs in the aviation research	CSA

Calls 2016-2017 (H2020)
(tópicos previstos)

DRAFT

Tópicos Área SAFETY			
2016		2017	
3.1 Addressing aviation safety challenges	RIA		
3.5 Behavioural aspects for safer transport	RIA		

Tópicos Área LOGISTICS			
2016		2017	
		5.2 Innovative ICT solutions for future logistics operations	RIA

Calls 2016-2017 (H2020)
(tópicos previstos)

DRAFT

Tópicos Área INFRASTRUCTURE

2016		2017	
		7.1 Resilience to extreme (natural and man-made) events	RIA
		7.2 Optimisation of transport infrastructure multi-modal corridors and terminals	RIA

Tópicos Área SOCIO-ECONOMICS

2016		2017	
8.1 Research, technology development and market trends for the European transport manufacturing industries	CSA		

Call 2016 (H2020)
(tópicos AVIATION)

RIA
5-9 M€ per project

1.1 Reducing energy consumption and environmental impact of aviation

CHALLENGE & IMPACT

- Greening aviation
- increasing energy efficiency
- Reduce consumption to reduce 75% CO2
- Reduce 90% pollutants (NOx) and particulate matter (Carbon).

SCOPE

Aircraft technologies (Large and small aircraft). Address one:

1. More electric aircraft
2. Engine technologies for improved thermal efficiency
3. Self-sensing, morphing and multi-functional Aero-structures
4. Screening and optimization tools for alternative jet fuel
5. Design tools for assessing the impact of different fuel compositions

TRL range 1-6

Call 2017 (H2020)
(tópicos AVIATION)

RIA
5-9 M€ per project

1.2 Reducing aviation noise

CHALLENGE & IMPACT

- Holistic approach to aviation noise, coupling engine technology w/ airport infrastructure and land use
- Easy decision making aids for sustainable airport development plans
- Aircraft noise affect population health and endangers extensions of airports

SCOPE

- Reduce noise at the source and mitigate the noise impact of air traffic
- New technologies and methodologies to enable 24/7 operations
- Coordination of national and EU research activities for aviation noise, towards a common strategic research roadmap for aviation noise reduction

International Cooperation is encouraged

Call 2017 (H2020)
(tópicos AVIATION)

RIA
5-9 M€ per project

1.3 Maintaining industrial leadership in aeronautics

CHALLENGE & IMPACT

- Develop and bring up promising technologies at low TRL
- demonstrate improvements on weight benefits, systems complexity and reduced maintenance costs
- demonstrate the capability to reduce costs and increase production rates up to 60%
- Develop computing solutions for key industrial problems

SCOPE

- Address priority areas (one or more):
  1. Condition-based health management, replacing scheduled inspections
  2. New composite aero-structures and multifunctional Nano-materials
  3. Address electromagnetic immunity problems of new aero-structures
  4. Design tools that address specific or clustered industrial problems

Low TRL – increase TRL
Technologies not included in Clean Sky

Calls 2016-2017 (H2020)
(tópicos AVIATION)

RIA
2-4 M€ per project

1.4 Breakthrough innovation

CHALLENGE & IMPACT

- Disruptive breakthrough technologies for industrial leadership (FP 2050)
- Medium term substantial decrease of the environmental impact of aircraft
- Enhance competitiveness of the European aviation industry

SCOPE

- Integration without fundamental changes at airport level (proof-of-concept)
- Address one or more:
  1. Innovative aircraft configurations and airframes
  2. Propulsion systems
  3. Novel and integrated multifunctional systems
  4. Autonomous, intelligent and evolving systems (RPAS)

Low TRL – increase TRL

Calls 2016-2017 (H2020)
(tópicos AVIATION)

CSA
1-2 M€ per project

1.5 Identification of gaps, barriers and needs in the aviation research

CHALLENGE & IMPACT

- Actions needed to meet the highly ambitious goals of Flightpath 2050
- Assess progress needs, gaps and barriers
- Make recommendations for further actions

SCOPE

- Annual review of the state of the art of research and innovation
- International benchmarking
- Identify gaps in the research landscape and bottlenecks to innovation
- Proposals should address one or more of:
  1. Mobility
  2. Competitiveness
  3. Environment and energy
  4. Safety and security

Call 2016 (H2020)
(tópicos SAFETY)

RIA
5-9 M€ per project

3.1 Addressing aviation safety challenges

SPECIFIC CHALLENGE

- Identify and mitigate new risks of air transport
- Introduce new system concepts, products and operational practices
- Enhanced level of safety to sustain public's trustworthiness of aviation
- Deliver holistic approaches for higher performance, better resilience and lower levels of complexity and costs

SCOPE

- Develop and enhance safety-related products and processes
- Address one or several:
  1. More robust, cost-efficient solutions for the whole life-cycle
  2. Identification of hazards and handling of data and processes
  3. Reinforce old and develop new EASA capabilities that will contribute to its performance-based regulatory and certification mission.

EASA enrolment & international cooperation encouraged

Call 2016 (H2020)
(tópicos SAFETY)

RIA
4-9 M€ per project

3.5 Behavioral aspects for safer transport

CHALLENGE & IMPACT

- Study key factors that influence safe transport user behavior
- Reduction of fatal accidents
- Mitigate unsafe user behavior patterns
- Enforce training schemes
- Safe integration of new types of vehicle and increased usage of 'soft' modes

SCOPE

Proposals should address :

- Distraction due to health related factors; on-board and mobile devices; unsafe conditions; psychological condition of pilots and mitigation measures
- Social and demographic factors and measures to reduce their impact
- Risk appraisal and reduction of hazardous risk taking
- Measures to modify user behavior in transport

international cooperation encouraged (US, Japan, Canada, Australia, China, India, Brazil)

Call 2017 (H2020)
(tópicos LOGISTICS)

RIA
3-5 M€ per project

5.2 Innovative ICT solutions for future logistics operations

CHALLENGE & IMPACT

- Exploit ICT advances to logistics business
- Internet-of-Things, Big data, GNSS and Intelligent Transport Systems
- Better integration of ICT solutions and operational processes for:
  1. Seamless freight transport across member states and across modes
  2. Increased reliability and reduced transit times
  3. 10% higher load factors and 10% shorter delivery routes
  4. Viable business models

SCOPE

- Use previous work in the e-Freight domain (including SESAR)
- Proposals should cover at least 2 of the 3:
  A) Planning and data
  B) Dynamic routing and business models
  C) Interoperability and everything connected

Call 2017 (H2020)
(tópicos INFRASTRUCTURE)

RIA
3-5 M€ per project

7.1 Resilience to extreme (natural and man-made) events

SPECIFIC CHALLENGE

- Mitigation measures and strategies for extreme weather conditions, climate change, damages to the infrastructure and traffic impediments
- Minimize the impact of both natural and man-made extreme events
- Improve mobility of people and freight in case of disasters

SCOPE

Build on FP7 projects and EUROCONTROL studies to:

- Identify risk factors and map climate 'hot spots' of the European transport network
- New materials, techniques and systems for construction, operations and maintenance
- Integrate terrestrial and satellite systems for the SHM of key infrastructures
- Innovate links and connections for a smooth transfer from one mode to another in case of disruption

Call 2017 (H2020)
(tópicos INFRASTRUCTURE)

RIA
2-6 M€ per project

7.2 Optimization of transport infrastructure multi-modal corridors and terminals

CHALLENGE & IMPACT

- Re-engineering of trans-European connections to improve capacity and availability of corridors and Key nodes
- Design, construction and operation of corridors, terminals, hubs and gateways as points of interchange or transfer
- Optimal use of the multimodal transport system

SCOPE

Proposals should address one or several of the following;

- Re-engineering/re-design methods to adapt the network to new needs and ensure higher efficiency.
- Innovative fast, cost-efficient design and construction methods
- Assessment of the multimodal network capacity in view of optimized use and future planning

Airports of all sizes and operations are included. Twinning of projects with US partners.

Call 2016 (H2020)
(tópicos SOCIO-ECONOMICS)

CSA
0,5-1,5 M€ per project

8.1 Research, technology development and market trends for the European transport manufacturing industries

CHALLENGE & IMPACT

- Picture the research and technology development capabilities, innovation challenges and market prospects for European Transport industries
- Identify trends at global scale to enable stakeholders and policy makers to identify gaps in research, technology and innovation capabilities and strategies of the Transport industry

SCOPE

Proposals should address:

- Investment trends, productivity levels, technology choices, industrial strategies, research and technology development capabilities and funding efforts of producers of transport means for the different transport sectors including aeronautics
- Assess competitive advantages and disadvantages of industries

Clean Sky2 - CFP02
(tópicos previstos - JULHO 2015)

DRAFT

2ª Call For Proposals 2015

- Orçamento = 59M€
- Abertos 66 tópicos em 6 áreas (LPA, REG, FRC, AIR, ENG, SYS)
- Podem concorrer entidades de qualquer EM ou AC
- Entidades podem concorrer individualmente ou em consórcio
- Os vencedores (Partners) não se tornam membros da JTI Clean Sky
- São esperadas 15+ calls CFP ao longo do período de vida do Clean Sky 2

Clean Sky2 - CFP02
(tópicos previstos - JULHO 2015)

DRAFT

LARGE PASSENGER AIRCRAFT (LPA)

Title	Type of Action	Value (Funding in M€)
Active technologies for acoustic and vibration comfort	IA	0,75
Validation of aero-vibro-acoustic model on new aerodynamic configurations.	RIA	0,9
Laminar Horizontal Tail Plane full scale ground demonstrator	IA	1,5
Design, test and manufacturing of robust fluidic actuators	RIA	0,35
Drive and control system for piezoelectric AFC actuators	IA	0,35
Test aircraft preparation and qualification for Scaled Flight Testing ("PREP")	IA	2
Hybrid Prop. Demonstrator Components – Electric Power Drives ("DRIVE")	IA	1,5
Hybrid Propulsion Component Studies – Electrics	RIA	1,5
Landing gear large die-forged fitting with improved mechanical performance	IA	0,40
High production rate composite Keel Beam feasibility	IA	0,40
Integrated main landing gear bay	IA	0,60
Development of pultrusion manufacturing applications	IA	0,60
Touchscreen control panel for critical system management functions	IA	2
New flight crew oxygen mask concept for prolonged use in civil aircraft	IA	0,55
Head Up System integration in next generation cockpits	IA	1
Smart sensors for automatic leak detection	IA	0,35
		14,75

Clean Sky2 - CFP02
(tópicos previstos - JULHO 2015)

DRAFT

REGIONAL AIRCRAFT (REG)

Title	Type of Action	Value (Funding in M€)
Smart-grid converter	RIA	0,8
Powered WT model design and manufacturing of the FTB2 aircraft configuration for aerodynamic tests in wind tunnel at low and high Reynolds number	IA	2,5
		3,3

Clean Sky2 - CFP02
(tópicos previstos - JULHO 2015)

DRAFT

FAST ROTORCRAFT (FRC)

Title	Type of Action	Value (Funding in M€)
Development and demonstration of materials and manufacturing process for ultra high reliability electric Anti-ice/De-ice thermal layers for high strain civil rotor blades and airframe sections of tiltrotor	IA	0,75
Development and demonstration of materials and manufacturing process for high power density homokinetic drive joints for civil rotor applications	IA	0,75
Development and validation of an optimised gearbox housing structural design and manufacturing process, based on additive layer manufacturing concept leading to a flight cleared demonstrator.	IA	1,75
Design, development and flight qualification of a highspeed/high torque novel freewheeling clutch architecture for tiltrotor main drive system	IA	0,75
Design, development and flight qualification of a novel, integrated high efficiency heat exchanger for tiltrotor transmission oil cooling	IA	0,35
Design, development, testing and qualification of a high-reliability integrated fuel gauging and distribution system providing active CG management in a civil tiltrotor	IA	0,75
Light weight, impact resistant, canopy for fast compound rotorcraft	IA	1
Long drive shafts with flexible couplings for a compound fast rotorcraft	IA	0,5
Multipurpose test rig for transmission gear boxes	IA	0,8
Design and realization of equipped engine compartments for a fast compound rotorcraft	AH	1,25
Fuel bladder tanks for a fast compound rotorcraft	IA	0,8
HVDC Generator	IA	1,2
Bird strike- and erosion resistant and fast maintainable windshields	IA	0,6
		11,25

Clean Sky2 - CFP02
(tópicos previstos - JULHO 2015)

DRAFT

AIRFRAME (AIR)

Title	Type of Action	Value (Funding in M€)
CROR Engine debris Middle level Impact and mechanical test	IA	0,4
Experimental characterization of turbulent pressure fluctuations on realistic Contra-Rotating Open Rotor (CROR) 2D airfoil in representative high subsonic Mach number.	IA	0,4
Erosion-resistant functional coatings	RIA	0,2
High accuracy and low intrusiveness in-flight wing shape and temperature measurements	RIA	0,55
Tool-Part-Interaction simulation process linked to laminate quality	RIA	0,35
Complex (composite) part Ultrasonic inspection facilitated by man-robot collaboration	RIA	0,35
Technology evaluation of immersive technologies for in-flight applications	IA	0,35
Ice protection system based on two-phase heat transport technologies integrated in representative engine intake structure	IA	0,5
HVDC Electrical Power Conversion and Distribution System Development	IA	1
Integrated airborne antenna for satellite communications in wing – fuselage airframe fairing	IA	1,1
Ice protection technology based on electromagnetic induction integrated in representative leading edge structure	RIA	0,25
System development for optical fiber sensing technology measurements for industrial aeronautical contexts: composite manufacturing plants, structural test platforms and airborne conditions	IA	0,35
Prototype Manufacturing Tooling for Single Parts Manufacturing of the Rotorless tail for LifeRCraft.	IA	0,75
Prototype Tooling for Sub-Assembly, Final Assembly and Transport of the Rotorless tail for the Compound RC.	IA	0,35
Design Against Distortion: Part distortion prediction, design for minimized distortion, carbon-epoxy aerospace parts	RIA	0,345
Process development for composite frames manufacturing with high production rate and low cost	IA	0,4
		7,3

Clean Sky2 – CFP02
(tópicos previstos - JULHO 2015)

DRAFT

ENGINES (ENG)

Title	Type of Action	Value (Funding in M€)
Conventional and Smart Bearings for Ground Test Demo	IA	2
More electric, advanced hydromechanics propeller control components	IA	0,25
Engine Mounting System (EMS) for Ground Test Turboprop Engine Demonstrator	IA	0,4
Integration of Laser Beam Melting Simulation in the tool landscape for process preparation of Additive Manufacturing (AM) for Aero Engine applications	RIA	0,7
Integration of a property simulation tool for integrated virtual design & manufacturing of forged discs/rotors for aero engine applications	RIA	0,45
Industry focused eco-design	RIA	2,5
Jet Noise Reduction Using Predictive Methods	RIA	0,4
Catalytic control of fuel properties for large VHBR engines	RIA	0,35
Development of coupled short intake / low speed fan methods and experimental validation	IA	2,8
Powerplant Shaft Dynamic and associated damping system	IA	0,35
		10,2

Clean Sky2 - CFP02
(tópicos previstos - JULHO 2015)

DRAFT

SYSTEMS (SYS)

Title	Type of Action	Value (Funding in M€)
High brightness microdisplay system for Head Up Displays	RIA	3,8
ALGeSMo (Advanced Landing Gear Sensing & Monitoring)	IA	2,4
Analysis of centrifugal compressor instabilities occurring with vaneless diffusor, at low mass flow momentum	IA	1,13
Innovative design of acoustic treatment for air conditioning system	IA	0,67
Eco Design : Optimization of SAA chromium free sealing process	IA	0,35
Analysis, validation and data collection of design and operating parameters for advanced cabin ventilation concepts related to future aircraft energy management systems	IA	2
Electromechanical actuator for primary moveable surfaces of small aircraft with health monitoring	IA	1
Passive thermo-acoustic insulation for small aircraft.	IA	0,4
Database of dynamic material properties for selected materials commonly used in aircraft industry.	IA	0,3
		12,05

AVIATION – H2020

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