

TRANSPORT INFORMATION DAY

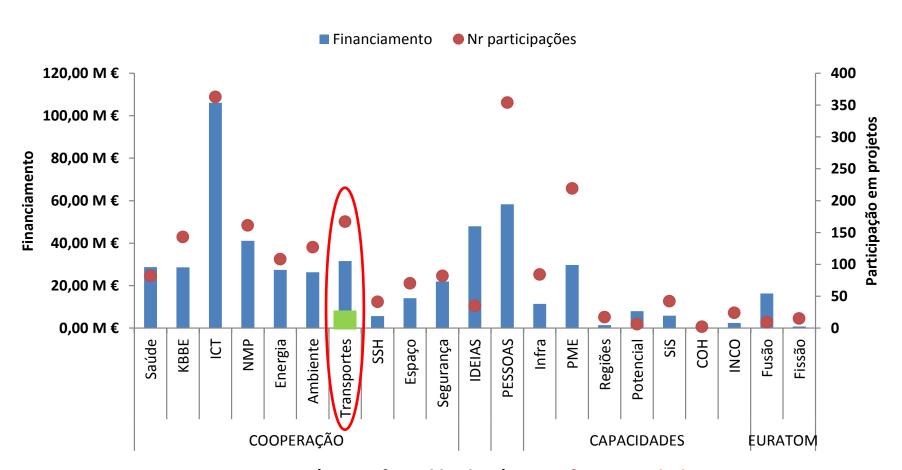
Funding opportunities for AVIATION under Horizon 2020 2014 & 2015

Margarida Pinto (National Delegate Transports / Aeronautics, ISQ)

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Lisbon, 24 January 2014

Portuguese Participation in FP7 (2007-2013) - Aeronautics



Return in aeronautics = 7,4 M€ (0,9% of total budget) - Performance below average

FCT Fundação para a Ciência e a Tecnologia

Opportunities for aviation research in H2020



1

TRANSPORT /AVIATION - Call MG.2014 - 2015 CLEAN SKY JTI - Call 16 SESAR JTI - soon open

Call Mobility for Growth 2014 – 2015

Medium to long term research and innovation actions

Bottom-up approach for innovative technologies not covered by CLEAN SKY and outside the scope of SESAR

Maturation in the TRL range 1-6

SESAR
JOINT UNDERTAKING

T
R
L
Air Traffic
Managment



Air Transport

Aeronautics

Aviation 2014 – 2015 - Call Mobility for Growth Webpage H2020 @ EU

Budget 108 M€

Deadlines: 18 March 2014

27 March 2014

28 August 2014

Login | About | Contact | Lega

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

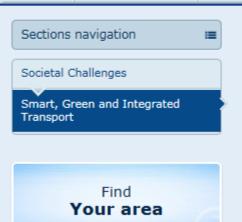


HORIZON 2020

The EU Framework Programme for Research and Innovation

European Commission > Horizon 2020 > What is Horizon 2020? > Horizon 2020 programme sections > Smart, Green and Integrated Transport

Home What is Find How to News & Multimedia & Project Horizon 2020? Your area Get funding? Events Publications Stories



Smart, Green and Integrated Transport

This Challenge aims to boost the competitiveness of the European transport industries and achieve a European transport system that is resource-efficient, climate-and-environmentally-friendly, safe and seamless for the benefit of all citizens, the economy and society.

The Transport Challenge is allocated a budget of €6 339 million for the period 2014-2020 and will contribute to four key objectives, each supported by specific activities.

Horizon 2020 will provide funding for a **resource efficient transport that respects the environment** by making aircraft, vehicles and vessels cleaner and quieter to minimise transport's



Webpage H2020 transports @ GPPQ

Budget 108 M€

Deadlines: 18 March 2014

27 March 2014

28 August 2014

http://www.gppq.fct.pt/h2020/calls_abertas.php?tema=UzXdPYUIrmfSIhIGUMP_5GmJgOzRbYYT3aEaXW2iXSo



	2014 (72 M€)	2015 (36M€)	
RIA 2 stage	MG 1.1Competitiveness MG 1.3Seamless Mobility	MG 1.2Resource Efficiency	RIA 2 stage
52M€	MG 1.5Breakthrough Innovation		20M€
RIA 1 stage 15M€	MG 1.4Coordinated RIA Safety		
CSA 1 stage 3M€	MG 1.6 Skills and Knowledge MG 1.7 R&I policy MG 1.8. <i>D1</i> INCO (JP)	MG 1.8. <i>D2</i> INCO (JP, RU, CN, CH)	<i>RIA</i> 1 stage 16M€
Procurm 2M€	Other Actions Environmental modelling suite		

MG 1.1 Competitiveness of European aviation through cost efficiency and innovation

SPECIFIC CHALLENGE

Deliver the best products and services in a time and cost efficient manner and offer new and innovative products, vehicles and services

SCOPE

- 1. Aircraft: development of technologies and methodologies to save costs and time across the Whole life cycle of the aircraft (design, production, maintenance, overhaul, repair, retrofit, materials in structural components, additional services onboard, sensing, actuating, automation and art. intelligence)
- 2. Air transport: cost efficiency and innovative approaches of ground operations which can reduce the needs or accelerate the pace of the training of personnel

EXPECTED IMPACT

Europe aviation industry needs to be competitive and retains leading edge design, manufacturing and system integration capabilities, reduction of costs of certification by 50%).

MG 1.1 MG 1.3 MG 1.5

- 2014
- RIA
- 52 M€
- 2 stage
- Deadlines

18/03/2014 28/08/2014

Partial coverage possible

Several proposals can be funded

5-8 M€ per topic

MG 1.3 Seamless and customer oriented air mobility

SPECIFIC CHALLENGE

Enhance time efficiency, seamlessness, robustness and accessibility of the European air transport system

SCOPE

- 1. Minimizing the duration of the travel and providing integrated and comprehensive information to air passengers so that they can take informed decisions.
- 2. Improved accessibility to airports and aircraft, methods and systems to be put in place in case of major disruption

EXPECTED IMPACT

- 1. 90% of the travels involving air transport within Europe can be completed in 4 hours door to door
- 2. Passengers can make informed decisions
- 3. Air transport is well connected to other modes.

MG 1.1 MG 1.3 MG 1.5

- 2014
- RIA
- 52 M€
- 2 stage
- Deadlines

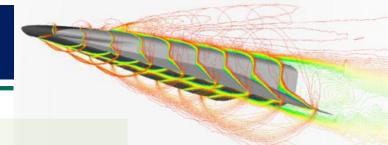
18/03/2014 28/08/2014

Partial coverage possible

Several proposals can be funded

3-5 M€ per topic

MG 1.5 Breakthrough innovation for European aviation



SPECIFIC CHALLENGE

Breakthrough innovations are needed, i.e. new solutions which rely on a disruption with respect to current approaches

SCOPE

- 1. Vehicles: target new technologies and concepts that are not currently used in aeronautics or that have not yet being put in combination in the aviation sector
- 2. Air transport system: radical new concepts for vehicles, passengers and freight handling, organization of airports and their connection to other modes, information sharing

EXPECTED IMPACT

- 1. Decrease the environmental impact of aviation
- 2. Enhance the competitiveness, mobility, levels of safety

MG 1.1 MG 1.3 MG 1.5

- 2014
- RIA
- 52 M€
- 2 stage
- Deadlines

18/03/2014 28/08/2014

Partial coverage possible Several proposals can be funded

2-4 M€ per topic

MG 1.4 Coordinated research and innovation actions targeting the highest levels of safety for European aviation

SPECIFIC CHALLENGE

Monitor and mitigate risks (cabin air quality, integration of new technologies, new operations or emerging potential hazards) to maintain the excellent European achievements.

SCOPE

- 1. Actions in targeted areas of aviation safety. Identify and priorities actions to be undertaken in the next seven years.
- Other RIA actions on safety must be carried out by the proposal partners, with equivalent magnitude and same time frame and networking with third countries, to leverage resources and global impact (e.g. with US and Canada)

EXPECTED IMPACT

Less than 1 / 10 M commercial flight in 20150. 80% reduction of the accident rate (2000) for all types of air vehicles, manned and unmanned, preserving cost and time efficiency.

Gather critical mass on a pan-European scale, overcoming gaps, duplication and fragmentation, enhance efficiency of aviation safety for future safety regulations, operations and technology.

MG 1.1 MG 1.3 MG 1.5

- 2014
- RIA
- 15 M€
- 1 stage
- Deadline27/03/2014

One proposal can be funded ??

15 M€

MG 1.6 Improving skills and knowledge base in European aviation

SPECIFIC CHALLENGE

- D1 Highly skilled work force
- D2 Dissemination of scientific/technical knowledge base



SCOPE

D1 - Identify the skill needs in the sector, propose improvements and contribute to the harmonization of the content of the curricula for aviation engineers towards the creation of a Europe wide system, attract young people to aviation studies / careers.

D2 - Europe wide coordination mechanisms for to harmonize conferences, events and publications and increase their impact

EXPECTED IMPACT

- D1 Increase attractiveness, quality, coherence and relevance of curricula
- D2 Raising impact and visibility of European conferences and events

MG 1.6 MG 1.7 MG 1.8 (D1)

- 2014
- CSA
- 3 M€
- 1 stage
- Deadline27/03/2014

Only 1 proposal funded per domain (D)

Estimated 500K€ each

MG 1.7 Support to European aviation R&I policy

SPECIFIC CHALLENGE

- D1 New air travel system for a seamless door to door travel
- D2 New approaches to certification



D1 - Collecting data and analyzing the current European air transport system and its connections from a user's perspective; main areas to be improved for an effective traffic flow; broad lines of the architecture of this system and assess the feasibility and economic viability of the concept

D2 - New tools, new methods, alternative means of compliance to accelerate the certification process and lower its costs

EXPECTED IMPACT

D1 - 90% of the travels involving air transport within Europe can be completed in 4 hours door to door by 2050

D2 - Certification process gains time and cost efficiency

MG 1.6 MG 1.7 MG 1.8 (D1)

- 2014
- CSA
- 3 M€
- 1 stage
- Deadline

27/03/2014

Only 1 proposal funded per domain (D)

Estimated 500K€ each

MG 1.8 International cooperation in aeronautics (D1)



SPECIFIC CHALLENGE

D1 - Deepen links with countries and identify topics of common interest and mutual benefit with other regions of the world



SCOPE

D1 - Set up EU/Japan platform of communication, identify topics of common interest

MG 1.7 MG 1.8 (D1)

MG 1.6

- 2014
- CSA
- 3 M€
- 1 stage
- Deadline27/03/2014

Only 1 proposal funded per domain (D)

Estimated 1M€

EXPECTED IMPACT

D1 - Foster cooperation, maintain a common research and innovation roadmap with Japan

MG 1.2 Enhancing resources efficiency of aviation

SPECIFIC CHALLENGE

Aviation impacts environment and EU citizens due to greenhouse gas (CO2), pollutants (NOx), particulate matter (e.g. black carbon), contrails, cirrus cloud and noise. The challenge is to significantly improve aircraft that will enter into service after 2025, given the increase of air transport traffic by 5% every year

SCOPE

- 1. Development of sustainable green technologies for reduction of emissions and noise at the source
- 2. Target greener overall aircraft lifecycle: design, production, assembly, maintenance, overhaul, repair, retrofit, recycling and disposal.
- 3. Greener ground operations, technologies and procedures

EXPECTED IMPACT

To reduce CO2 by 75%, NOx and particles by 90%, noise by 65% in 2050 (baseline year 2000), to reduce the emission of local atmospheric pollutants.



MG 1.2

- 2015
- RIA
- 20 M€
- 2 stage
- Deadlines

31/03/2015 27/08/2015

Partial coverage possible

Several proposals can be funded

5-8 M€ per topic

MG 1.8 International cooperation in aeronautics (D2)



SPECIFIC CHALLENGE

D2 - To perform jointly research and innovation actions on topics of common interest, involving the appropriate funding from both sides



SCOPE

D2 - Actions should address topics of common interest between Europe and the international partners (Japan, China, Canada, Russia) for the joint development of technologies to enhance safety, reduce the impact on environment, mature new materials and manufacturing processes for components and structures, develop numerical and experimental tools for aircraft design

MG 1.8 (D2)

- 2015
- RIA
- 16 M€
- 1 stage
- Deadline31/03/2015

Several proposals can be funded

EXPECTED IMPACT

D2 - mature the level of readiness of technologies and concepts, identify mutual benefit and evaluate the leverage effect resulting from coordinating R&I funding with EU

Developing a public European environmental modeling suite for aviation (Other actions)

SPECIFIC CHALLENGE

More access to a complete and unbiased set of models to cover their policy needs and publicly available datasets and methodologies



SCOPE

Complete and open European environmental model suite, collect new data and establish associated databases for the gaps identified, enrich existing public models with new modules, develop new methodologies that could be applied to policies that require an environmental impact assessment, prepare recommendations

EXPECTED IMPACT

Development of environmental standards for aviation at European and global level

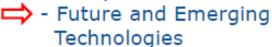
Other Actions

- 2nd quarter **2014**
- Public Procurement
- 2 M€

Synergies with other themes in H2020

Excellent Science







- Infrastructures





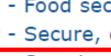




- ⇒ 🛮 iii. Space
 - Access to risk finance
 - Innovation in SMEs



- Health, demographic change and well-being
- Food security, sustainable ...
- Secure, clean and efficient energy
 - Smart, green and integrated Transport (8.25%)
- Climate action, environment, resource efficiency and raw materials
- Secure societies
 - Spreading excellence and widening participation
 - Science with and for society
 - Communication & dissemination



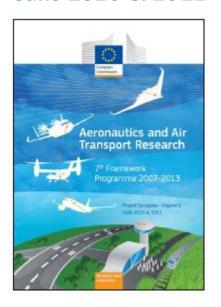


State of the Art & Consortia FP7 Synopsis books

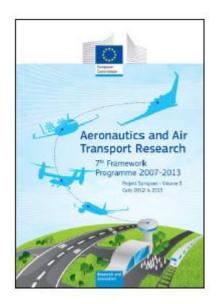
Volume 1 Calls 2007 & 2008



Volume 2 Calls 2010 & 2011



Volume 3 Calls 2012 & 2013

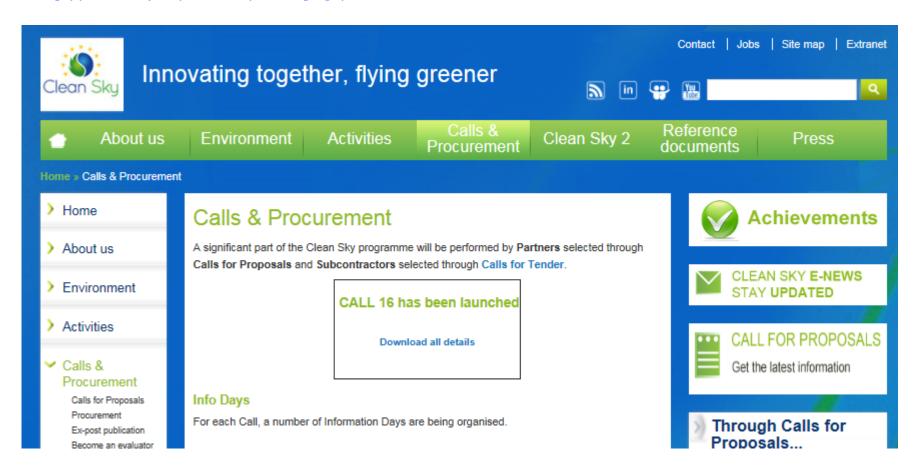


Webpage CLEANSKY @ EU

Budget 17 M€

Deadline :3 April 2014

http://cleansky.eu/content/homepage/calls



Webpage CLEAN SKY @ GPPQ

Budget 17 M€ Deadline :3 April 2014

http://www.gppq.fct.pt/_7pq/calls_abertas.php?tema=UWARAYlhtTObvsG6RIHjHjAZhjuNAKh9xZqyybCWQ0g







SUSTAINABLE AND GREEN ENGINES (SAGE)

AREA-02 - OPEN ROTOR DEMO 2		
•	Innovative instrumentation for rotating gauges	350K€
•	Effect of tolerance variation in high power density gears	600K€
•	High Speed Turbine Powder Hipping Casing	900K€
•]	Non-intrusive Turbine Blade measurements	1.050K€
AREA-03 - LARGE 3-SHAFT TURBOFAN		
•]	Electric Pump for Safety Critical Aero engine applications	1750k€
AREA-06 - LEAN BURNER		
•	Instrumentation Capability for Accelerated Lean Burn development	2150K€
•	Advanced methods for prediction of lean burn combustor unsteady phenomena	950K€
•	Smart methods for lean burn injector design	500K€
•]	Design methods for accurate combustor wall temperature	1500K€





SMART FIXED WING AIRCRAFT (SFWA)

AREA01 – SMART WING TECHNOLOGY		
•	Innovative instrumentation for rotating gauges	350K€
•	Effect of tolerance variation in high power density gears	600K€
•	High Speed Turbine Powder Hipping Casing	900K€
•	Non-intrusive Turbine Blade measurements	1.050K€
AREA02 - NEW CONFIGURATION		
•	Instrumentation Capability for Accelerated Lean Burn development	2150K€
•	Advanced methods for prediction of lean burn combustor unsteady phenomena	950K€
•	Smart methods for lean burn injector design	500K€
•	Design methods for accurate combustor wall temperature	1.500K€
AREA03 – FLIGHT DEMONSTRATORS		
•	Jigs and Fixtures for Assembly of the Laminar Wing at the "BLADE" Flight Test Demo	900K€
•	Wing Tooling for the BLADE Flight Test Demonstrator Final Assembly Line	300K€
•	In-Flight Local Surf. Deform. Measurements by Means of Reflectometry and Shadow Casting	640K€
•	Design, Manuf, Qualif.& Assy of improved NLF Wing LE & Upper Cover Flight Test Article	2.200K€
•	Miniaturized remote acquisition unit for optical sensors	530K€



SYSTEMS FOR GREEN OPERATIONS (SGO)

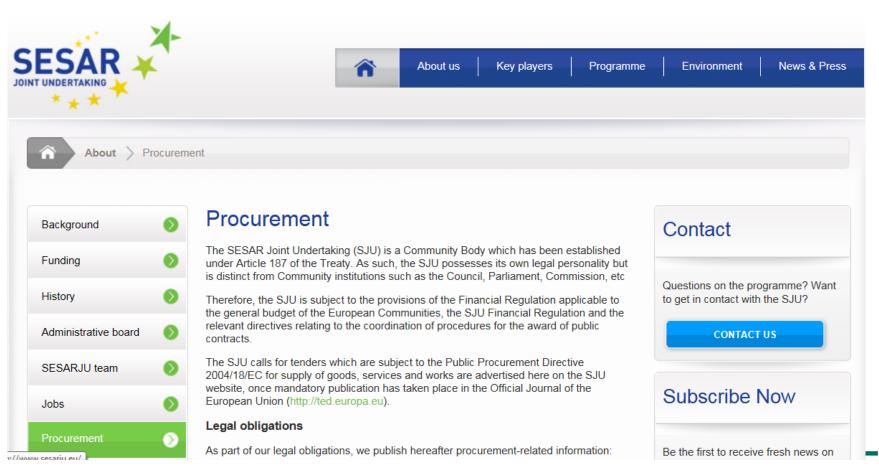
AREA-02 - MANAGEMENT OF AIRCRAFT ENERGY		
•	Electrical Starter / Generator disconnect system	600K€
•	HVDC fuses design, development, validation and integration	800K€
•	Adaptable power density coating for energy efficient heating of cockpit and cabin	1.000K€
•	Optimizing power density of aircraft inverter by combining topology and PWM-patterns	500K€
•	Develop a composite sleeve for spatial separation of rotor and stator of electrical motor	300K€
•	Develop actuator components made by alternative metal injection molding (MIM) process	200K€
•	Develop and fabricate high-temp. high-freq. capacitors for power switch integration	440K€
•	Accelerated Life Testing of Electrical Motor Drives	800K€
AREA-03 - MANAGEMENT OF TRAJECTORY AND MISSION		
•	Cross platform development tool suite for high performance computing on tablet platforms	200K€
AREA-04 - AIRCRAFT DEMONSTRATORS		
•	Thermal Mock-ups for Thermal Management of a Ground Integration Test Rig	1.200K€
•	Air Distribution assembly for EECS flight test demonstration	250K€

SESAR – OPPORTUNITIES

Webpage SESAR @ EU

Budget (...)
Deadline :30 September 2016

http://www.sesarju.eu/about/procurement





SESAR – OPEN PROCUREMENT



CALL FOR EXPRESSIONS OF INTEREST (database of independent experts)

TARGET

independent experts (individuals) who are interested and have the profile to assist the SESAR Joint Undertaking in the framework of the SESAR Programme, namely for:

- evaluation of proposals/tenders
- organisation and coordination of the SESAR Programme activities
- evaluation of and monitoring projects
- project monitoring and site visits
- any other relevant tasks

ELIGIBILITY

- University degree or comparable professional qualification
- minimum of 10 years professional experience
- experience in the air transport or comparable relevant sectors
- knowledge and experience of R&D, study and/or preparatory activities

SUBMITING

Submit documents via e-mail to call0005@sesarju.eu





REMOTELY PILOTED AIR SYSTEM (RPAS) DEFINITIONS STUDY

SCOPE

This study shall determine the specific work, resources, timeframe to be performed in terms of ATM Research and Development to achieve the safe integration of RPAS into the non-segregated ATM environments in European controlled airspace from 2016.

One consortium will be selected. Duration estimated between 12 to 18 months.

ESTIMATED BUDGET

3 M€

PROCEDURE

Open Call for Tender

FORESEEN DATE OF LAUNCH

By 31 January 2014

TYPE OF PURCHASE

Service





AUDIT, STRATEGIC ADVICE AND PROGRAMME MANAGEMENT SUPPORT FOR THE SESAR JOINT UNDERTAKING

SCOPE

Lot 1 – Audit and assurance

Lot 2 – Strategic Advice, Analysis and Consultancy Services

Lot 3 – Support to SESAR Programme Execution and Programme Management.

ESTIMATED BUDGET

tbd

PROCEDURE

Open Call for Tender

FORESEEN DATE OF LAUNCH

By 31 January 2014

TYPE OF PURCHASE

Service





MARKETING AND MEDIA PLATFORM

SCOPE

Provide tools that will meet its email marketing and press monitoring needs: The email module should offer state-of-the-art email marketing campaign management, newsletter template design, contacts management and campaign analysis, among other features; the news monitoring module should offer online media monitoring, press contacts search and management tools, news coverage analysis and exploitation functionalities.

ESTIMATED BUDGET

40 K€

PROCEDURE

Low value negotiated

FORESEEN DATE OF LAUNCH

By March 2014

TYPE OF PURCHASE

Service





SESAR LARGE SCALE DEMONSTRATION ACTIVITIES

SCOPE

Selection and co-financing of projects complementing the on-going SESAR Programme activities for the period 2014-2016 and provide additional added-value when addressing transversal themes like Cyber-Security, Safety, etc. in the following thematic areas:

- Features stemming from SESAR Solutions and paving the way towards deployment, in particular the Pilot Common Project content;
- Solutions targeting improvements at small/medium size airports;
- Global Interoperability, in particular "SESAR Going Global"

ESTIMATED BUDGET

30 M€ (max rate 50% of total eligible costs)

PROCEDURE

Grant

FORESEEN DATE OF LAUNCH

31 January 2014



PROPOSAL PREPARATION - GUIDELINES

KEY DATA SET:

- Title and Acronym
- Partners list
- Topic addressed

OVERALL DOCUMENTS TO BE SUBMITTED:

- Proposal Submission Forms (former Part A)
- Technical Annex" (former Part B)
- The page limit for a first stage proposal is 15 pages. (strict limit watermark):

This page limit includes:



- All tables in these sections
- Table of content,
- List of figures, glossary...
- Cover page
- The minimum font size allowed is 11 points.

PROPOSAL PREPARATION – CONTENTS (Submission Forms)



1. SUMMARY

Short summary (max. 2,000 characters, with spaces) to clearly explain:

- the objectives of the proposal
- how they will be achieved
- their relevance to the work programme.

2. ADMINISTRATIVE DATA OF PARTICIPATING ORGANISATIONS

3. BUDGET FOR THE PROPOSAL

4. ETHICS ISSUES TABLE



PROPOSAL PREPARATION – CONTENTS – STAGE 1 (Technical Annex)

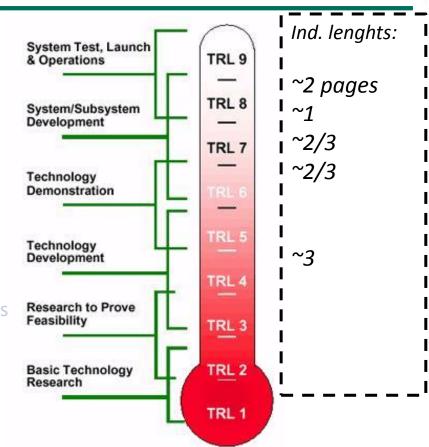


1. EXCELLENCE

- 1.1 Objectives
- 1.2 Relation to the work programme
- 1.3 Concept and approach
- 1.4 Ambition

2. IMPACT

- 2.1 Expected impacts
- 2.2 Measures to maximise impact
 - a) Dissemination and exploitation of results
 - b) Communication activities



PROPOSAL EVALUATION – CRITERIA – STAGE 1

.. EXCELLENCE Threshold: 4/5

- Clarity of the objectives;
- Soundness of the concept, including trans-disciplinary considerations, where relevant;
- Extent that proposed work is ambitious, has innovation potential, and is beyond the state
 of the art

2. IMPACT Threshold: 4/5

The expected impacts listed in the work programme under the relevant topic;



3. QUALITY AND EFFICIENCY OF IMPLEMENTATION Threshold: 3/5

- Coherence and effectiveness of workplan, ..allocation of tasks, resources;
- Competences, experience and complementary of the individual participants, as well as the consortium as a whole;
- Appropriateness of the management structure and procedures...risk management

Weighting: For Innovation actions and the SME instrument (phases 1 and 2), to determine the ranking, the score for the criterion 'impact' will be given a weight of 1.5





ROLE OF "GABINETE DE PROMOÇÃO DO PROGRAMA-QUADRO"

- PROMOTE participation of Portuguese entities in H2020
- BRIDGE between European Commission and national partners
- SUPPORT and GUIDANCE to national players
- FOLLOW-UP of projects with Portuguese players
- COORDINATION of NCP networks
- HELPDESK



www.gppq.fct.pt



AVIATION – H2020

Fundação para a Ciência e a Tecnologia

MINISTÉRIO DA EDUCAÇÃO E CIÊNCIA

CONTACTS

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National Delegate Transports-Aeronautics / MSG ACARE

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