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CLEAN SKY & IMI

Accompanying the document

Report from the Commission to the European Parliament and the Council

**Annual Progress Report on the activities of the Joint Technology Initiative Joint
Undertakings (JTI JUs) in 2012**

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1. INTRODUCTION

The present Commission Staff Working Document accompanies the Report from the Commission to the European Parliament and to the Council on the progress achieved by the Joint Technology Initiatives Joint Undertakings in 2012. In compliance with Article 11 (1) of each Council Regulation establishing the Joint Technology Initiatives Joint Undertakings (hereinafter referred to as "JTI JUs") it shall provide details on the implementation of their research activities, i.e. number of proposals submitted, number of proposals selected for funding, type of participants, including SMEs, and country statistics. The document shall also "include assessment results of the Technology Evaluator referred to in Article 8(1) of the Statutes [of the Clean Sky JU], as appropriate" pursuant to Article 11(1) of Council Regulation (EC) 71/2008 setting up the Clean Sky Joint Undertaking.

The data contained in this document is gathered through a specifically designed template, filled in by each JTI JU under the guidance of the European Commission. The document introduces a comprehensive analysis of progress and achievements in 2012 and it is followed by further five sections, one per Joint Undertaking, which detail in-depth the results achieved by the JTI JU. Each section contains the following three sub-sections providing information on the JTI JUs' activities in 2012 in a structured and uniform way: 1) Introduction, 2) Overall progress since the establishment of the JTI JUs, 3) Outline of the main activities and achievements in 2012, 4) Calls for proposals implementation in 2012 and 5) Grant Agreements/projects portfolio.

The description of the progress of each Joint Undertaking throughout the year starts with a short introduction of the JTI JU, outlining its legal basis, main objectives, research priorities, funding and governing structure. The second sub-section highlights the key achievements of the entity from its establishment up to 2012 whilst the third sub-section focus on the activities and achievements during 2012 only and submission and evaluation process of the individual JTI JUs calls is also explained.

The second to last sub-section is dedicated to the calls for proposals launched by the Joint Undertakings in 2012. In case the entity has launched multiple calls during the year, each call is described with a brief summary listing the call topics, eligible beneficiaries, timeline and indicative budget, followed by detailed statistics on the submitted proposals by types of participants and by country. A special attention is given to the number of SMEs, whose participation in the call is presented separately.

Detailed statistics on the selected proposals by types of participants and by country are provided, which can serve for a comparative analysis of the participants at the different steps of the call. Each sub-section ends with a table giving information on the grant agreements signed in the respective call.

The last sub-section provides details on the Grant Agreements signed by the relevant JTI JU as well as details on Grant Agreements for which activities have ended and/or final results are available.

2. OVERALL ANALYSIS OF PROGRESS ACHIEVED IN 2012

2.1. Communication and administration

In order to increase participation in the projects of SMEs and research community, the first interim evaluations advised the JTI JUs to take a more proactive and target-oriented approach in their communication activities. Recommendations clearly invited JTI JUs to develop and implement better-tailored communication and dissemination plans, establish a separate identity and improve synergies with national programmes and international cooperation with non-EU stakeholders.

Following actions taken in 2011 to reinforce communication and dissemination activities, JTI JUs continued to reinforce their visibility towards stakeholders and the general public.

Newsletters (from IMI and Clean Sky) and a paper magazine (ARTEMIS and Clean Sky) are circulated regularly and a number of press releases on significant achievements have also been published.

JTIs JUs websites are also regularly updated and represent a communication tool rich in novelties and tailored for stakeholders.

In 2012, the JTI JUs again have efforts to widen participation, for example by improving communication with potential applicants to the calls for proposals. This also entailed the organisation of targeted awareness rising and communication activities held in countries usually less represented in projects selected for funding.

A consistent number of tailor-made Info Days were held and JU participation in seminars, events and major technological fairs and exhibitions continued to grow. Progress was also made in increasing the public visibility of JTIs by, for instance, constantly improving the JTIs' web sites to present better and more user-friendly information.

The Annual General Forum and Stakeholders Forum are also major events at which members, partners and potential partners get together and are given up-to-date information on achievements and project results. These events have attracted hundreds of participants in 2012.

Besides, FCH and the IMI in particular gained international visibility as part of European actions in support of research and policy making. The United States and South Korea were the main target countries: a number of bilateral meetings took place during the year with the aim of developing cooperation at project level and exchanges of information. In this context, appropriate international strategies should be defined or boosted for each JTI JU, taking into account their specific research areas, the potential benefits of cooperation in terms of research, innovation and regulation and, of course, the collateral risks.

All the five JUs made significant progress towards reaching their full complement of staff in 2012 replacing staff members who left during the year.

ARTEMIS filled two existing administrative positions while ENIAC was almost fully staffed (one Seconded National Expert will join in 2013). The FCH JU also recruited two staff and reached its full complement of 20 staff by the end of the year. IMI reached full strength in mid-2012.

Clean Sky lost three temporary staff who were replaced in good time and two out of six contract staff also left. Currently it has a staff of 24 members, but to tackle the workload, it has three extra staff on temporary contracts.

The JUs complied with planning and reporting requirements, both their governing and advisory bodies met on a regular basis and their Governing Boards (GB) approved strategic documents such as the 2011 final accounts and draft budgets. The FCH JU's GB also approved changes in the organisational structure of the Programme Office. For Clean Sky and IMI, new Governing Boards chairs and vice-chairs were elected in 2012 and the contracts of the Executive Directors were renewed.

2.2. Strategic Research Agenda

The Strategic Research Agendas (SRAs) were revised to set new priorities, to meet current challenges and to take into account the industrial progress achieved in recent years. The revised SRAs have strengthened the innovation dimension and reinforced the focus on a higher level of readiness of the technologies. This entailed addressing a higher number of research activities at the levels of TRL¹ 4 to 8.

In aeronautics, the overall Clean Sky (CS) programme was revised in 2012 as a consequence of major changes made in 2011 to work in the engine Integrated Technology Demonstrator (ITD) with reference to the Open Rotor configuration. Due to the high level of interdependence of the six ITDs, the targets set for the Clean Sky JTI JU were reassessed and updated in March 2012, together with the development plan and the forecast of the environmental benefits to be expected by the end of the programme.

The achievements in the development of the open rotor allowed introducing a new technology stream on lean-burn engines focusing on the reduction of NO_x emissions, thus strengthening the CS capability to address ambitious NO_x reduction targets.

The Technology Evaluator (TE), which gathers all the 12 ITD leaders and the major aeronautical research establishments in Europe, ran the First Internal Assessment of Clean Sky technologies for the purpose of analysing the full environmental potential of Clean Sky technologies. Its results were published in March 2012. The assessment was based on a comparison of two scenarios for the air traffic system in 2020: with fleet Clean Sky aircraft replacing all existing aircraft and without Clean Sky aircraft. Combining the analysis for airports and air traffic systems, the results indicate that Clean Sky is on track to reduce noise,

¹ TRL: the Technology Readiness Level is a measure used to assess the maturity of evolving technologies. TRL levels are grouped into four major development phases:
(1) Fundamental research: TRL 1 Basic principles observed; (2) Technological research: TRL 2 technology concept formulated; TRL 3 Experimental proof of concept; TRL 4 Technology validated in lab; (3) Product demonstration: TRL 5 Technology validated in relevant environment; TRL 6 Demonstration in relevant environment; TRL 7 demonstration in operational environment; TRL 8 System complete and qualified; (4) Competitive manufacturing: TRL 9 Successful mission operations.

to reduce CO2 emission by 50% and NOX by 80% and to minimise the life-cycle impact of aircraft on the environment by 2020. It also indicated that, to minimise the environmental impact of the aircraft' life cycle, all research and technology areas of Eco-Design should be considered. The assessment also showed the benefits of linking work programmes closely to the key technical and demonstration milestones in each ITD.

In the pharmaceutical sector, the Innovative Medicines Initiative's SRA was fully revised by the end of 2011 to reflect scientific advances and changes in the industry environment. The focus was put on large-scale, game-changing projects and in 2012 this new vision resulted in a decision to fund two major projects: a pan-European platform for drug discovery, the *European Lead Factory*, and the antimicrobial resistance programme *New Drugs for Bad Bugs*. Both projects' research activities also involve clinical and chemical developments closer to the market. The assessment of a number of on-going projects demonstrated that the results are in line with the objectives set for the IMI.

In the fuel cells and hydrogen sector, a review of the Implementation Programme in November 2012 confirmed that, overall, the JTI JU is making progress towards the main objectives set in its the Multi-Annual Implementation Plan (MAIP). Market introduction has been achieved for some early applications such as forklifts and small back-up power units. For both energy and transport applications, progress has been made in materials performance, durability and cost reduction for both components and systems for transport and stationary power applications.

In the embedded systems sector, a working group on *success criteria and metrics* was set up in early 2010 to better monitor the research progress made by ARTEMIS and to convert targets generically described in the SRA into measurable quantities. This working group analysed data collected via targeted questionnaires that were distributed to project participants in 2011 and 2012. The replies to the second-phase survey suggest in particular that: new partnerships have been established and a growing number of SMEs been involved in networks of stakeholders; there is growing interest in building prototypes and demonstrators, including trials and field testing; the impact on business has mainly been to reduce development costs and time to market while increasing the level of reusability.

In the nanoelectronics components sector, overall progress in the implementation of the SRA shows that the ENIAC JTI JU has boosted technological areas in which Europe improved its competitiveness, namely "Equipment, Materials and Manufacturing" (28% of the JU funding allocated), "Semiconductor Process and Integration" (25% of funding) and "Energy Efficiency" (24% of funding). This process is also helping to reduce the fragmentation in the research and innovation environment and facilitating steady cooperation among stakeholders. In 2012 investment in electronics R&D was increased significantly by combining ENIAC and CATRENE² funding. Cooperation between the ENIAC JTI JU and CATRENE has always been a key element of the SRA and finally brought the expected results.

² Cluster for Application and Technology Research on Nanoelectronics, CATRENE is a EUREKA's co-operative R&D public private partnership for large companies, SMEs, institutes and universities aiming at precompetitive innovations in semiconductor technology and applications.

2.3. Operational progress

JTI JUs aim to coordinate resources and funding from industry and public bodies so as to achieve synergies and help build Europe's future growth, competitiveness and sustainable development. In 2012, the five JUs launched 12 calls for proposal, opening 263 research topics in line with their updated SRAs. JTIs JUs also continued to evaluate and negotiate grants arising from previous calls. Overall, over 2500 participants submitted proposals and over 1200 participants were selected for funding in 2012 with an aggregated success rate of about 34%.

The 263 research topics for which calls were launched and managed in 2012 resulted in over 500 proposals being submitted³ and 172 being selected for funding (see table below).

	Number of proposals submitted in 2012	Number of proposals selected for funding in 2012	Success rate
Clean Sky	344	120	35%
FCH	72	28	39%
IMI	37	5	14%
ENIAC	27	11	40.7%
ARTEMIS	24	8	33%
Total	504	172	34%

As JTI JUs differ in terms of the number and type of calls launched and managed, the research topics, the types of beneficiaries and stages of evaluation, progress in implementing calls is outlined for the different JTIs in sections 3.1 to 3.5 below.

2.3.1. Progress achieved by the CLEAN SKY JU

Clean Sky was set up to achieve three main objectives by the end of the programme. These are: (i) to accelerate environmental improvements in the Air Transportation System (ATS) through the introduction of advanced technologies and full scale demonstrators, (ii) to improve on the overall ATS impact on the environment (reducing noise, emissions, and fuel consumption), and (iii) to consolidate the European aeronautics industry around a project of common interest. To achieve these objectives, Clean Sky works with the Single European Sky Air Traffic Management Research (SESAR) JU, as the two initiatives complement each other.

A total budget of € 1.6 billion was allocated to Clean Sky: a maximum € 800 million from the European Union in cash, to be matched by industry contributions in-kind worth at least € 800 million.

Clean Sky works mainly via grants to named beneficiaries rather than calls for proposals. Its main achievements result from the work of its members, organised in six different technical

³ For IMI and ENIAC only the stage of Expression of Interest and Project Outline respectively has been accounted.

areas called Integrated Technology Demonstrators (ITD), supported by a Technology Evaluator (TE) that continuously monitors and assesses the results. Most of the overall budget (€600 million or 75%) is distributed to these members, who are the "named beneficiaries"; the remaining €200 million is allocated through calls for proposals. This report focuses in particular on these calls, launched on a regular but one-off basis when ITD members express a need for additional specific research activities to complement their work. The implementation of research by named beneficiaries is reported in Annexe I.

Clean Sky calls for proposal are targeted call; they cover various topics in each technological area and are usually of short duration (averaging six months to one year) with a limited number of partners in the consortia (in average less than two partners per project). Calls for Partners are evaluated in a single-stage process with the support of independent experts. In 2012, Clean Sky published three calls for proposals.

In 2012, The JU managed 158 topics in total, with 245 partners from 17 countries selected after call 13. Compared to 2011 and for a similar number of research topics to be implemented (159 in 2011), Clean Sky faced a slight contraction in the number of participants and countries involved. This could also be due to fewer calls being launched over the year (four in 2011, three in 2012). The table below gives an overview of the calls launched and evaluated by Clean Sky in 2012, including proposals submitted and evaluated.

Calls reference		Proposals Submitted			Evaluation Results				
Call N°	Ref	Number of proposals	Number of eligible proposals	% of retained	Above threshold	Selected for funding	Redress cases	Reserve List	Success rate
11	2012-01	159	142	89,31%	96	54	5	42	33,96%
12	2012-02	109	104	95,41%	69	36	1	33	30,28%
13	2012-03	76	71	93,42%	49	30	1	19	39,47%
	total	344	317	92,71%	214	120	7	94	35%

The overall maximum funding available at call publication was €98.9 million and the funding requested after evaluation €64.2 million.

The overall eligibility of proposals was as high as in 2011 about 93% of submitted proposals were considered eligible for evaluation, against 95% in the previous year. The number of projects selected for funding increased (to 120 from 118 in 2011), split over three calls and not four as in 2011.

In comparison with the other JUs, the high overall number of topics is high and this factor affects participation in the calls, which is high, as is the number of projects selected for funding. The participants are evenly distributed between research organisations, industry, universities and SMEs. Clean Sky was again less attractive to public bodies and regulatory agencies in 2012. SMEs accounted for a very high number of participants⁴ in the projects

⁴ Participant refers to single entities (SMEs, Universities, Research Organisations, etc.) that take part in given call. This definition implies that they are counted once only.

funded (38 %) with a significant success rate (51%); over the period 2008–2012, SMEs accounted for 34% of the EU’s Clean Sky funding for calls for proposals⁵.

Based on the data available on the funded projects, calls 11 to 13 attracted participants from 17 countries, about 30% of the countries involved in 2011 did not apply in 2012. The countries best represented were Spain, the United Kingdom, Italy, France and Germany in that order; they confirm their strong industrial tradition in aeronautics in Europe. Their participations⁶ altogether account for over 72% of the total selected for funding.

The promising representation of the newer Member States (the EU-12) reported in 2011 decreased significantly, from 22 to 7 participants in 2012, though Cyprus participated for the first time in JTI JU calls.

Switzerland increased its leadership among the Associated Countries with 12 participations, twice as many as in 2011. Clean Sky did not include any international partners in the funded projects, although China and Russia were successfully represented in 2011.

On **Communication**, in 2012, 15 press releases and press clipping were published and a new brochure on the Strategic Research and Innovation Agenda was posted online. Special issues of the ‘Skyline’ magazine presented the assessment of the first Technology Evaluator.

Clean Sky organised 8 events, including Information Days on calls that were held in Madrid, Turin, and Brussels; it participated in 12 other major international events: in particular, ‘Innovation Zone’ at Farnborough Air Show where the stand was visited by Rt Hon David Willetts, the UK Minister for University and Science.

Conferences with the goal of raising students’ interest in aeronautics, environment and Europe took place in Amsterdam, Bristol, Paris and Berlin, with audiences of up to 150 students. The General Forum took place in November 2012 and over 120 stakeholders from industry, SMEs, academia, research organisations and EU institutions participated in this annual event.

Concerning **Governance**, the Governing Board met four times in 2012. On 30 March 2012, the CS JU Development Plan was adopted and on 13 December 2012 the Chair (Mr Alessandro Franzoni) and Vice- Chair (Mr Ric Parker) for 2013 were elected.

2.3.2. *Progress achieved by the INNOVATIVE MEDECINES INITIATIVE JU*

The European Commission and the pharmaceutical industry collaborated to jointly achieve at the end of the programme a number of objectives which are paramount for Europe. These are: (i) to build a more collaborative environment for pharmaceutical R&D in Europe; (ii) to speed up the development of more effective and safer medicines; and (iii) to increase the competitiveness of the EU pharmaceutical sector.

A total budget of €2 billion was allocated to the Innovative Medicines Initiative (IMI) JU. Of this, a maximum of €1 billion was to be allocated from the EU budget for the Seventh

⁵ The 34% share of the SMEs participation concerns only their participation in the calls for proposals. Only € 200 million of EU funding for Clean Sky is dedicated for calls for proposals while € 600 million is distributed to the ‘named beneficiaries’.

⁶ In this report, the term “Participations” refer to participant that may be involved in more than one proposal in response to calls. This definition implies potential multiple participation of entities.

Framework Programme, while in-kind contributions worth at least another €1 billion were expected from member companies of the European Federation of Pharmaceutical Industries and Associations (EFPIA).

Companies have found that IMI calls are well suited to their needs and are participating much more in IMI projects now than in FP7 Health Projects.

The IMI handles calls for proposals in two stages. In stage one, applicants that can be funded under the IMI send expressions of interest (EoIs); in stage two, the best-ranked participants and EFPIA companies are invited to form consortia and jointly draft a full project proposal (FPP). This mechanism also implies two-stage evaluation: in step one for EoIs and in step two for FPPs. Only FPPs that meet all the evaluation criteria and pass ethical review are finally selected for funding. In 2012, for already ongoing projects, IMI introduced a new option of applying for additional research funding if projects proved to be worth more investment to explore new scientific opportunities. The first Explore New Scientific Opportunities (ENSO) call was launched in August and five applications were submitted by the second cut-off date in December. Since no proposals had been received by the first cut-off date, the budget available for the two was combined, and amounted to €5 214 163. Five projects were selected for funding and overall five new organisations joined: one from EFPIA and four non- EFPIA members.

ENSO partners – including EFPIA companies – come mostly from Germany, the United Kingdom, France, Switzerland, the Netherland, Sweden and Belgium. Organisations from the newer Member States EU-12 are less well represented: only Poland, the Czech Republic and Estonia are included in one of the five funded projects , once each (as are Ireland, Israel, Norway, Denmark).

In 2012, the IMI signed the two final grant agreements for call 3, finalised the stage 2 evaluation of call 4 and published four additional calls for proposals (calls 5, 6, 7, and 8). Grant Agreements were also signed for all projects from calls 4 to 6. The table below presents a general overview of calls 5 to 7, which were launched and evaluated in 2012⁷.

⁷ Call 8 was launched mid-December 2012, so the results cannot yet be reported.

Call Reference	Submitted Expression of Interest			Evaluation results		
	Submitted Expression of Interest	Eligible EoIs	% of retained	EoI above threshold	Full Project Proposals selected for funding	Success rate (selected FPPs/ submitted EoIs)
Call 5 - 2012	14	12	85.7%	2	1	7.1%
Call 6 - 2012	14	13	92.9%	3	2	14.3%
Call 7 - 2012	9	8	88.9%	2	2	22.2%
Total	37	33	89.2%	7	5	13.5%

Calls 5 to 7⁸ attracted 418 applicants, of which only 14% were selected for funding. These 418 applicants submitted a total of 33 eligible Expressions of Interest and five projects were selected for funding at the end of the evaluation procedure. Furthermore, in calls 5 and 6, two eligible proposals submitted by different research groups were merged into one project. This was recommended by the independent experts to optimise the potential benefits of projects, avoid fragmentation in the research environment and keep the highest possible number of beneficiaries involved.

For the IMI, there are a limited number of research topics and a large allocated budget and this affects the final number of partners involved in each consortium.

The IMI participant⁹ typology of is very specific. Industry is well represented (by EFPIA companies and SMEs, the latter participating in 104 out of 418 EoIs) and there is very high participation by universities and research organisations, which together submitted 74% of EoIs. Academia also accounted for most of the participants in the projects eventually funded (25) in 2012 followed by research organisations (18) and SMEs (16), with the latter representing 26 % of total participation considering all calls for which Grant Agreements were signed in 2012 (calls 4 to 6). It is worth mentioning that this result appears slightly different if only calls launched in 2012 and for which Grant Agreements were signed during the year are taken into account: SMEs participation in calls 5 and 6 was 20,5%. This is good progress compared to the 17.7% in 2011. Globally, SMEs were awarded about €93 million under the Grant Agreements signed in 2012.

Regarding the geographical distribution of successful participants, the quantity and quality of available figures improved in 2012. Participants in projects selected for funding (62, excluding EFPIA companies) came from 13 countries, mostly the United Kingdom, Germany, the Netherlands and France. Hungary was the only EU-12 country represented, with one participation in call 5. Calls 5 to 7 did not include international partners although these were

⁸ EFPIA companies are not included at the first stage of the process (EoIs), they are only taken into account when it comes to FPPs and proposals selected for funding.

⁹ For the definition of participant / participations see foot notes 10 and 12

represented in the calls finalised in the first half of the year (e.g. calls 3 and 4). Associated countries also participated significantly only in calls 3 and 4 with 20 participations overall (about 7%).

On **Communication**, IMI participated in 15 different events in 7 different European countries and was presented in National Info Days throughout 2012 in 13 different European countries. It published 9 press releases and was quoted in 11 public newsletters. On dissemination of results, IMI achieved 366 publications relating to funded projects. Access to the web page increased by about 20 % from 2011, taking into account unique visitors (about 8000 visitors/month).

Concerning **Governance**, the governing board met three times in 2012. In April 2012, Mr Roch Doliveux (EFPIA) became Chair and Dr Rudolf Strohmeier (EC) Vice-Chair for a one-year term. 21 decisions on running the JTI JU were approved.

2.3.3. Progress achieved by the FUEL CELL AND HYDROGEN JU

The FCH JU pursues three main objectives: (i) to accelerate the development and deployment of fuel cell and hydrogen technologies; (ii) to provide the technology base to start marketing them within the timeframe 2015 to 2020, reducing the “time to market”, and (iii) to place Europe at the forefront of these technologies worldwide.

To achieve these objectives by the end of the programme, a budget of €940 million was allocated. The EU cash contribution is €470 million maximum, to be matched by cash contributions to running costs and by in-kind contributions to operational costs from the legal entities participating in FCH JU activities.

The FCH JU uses two types of funding schemes to further a wide spectrum of RTD activities: collaborative projects (for basic research and demonstration) and coordination and support actions (for networking activities, including pre-normative research). Another feature of the FCH JU is cross-cutting activity: to complement the four scientific application areas it aims to raise awareness, educate the public and support the market. Proposals are submitted and evaluated by means of a simple single-stage process.

During 2012 the FCH JU launched and evaluated one call for proposals (FCH-JU-2012-1), for an indicative available budget of €77,5million. 72 proposals were submitted, of which 68 were eligible. 28 were proposed for negotiations, representing a success rate of 39%. No Grant Agreement was signed for this call for proposals in 2012; but 33 Grant Agreements were signed for proposals evaluated in 2011.

The table below presents the major features.

Call Reference	Submitted Proposals			Evaluation results			Reserve list, if any % of retained
	Submitted Proposals	Eligible Proposals	% of retained	Above threshold	selected for funding	Success rate	
FCH-JU-2012-1	72	68	94%	43	28	39%	35%

The 72 proposals submitted covered the five application areas, four scientific and one cross cutting, with best results in the areas of Transportation and Refuelling Infrastructures and Early Markets for which 100% of the proposals submitted were selected. The results did not vary much from the previous year, and overall the volume of activity and the results remained steady.

The FCH JU attracted a wide range of participants¹⁰ of all types, including public authorities (e.g. national/regional bodies, energy agencies) and NGOs. This might be because of their particular interest in coordination and support actions. The participants were also evenly distributed between research organisations and industry. The Commission is partnering with the New Energy World Industry Grouping (NEW-IG), which associates industrial companies, and the N.ERGHY Research Group, which represents the research community. Of the 573 applicants responding to the call, 222 had their projects funded, with an overall success rate of 39%. 12 public bodies and organisations other than private companies were selected for funding whilst SMEs had 55 participations in successful proposals; this represents 25% of the total participation. Taking as its baseline the Energy Theme of the Cooperation Programme in FP7 in the period 2008-2012, SMEs participation in FCH JU activities is significantly higher than in FP7. In the FCH JU, SMEs receive 25% of the funding compared to 18% in FP7.

Twenty countries were represented in the call, led by Germany, France, the United Kingdom, Italy and Belgium. Compared to the previous year, France performed better than the UK within the seven countries that altogether are leaders in the sector. EU-12 countries were represented with 11 participations. Poland demonstrated best results in the group of four (Poland, Czech Republic, Lithuania and Romania).

Of the Associated Countries, Switzerland and Norway maintained their position with 17 participations overall, a slight increase compared to 2011, and Croatia participated for the first time. The international partners were only represented by the United States with one participation.

On **Communication**, in 2012, FCH JU organised 3 events and participated in another 7. Publications included a general leaflet on FCH JU, a listing & mapping of demonstration activities and a report on the programme review with fact sheets for each project. The FCH web site, operational since March 2011, acquired pages on the stakeholders' general assembly

¹⁰ For the definition of participant / participations see foot notes 10 and 12

and related activities, programme reviews, and projects presented by application area and year.

Concerning **Governance**, the governing board met four times in 2012. In addition to decisions on running the JTI JU, in November 2012 two other new members of the scientific committee were appointed.

2.3.4. Progress achieved by the ARTEMIS JU

ARTEMIS JU was set up to achieve at two main objectives by the end of the programme: (i) to tackle the research and structural challenges faced by industry in embedded systems, and (ii) to help European industry consolidate and reinforce its world leadership in embedded computing technologies.

Embedded systems are the invisible brain of all electronic systems and are a main differentiating factor in the market. In 2012 the world market for embedded systems was estimated at €472 billion.

The work in ARTEMIS is closely linked and depends on the work done in ENIAC as electronic components nowadays incorporate more functionalities.

The participation of Member States in funding and governance alongside the EU and industry is a major feature of the JU. The European Union, Member States and industry share the total maximum budget as follows: the maximum EU contribution is €420 million, the ARTEMIS Member States contribute at least 1.8 times the EU contribution (€756 million), and in-kind contribution from industry must be at least equivalent to the public authorities' total.

To date, the 44 running ARTEMIS projects represent total R&D&I investment of €708 million, comprising €228 million in national contributions, a €116 million contribution by the EU and €363 million from industry. All eight sub-programmes of the ARTEMIS Research Agenda are covered. In the first four years of the JU to 2011, commitments from the ARTEMIS Member States fell. However, the introduction of the ARTEMIS Innovation Pilot Projects (AIPPs) for the 2012 call reversed this trend, resulting in the highest ever commitment for an ARTEMIS call. €38 million was allocated in funding via JU grants, along with €66 million funding by Member States.

Currently 23 different countries are cooperating on implementing the ARTEMIS SRA to boost embedded systems in Europe. Poland signed an Administrative Agreement in December 2011 and committed the resources needed; nine Polish organisations have participated successfully in calls for proposals, a very promising result for a new member.

The submission and evaluation procedure is normally in two-stage: applicants first send a project outline (PO), then a full project proposal (FPP). This procedure was used in calls for proposals for 2009, 2010 and 2011. In 2012, as in 2008, ARTEMIS launched and evaluated calls following a single-stage procedure. So in 2012, the Project Outline phase was skipped and the process speeded up. The table below gives an overview of the FPPs submitted in response to the 2012 call, together with the results of the evaluation.

Call Reference	Submitted Full Project Proposals			Evaluation results			Reserve list if any % on list
	Submitted Full Project Proposals	Eligible FPPs	% of retained	Above threshold	selected for funding	Success rate%	
ARTEMIS-2012-1	25	24	96%	13	8	32%	3 proposals, 23% of above threshold

631 applicants were involved in Full Project Proposals and 326 were selected for funding in the 8 successful projects. This entailed an increase in the number of partners by project: on average consortia included 40 partners in 2012 against 23 in 2011. ARTEMIS seeks to foster collaboration between all stakeholders — especially industry, including SMEs, national and/or regional authorities, and academic and research centres — pulling together and focusing research efforts. There was again a good balance between the types of participants¹¹ that were represented with some 33.1% from universities and research organisations altogether, 34.4% from large industry and 32.5% from SMEs. Globally, SMEs have been funded with over €9 million in 2012.

The projects funded involved 18 countries, led as in the previous year by Spain, Italy, France, Germany, Netherlands and Finland. The EU-12 countries were represented by the Czech Republic again this year followed by Poland, Slovenia and Latvia. Only Turkey had participation as an Associated Country but the 2012 call did not attract international partners.

On **Communication**, ARTEMIS participated in over a dozen events. The Chair of the JU Governing Board was interviewed for the Embedded World Conference and Exhibition newspaper and the Research Media (UK) published an interview with ARTEMIS Industry Association Chair Klaus Grimm, focusing on international innovation. Series 12 and 13 of the ARTEMIS Magazine were published, plus various brochures on the JU in general and on specific matters such as calls.

Concerning **Governance**, the governing board met three times and the public authorities' board met four times. The main decisions taken by the governing board during the year were related to the annual implementation plan 2012 and annual budget plan 2012.

2.3.5. Progress achieved by the ENIAC JU

ENIAC pursues three main objectives at programme level: (i) to tackle research and innovation in nanoelectronics technologies and their integration in smart systems; (ii) to help European industry consolidate and reinforce its position in nanoelectronics technologies and systems and (iii) to contribute to further incorporation and miniaturisation of devices, and increase their functionalities while delivering new materials, equipment and processes.

¹¹ For the definition of participant / participations see foot notes 10 and 12

Considering the high cost and the great complexity of R&D requiring multi-disciplinary efforts, coordination in the field of electronic components at European level with the Member States is of paramount importance.

The work done in ENIAC complements the embedded systems development done in ARTEMIS.

The maximum budget allocated by the European Union is €450 million, which should be boosted by ENIAC Member State funding of at least of 1.8 times that (€ 810 million). The industry's in-kind contribution must at least match the public authorities' total. As with ARTEMIS, the participation of Member States in funding and governance alongside the EU and industry is a major feature of ENIAC.

After ENIAC became autonomous, commitments from ENIAC Member States steadily declined, but this trend was reversed in 2011. This turnaround was reinforced by the successful second call launched in 2012, which focused on the Key Enabling Technologies (KET) pilot line. Research activities for this call involved a higher level of technology readiness (TRL 4 to 8) and a larger budget (€193.2 million). At the end of 2012, national investment increased to € 150 million, from € 62 million on setting up.

Typically, ENIAC calls follow a two-stage submission and evaluation process like ARTEMIS (project outline, then full project proposal) and in 2012 two calls were launched and managed.

The table below gives an overview of the two calls launched and evaluated in 2012.

Call Reference	Submitted Project Outlines (POs)			Evaluation results		
	Submitted Project Outlines	Eligible POs	% of retained	Full Project Proposals	Selected for funding	Success rate
ENIAC-2012-1	16	16	100%	11	6	37.5%
ENIAC-2012-2	11	11	100%	6	5	45.5%
total	27	27	100%	17	11	40.7%

Of the 360 applicants that sent Full Project Proposals (FPPs) for the 2012 ENIAC calls, 247 were selected for funding, with a success rate of over 68%. The quality of Project Outlines proved good in 2012 and all 17 went to the second-stage: 11 FPPs were selected for funding, with a success rate of 40.7%. Participants¹² selected for funding include research organisations (39), universities (42), industry (108) and SMEs (58). SMEs accounted for 23% of all participations and received over €24 million funding in 2012.

Participants in the calls came from 21 countries, with France, Netherlands, Germany and Italy leading with 155 participations between them, out of 247 (about 63% of the total). EU-12 countries also participated, mostly represented by the Czech Republic (4 participations),

¹² For the definition of participant / participations see foot notes 10 and 12

Poland (3) and Hungary, Malta, Slovak Republic and Romania (2 each). There was also good participation from Associated Countries; Israel took the lead with 4 participations, followed by Norway (3) and Switzerland (2). In 2012, no international partners were selected for funding, as in 2011.

At the end of 2011, the ENIAC JU launched a call for Expressions of Interest in setting up pilot lines. This call prepared the JU to help implement the policy on improving Europe’s position in six key enabling technologies (KET) including nanoelectronics. The pilot lines are intended to boost innovation and implement activities at higher technology-readiness levels (TRL 4 to 8)¹³. Consequently, the second call of 2012 was fully dedicated to developing projects targeting pilot lines. After evaluation, 5 of these projects were selected for funding for a total of 128 participants, including 27 SMEs.

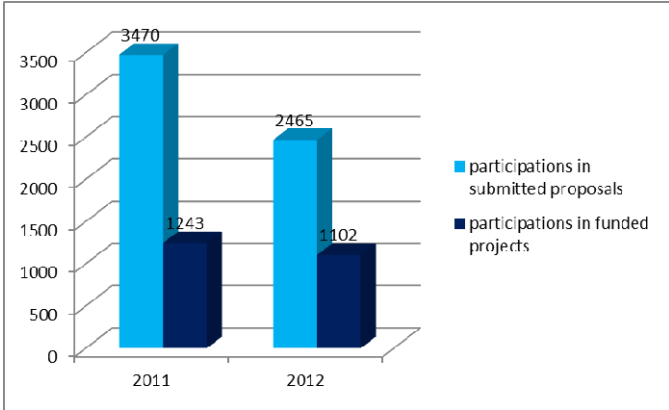
On **Communication**, on top of participating in several events in Germany, Austria, Italy, and sponsoring events in Belgium, France, the Netherlands and Germany, ENIAC issued 2 press releases which attracted over 10 000 and 8 000 internet views respectively. Together with The Parliament Magazine, it organised the ‘Securing the Future’ round table event at the European Parliament, among other events and publications.

Concerning **Governance**, the governing board met three times and the public authorities board met four times in 2012. Main decisions concerned the AIP 2012, the annual budget plan 2012 and adoption of the work programme 2013.

2.4. Stakeholder participation

After three years of full operational autonomy of the JUs, it is possible to start appreciating the progress achieved in terms of participation¹⁴. The data also provide an initial overview of the research and innovation environment best served by JTI JUs and information on the level of participation reached by category of beneficiaries.

The graphic below compares overall participation in 2011 and 2012.



¹³ See footnote 5.

¹⁴ For the definition of participant/participations, see footnotes 10 and 12.

Categories of beneficiaries in 2012 are presented in the table below.

	Participations in proposals submitted (2012)	Participations in projects selected for funding (2012)
Clean Sky	483	245
IMI	418	62
FCH	573	222
ARTEMIS	631	326
ENIAC	360	247
Total	2465	1102

In 2012, JTI JUs recorded 2465 participations in submitted proposals while participations in funded projects came to 1102. In comparison to 2011, the number of proposals submitted contracted by about 30% while the number of projects selected for funding was the same.

This is particularly evident for the IMI and reflects the new focus put on ‘think big’ projects. In fact, in 2012, in the three out of four calls launched for which data are available the number of full project proposals selected for funding was small (5) and this therefore affected the total number of participations.

The trend was more or less stable in the other four JTI JUs with the exception of ENIAC where the number of participations in projects selected for funding was higher than in the Project Outline phase. This is due to the two-stage evaluation and to the recommendations provided by evaluators after the first step evaluation. In some cases consortia that submitted Project Outlines decided to add specific capabilities and/or equipment following feedback from the independent experts. This also happened in the IMI but it did not affect total participations before and after the evaluation procedures ended.

The overall success rate increased from 35.8% in 2011 to 45% confirming that JUs are a tool to fund industry-driven highly specific research. This also demonstrates that the involved stakeholders are getting more and more acquainted with the modus operandi of these new instruments.

The types of stakeholders involved in the research projects vary according to the JU.

Participation in the FCH JU is diverse, with all stakeholders being represented in funded projects: 59 research organisations (around 27%), 31 universities (around 14%), 68 large industries (around 31%), 55 SMEs (around 25%) and 3 public bodies among its 222 participants. The participation of public bodies is linked to the demonstration activities of the JU, where collaborations at national and regional level are of importance.

IMI has attracted mostly industry representatives (66, i.e. 59%) both from large companies (EFPIA) and SMEs; universities, research organisations and regulators accounted for a further 46 participants (around 41%).

Generally, Clean Sky, ARTEMIS and ENIAC proved less attractive for public bodies. SMEs are well represented in Clean Sky, with 94 (38%) participations, and in ARTEMIS and ENIAC, with 106 (32.5%) and 58 (23%) respectively.

Overall, SMEs represent about 30% of the total participations and large industry account for another 31,1 %.

The following table shows participations by category for the five JTI JUs. Note that:

- in the IMI, EFPIA companies — which are ‘private for profit’ — are not included. Overall, since the IMI was set up, EFPIA companies have accounted for 363 participations in funded projects, while in 2012 they accounted for about 50;
- in ARTEMIS, universities and research organisations are normally considered together and the table follows that practice.

Type of participant	Clean Sky	FCH	IMI	ARTEMIS	ENIAC	
Public bodies		3				3
Research organisations	53	59	18	108	39	277 ¹⁵
Higher or secondary education	54	31	25		42	152
Private for profit (excl. education)	44	68	**16	112	108	332
SMEs	94	55	16	106	58	329
Others		6	3			9
Total	245	222	62	326	247	1102

However, when looking at participation and the representativeness of figures, it should be borne in mind that targeted results are expected in each technological sector.

2.5. Innovation and SMEs involvement

The current five JTI JUs are an innovative model for implementing research. The partnership between the public and the private sectors is a significant step forward in transferring research results to the market. The JTI JUs set their own research agendas in close cooperation with industry, with the aim of turning results into applications in the shortest possible time. This process of accelerating the use of research results will be pushed further under Horizon 2020.

We can highlight some points that allow the JTI JUs’ innovation performance in 2012 to be appreciated, but the report does not aim to present a detailed analysis of this aspect of the JUs.

The concept of Technology Readiness Level (TRL), which emerged in the aeronautic and space sectors, has been extensively used by the Clean Sky JU in evaluating projects submitted

¹⁵ This amount includes Research organisation and Higher or secondary education, which are not distinguished in ARTEMIS

¹⁶ Private for Profit: EFPIA companies accounted for about 50 participations in 2012

to ascertain the maturity of the technology¹⁷. ENIAC has also introduced the concept of TRL, in particular for projects selected for funding as part of the KET Pilot Line. This was the topic of the second ENIAC call in 2012 and proposals were expected to demonstrate a TRL of between 4 and 8.

In ARTEMIS, an index of maturity and an index of SME engagement in proposals has been used in the last two years to help identify those projects which can best contribute to developing innovation from research. ARTEMIS also interacts with Centres of Innovation Excellence (CoIE), which are multi-country, multi-organisation, interconnected R&D operators whose aim is successful innovation in a given market (e.g. intelligent building). The ARTEMIS Innovation Pilot Projects (AIPPs) concept was introduced in 2012. Projects funded under the AIPP are expected to cover the full innovation chain, from the proof of concept and prototyping stage to potential applications in industrial platform.

A number of prototyping and demonstration activities were presented in the Annual Implementation Plans for the JTIs. In particular, the FCH increased the number of demonstrators, namely in the area of "Early Markets" and called for proof of concept at system level in the area of "Stationary Power Generation and CHP". These two technology areas, together with "Transportation and Refuelling Infrastructures", feature large demonstration projects.

In Clean Sky, in the technological area of Green Regional Aircraft, the INDUCER project successfully delivered a laboratory-scale demonstration on "smart repairs" and further research topics launched in 2012 calls have addressed the demonstration and testing phases.

Within the FCH, a Danish SME has developed and facilitated the commercialisation of its two innovative products: H2Station (Hydrogen refuelling stations for automotive, bus and materials handling applications), and H2Drive (Fuel cell systems for materials handling vehicles such as forklift trucks and airport tow tractors).

Two new projects received ENIAC's 'Innovation Award', introduced in 2011 to recognise projects approaching completion or recently completed that produced the most impactful innovation. These were IMPROVE and LENS, which are generally considered success stories. IMPROVE, in particular, boosted cooperation between manufacturers and research organisations in Europe and has produced over 90 publications.

In the area of key standards and tools for drug development, IMI is supporting RAPP-ID, a project that successfully developed a device and protocol related to breath-borne aerosol sampling currently at the patenting stage.

FCH has currently submitted 13 patents, according to its operational indicators for 2012.

The JTI JUs continued to encourage SME participation, with improved results in 2012: SMEs accounted for about 30% of successful participants¹⁸ and 329 of the organisations involved. Of the five JTI JUs, Clean Sky proved most attractive to SMEs, which accounted for 38¹⁹% of total participation in the JU, followed by ARTEMIS (32.5%); IMI (26%); FCH (25%) and ENIAC (23%).

As regards to the Governance in the FCH JU, where the sector is still young and based on a high number of SME's, it should be noted that the Industry Grouping (IG) has grown from 48

¹⁷ See footnote 5

¹⁸ Foot note 10

¹⁹ The 38% share of the SMEs participation concerns only their participation in the calls for proposals. Only €200 million of EU funding for Clean Sky is dedicated for calls for proposals while €600 million is distributed to the 'named beneficiaries'.

members in 2007 till 68 at present and 60% of these members are SME's. Furthermore, one of the IG seats in the Governing Board is reserved for an SME.

The amount of EU funding which went to SMEs in 2012 varied from one JTI JU to another: IMI allocated over €55 million to SMEs in call 5 to implement the major European Lead Factory project (EUC2LID) and about €93 million overall. Clean Sky, FCH and ENIAC averaged €22 million and ARTEMIS about €10 million.

The table below gives a detailed overview of SME participation in the five JTI JUs, both in proposals submitted and in projects selected for funding 2012. Globally, SMEs submitted fewer proposals than in 2011 but performed better in terms of success rate: this has increased overall from 35 % to 44 %.

	Participations in submitted proposals	Participations in projects selected for funding
Clean Sky	186	94
IMI	104	16
FCH	160	55
ARTEMIS	225	106
ENIAC	70	58
Total	745	329

The number of participating SMEs confirms that JTI JUs offer a good range of research activities tailored to SMEs, in which their contributions are essential to achieving more general research and innovation objectives. Progress in 2012 has shown the JTI JUs to be a powerful tool to foster innovation and they are expected to contribute further under the Horizon 2020 programme.

2.6. Participation across Countries

The five JTI JUs involved an average of **20 Member States** in the implementation of the SRAs in 2012, as in the previous year. The IMI demonstrated a significant increase in the number of countries involved: eight new countries took part in projects selected for funding by the end of the year. On the other hand, Clean Sky and FCH witnessed a decline in geographic diversity. As shown in the table below, the top players come from Member States that have an advanced industrial environment surrounded by dynamic systems of SMEs, research centres and universities. These countries are: Germany (201 participations) France (182), the United Kingdom (139), Italy (126), the Netherlands (101), Spain (92), Austria (19), Sweden (18) and Belgium (13). Amongst the nine countries France and Germany participated to calls for proposals in all five JTI JUs. In particular in IMI and FCH the top players confirmed their ranking positions: the United Kingdom kept the lead in IMI and Germany led in FCH.

	N° of countries participating in projects selected for funding	Top players ²⁰
Clean Sky	17	Spain, the United Kingdom, Italy, France, Germany
IMI	23	The United Kingdom, Germany, the Netherlands, France, Sweden
FCH	21	Germany, France, the United Kingdom, Italy, Belgium
ARTEMIS	18	Spain, Italy, France, Germany, the Netherlands
ENIAC	20	France, the Netherlands, Germany, Italy, Austria

In terms of the international dimension in 2012, the number of partners involved from outside the EU was small. Only four organisations from the United States were selected for funding, three in the IMI and one in FCH. This represents a percentage well below the 3% reported in 2011.

EU-12 countries' access to JTI JU research activities improved overall: in general, the newer Member States accounted for approximately 6% of total participation in funded projects, against 4% in 2011. For the first time, organisations from Lithuania were represented in a selected project.

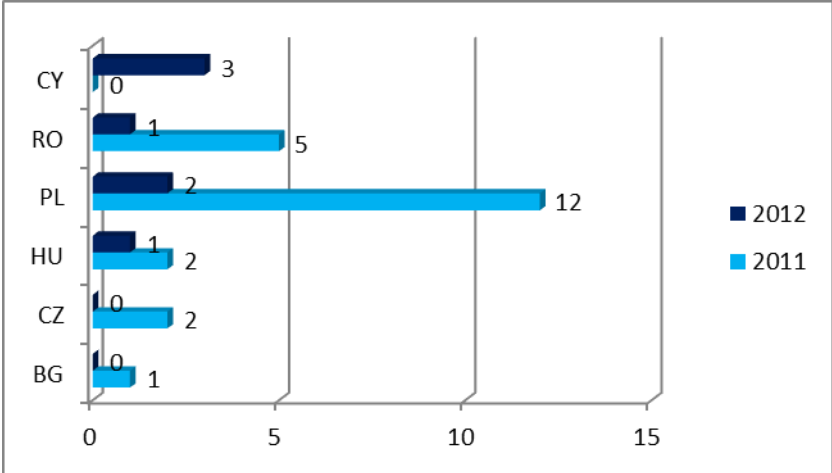
The table below shows the number of participations by country, in funded projects, and the distribution in each JTI JU.

Country	IMI	FCH	Clean Sky	ARTEMIS	ENIAC	Total
Czech Republic	1	3		16	4	24
Cyprus			3			3
Estonia	1					1
Hungary	3		1		2	6
Latvia				2		2
Lithuania		1				1
Malta					2	2
Poland		5	2	9	3	19
Romania		1	1		2	4
Slovak Republic					2	2
Slovenia				4		4
Total	5	10	7	31	15	68

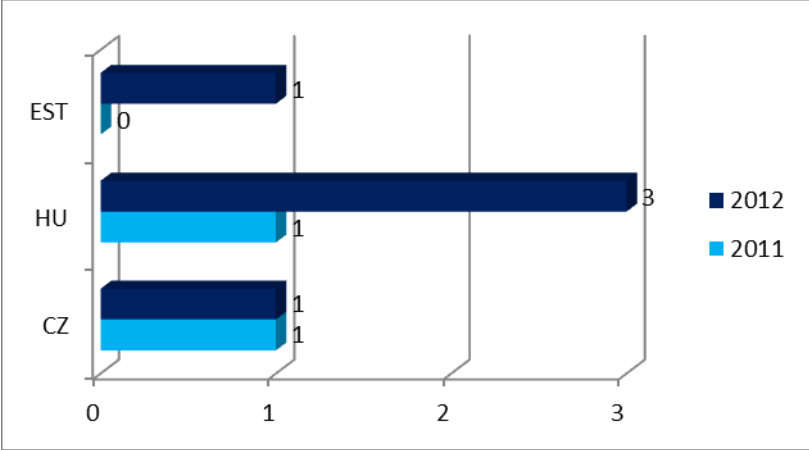
EU-12 participation was analysed for each JTI JU for the last two years of activity.

²⁰ Countries are ranked by number of participations and not by alphabetical order

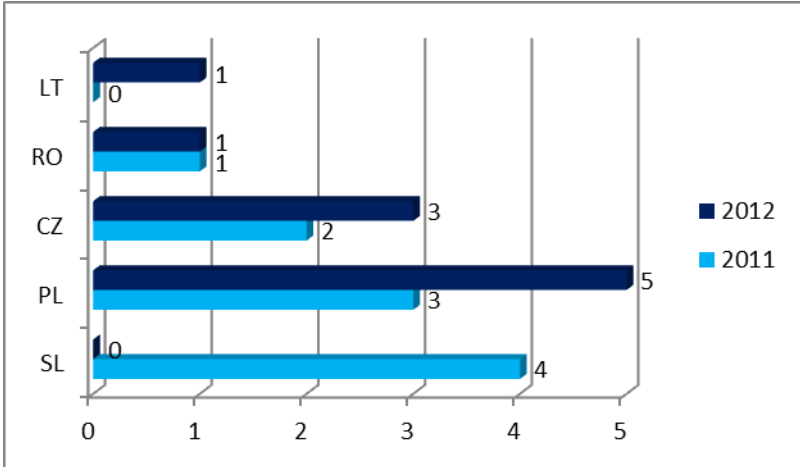
EU-12 participation in **Clean Sky (2011–2012)** by country and number of participations.



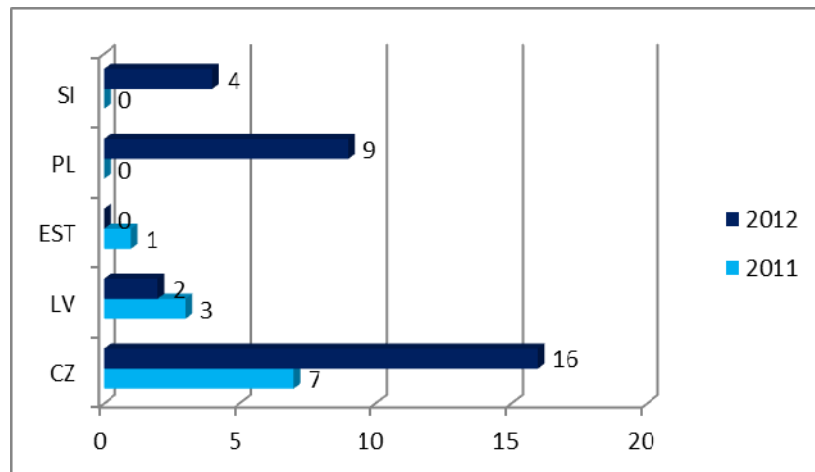
EU-12 participation in **IMI (2011–2012)** by country and number of participations.



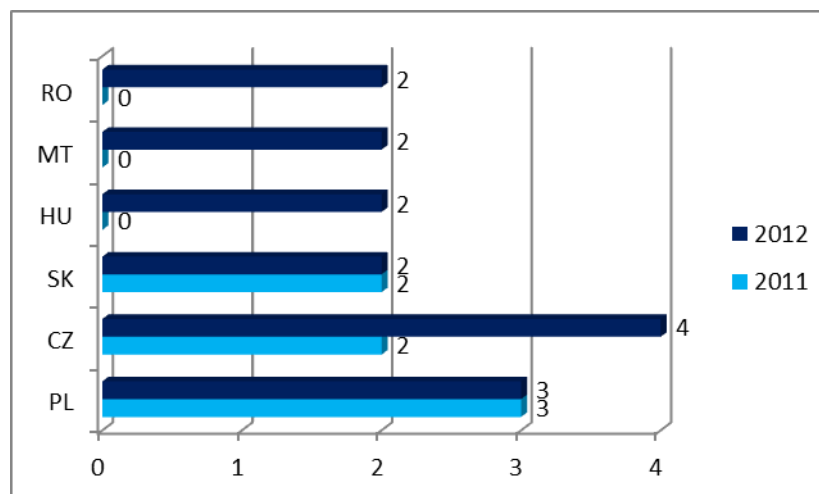
EU-12 participation in **FCH (2011–2012)** by country and number of participations.



EU-12 participation in **ARTEMIS (2011–2012)** by country and number of participations.



EU-12 participation in **ENIAC (2011–2012)** by country and number of participations.



EU-12 participation in FCH and ENIAC remained steady in the last two years and increased slightly in the IMI, which shows the efforts made by the JTI JUs to better represent less involved countries.

By contrast, EU-12 participation decreased by about 25% in Clean Sky, which performed better in 2011. ENIAC registered the most significant increase in participation (roughly 26%).

Overall, participation by the Czech Republic remained consistent and confirmed its leading position in the group. Poland and Hungary followed with 19 and 6 participations respectively. The remaining nine countries were less well represented and Bulgaria was not involved in funded projects.

Specific efforts have been made to attract more participation. For example, in April 2012, Clean Sky interviewed a representative of the Polish Institute of Aviation with the aim of highlighting the experience of Polish organisations as project coordinator.

The IMI successfully launched the Cooperative Medicine Development Course for postgraduate students from Estonia, Hungary, Lithuania, Poland, Romania, Slovakia, Slovenia, Portugal and Turkey. This high-level educational experience is intended to provide the best teaching in the field of pharmaceuticals.

ARTEMIS organised an International Brokerage Event in Prague in January 2012 and a Call Workshop in Gdansk, in May 2012, in cooperation with the European Institute of Technology (EIT) and the National Contact Point.

JTI JUs research activities also proved attractive to countries associated with the FP7, which accounted for approximately 5% of participations. The most active **Associated Country** in 2012 was Switzerland, followed by Norway and Israel, with 58 participations altogether, these countries account for 92% of participations in the five JTI JUs. Croatia, which joined the EU in July 2013, was successfully involved in FCH activities. The IMI and FCH attracted the highest number of participants from Associated Countries, followed by Clean Sky, ENIAC and ARTEMIS. Further assessments of associated country involvement in ARTEMIS and ENIAC should also take into account their tripartite model of funding.

An overview of the involvement of FP7 associated countries in JTI JU research activities is provided below.

Country	IMI	FCH	Clean Sky	ARTEMIS	ENIAC	Total
Croatia		1				1
Iceland	3					3
Israel	4				4	8
Norway	2	5		3	3	13
Switzerland	11	12	12		2	37
Turkey				1		1
Total	20	18	12	4	9	63

2.7. Grant portfolio

The grant agreements (GAs) portfolio varies from one JTI JU to another, together with the types of projects, the size of consortia and the budget allocated. JTI JUs may not only develop collaborative research but also support networking activities (e.g. FCH) with coordination and support actions or tailored high level training (e.g. IMI and FCH), where consortium size is naturally smaller and its composition different.

The overall number of grant agreements signed in 2012 increased slightly (151 GAs were signed in 2011), while the activities for which results are available or GAs ended naturally increased by about 20%, as programme implementation advanced.

	GAs signed in 2012	GAs for which activities ended in 2012
Clean Sky	102	55
IMI	11	0
FCH	33	5
ARTEMIS	9	11
ENIAC	11	8
Total	166	79

Clean Sky's GAs remain the most distinctive. The number of projects funded and GAs signed is bigger, but with fewer partners in each project and relatively small smaller budgets per project. Clean Sky calls allow single-partner projects, particularly when the research topics are so specific that only one organisation (or few competing in selection and evaluation) fits the call requirements.

There are on average two partners in Clean Sky GAs, with an average allocated budget of €408 000 and a funding rate of 65.3%. The usual duration of projects is also rather limited (12 to 24 months average) since results have to be achieved in a short time and be integrated in the correspondent technological area. The JU contribution to the 102 GAs signed in 2012 is of about €44 million. So, while the number of GAs to be signed and the management of reporting call for considerable efforts, coordination with and between partners is less burdensome.

FCH consortia have an average of eight partners and a JU contribution of €3 million. The JU contribution to the 33 GAs signed in 2012 is of about €117 million. Management effort is likely to be similar to those engaged in FP7 cooperative research projects.

The IMI's project portfolio typically features fewer projects (and GAs signed) but they are bigger in terms of both the budget allocated and the number of partners. The average number of partners in an IMI project is over 20, taking EFPIA and non-EFPIA organisations together. In 2012, the average budget of the GAs signed was roughly €20.6 million (IMI JTI JU contributions only). The IMI has also a stock of 39 GAs signed since it was set up and no results from completed projects. Note that a small number of projects, which were close to obtaining results or proved worth continuing with their scope revised were funded through the new ENSO calls

ARTEMIS involves on average 21 partners in a consortium with an average budget of €16 million. The JU contribution to the 9 GAs signed in 2012 was about €24 million. In ENIAC, the average number of partner organisations involved is 21, with a budget of about €13.5 million.

For the IMI, ARTEMIS and ENIAC, the effort required to coordinate the relevant number of partners in a given consortium are likely to be offset by the limited administrative interaction required because the number of projects selected for funding is small.

2.8. Actions performed by Commission in 2012

2.8.1. Stakeholder consultations

Stakeholders were consulted by the European Commission in 2012 with a view to extending the JTI JUs' mandate under Horizon 2020. These consultations are part of the impact assessment accompanying the legislative proposals for JTIs under the new research and innovation framework programme. In the case of ARTEMIS and ENIAC, a single consultation was carried out, as the Commission proposal foresees merging them into a single initiative dealing with electronic components and systems. The consultations were carried out using different tools but all included public web-based consultation, the results of which are presented in detail in the impact assessments for the proposals. Other tools used were:

1. Individual position papers by stakeholders, JTI JU members and JTI JU advisory bodies;

2. Hearings/meetings with the wider stakeholders' community (some general, some targeted);
3. Meetings with representatives of Member States and Associated Countries;
4. Surveys amongst participants in on-going projects;
5. Independent experts' advice;
6. Specific studies on future trends and impact of the JTI JU in the specific sector;
7. Identification and analysis of economic data, carrying out literature searches and assessing results from R&D projects.

Overall, the consultations demonstrate the clear European added value of public private partnerships. Stakeholders consider that the sectors in which the JUs operate are key to addressing societal challenges and industrial competitiveness but that it is impossible to rely solely on market mechanisms to achieve major innovations closer to the market. Therefore, they consider it appropriate to set up public private partnerships in these areas under Horizon 2020, as they are contributing to achieving the critical mass required for technological breakthrough and large-scale investment in research, development and demonstration, and to bridging the gap between academic and industrial research. Stakeholders also consider that Member States' support would not be sufficient.

Having lighter structures and increasing SMEs' involvement are mentioned as points to be considered for future improvement.

A profile of the stakeholders emerges from the over 500 replies submitted through the online questionnaires by the deadline.

The public consultation on Clean Sky, FCH and IMI JUs took place from 11 July to 4 October 2012. The number and types of respondents varied from one JU to another, as outlined below. Information on the results of the consultation on ARTEMIS and ENIAC JUs is presented separately because the relevant online consultations were followed a different path.

- **91 replies** were received by the closing date of the consultation on **Clean Sky**.

Replies came from at least 17 different countries, including five from Associated Countries. France and Spain were the best represented (with 23.1% each), followed by Germany (15.4%). Other countries included Austria, Belgium, the Czech Republic, Italy, Sweden and the United Kingdom. The country profile was generally in line with participation in calls for proposals, particularly for Spain, France and Germany.

- **127 replies** were received by the closing date of the consultation on **FCH**.

Replies came from at least 22 different countries, including five from Associated Countries. France was the best represented (with 30% of respondents), followed by Germany and the United Kingdom (13% each). Participation by Nordic and EU-12 countries was generally low. This does not match the general pattern of participation in calls for proposals launched by the FCH JU, which are more widely representative. This generally means less dominance by one country, while in the consultation by far the highest number of respondents were from France.

- **134 replies** were received by the closing date of the consultation on **IMI**.

Replies mainly came from six EU countries — Belgium, France, Germany, Portugal, Spain and United Kingdom — which accounted for 66% of replies. There was at least one reply

from 19 EU countries. Under ‘Other’ (non-EU) several replies were from Associated Countries, e.g. Switzerland and Norway. This reflects these two countries’ recurrent participation in calls for proposals. Note that the six countries that answered most include those which participate most in funded projects.

- For **ARTEMIS** and **ENIAC**, the online consultation was conducted between 20 July and 12 October 2012 and **151 replies** were received.

Replies mainly came from the 23 European countries involved in the current JTIs, with more than 20% from Germany and France. The industrial associations that are currently members of the ARTEMIS and ENIAC JUs responded for their constituencies (representing respectively 206 and 126 members) which gave their views more weight. Germany and France were also amongst the countries performing best in calls for proposals from ARTEMIS and ENIAC.

The table below presents the response to the open consultations by JU and by type of respondent. ‘Other’ includes organisations from non-EU countries. Individual citizens accounted for over 20% of responses in three consultations out of four (Clean Sky, IMI, and FCH): this might imply better public awareness of JTI JUs, too. An average of 12% of SMEs replied to the online questionnaires. Universities are included in the category ‘research organisations’ and, surprisingly, none of them replied to the consultation on Clean Sky.

Respondent by type	Clean Sky	IMI	FCH	ENIAC & ARTEMIS
Individual Citizens	25.3%	21.64%	27.6%	1%
SME s	10%	8.21%	18.9%	11%
Research Organisation	0%	12.69%	18.9%	39%
Large Business	34.2%	7.46%	14.17%	26%
Business Organisation	3%	6.72%	6.3%	2%
NGOs	6%	21.64%	5.51%	0%
Other	15.4%	14.93%	4.72%	13%
Member State Administration	6%	5.22%	2.36%	8%
Regional/ Local Administration	0%	1.49%	1.57%	0%
	100%	100%	100%	100%

2.8.2. *Cost-benefit analysis of the JUs*

In preparation of the new framework programme for research and innovation, Horizon 2020, the Commission assessed its current implementing modes, including the JTIs. This involved assessing their impact on the relevant technology sectors, and carrying out a cost-benefit analysis of the JUs as administrative structures.

The cost-benefit analysis was included in the Impact Assessment performed in 2012 on public-private partnerships set up under Article 187 TFEU for Horizon 2020. It first examined the current situation of JUs in comparison with implementation by DG RTD. Then it considered possible scenarios for the use of JTI JUs under Horizon 2020 and relevant key features, such as the cost impacts of simplification measures and derogations.

The CBA covers the cost efficiency of the administrative structures set up to implement the JTIs' strategic research agendas (e.g. setting them up, supervision and winding down), not of the instrument as such (i.e. programming, project management, etc.).

The analysis revealed a number of areas where the next framework programme and the next generation of JUs could be improved, as follows.

- **The suitability of the general legal framework of the JUs.**

The legal framework has proven less suited to the needs of relatively small structures like the JUs. Generally, administrative procedures are not geared to small entities. Examples include: high administrative overheads (on average 50% of JU staff are administrative compared with 22% in the rather larger European agencies²¹, also set up as EU bodies), procedures for staff recruitment and procurement, financial regulation limits, sharing of services between JUs and governing boards that tend to be involved in administrative decisions rather than focused on strategic issues.

The optimal balance between the legal framework and efficiency of the JU may not have been reached because the limited size of the administrative structure (JU) needed to support the JTI as a means of implementing the PPP was not sufficiently taken into consideration. Under the next Framework Programme, the Commission envisages a number of measures to move closer to the optimal balance by amending the legal basis for future JUs, including granting derogations to the Horizon 2020 rules on participation and dissemination specifically for Article 187 initiatives and proposed simplification measures under Horizon 2020.

- **The setting up costs of the JUs.**

This phase was a resource-intensive experience for all parties involved in terms of: building, recruitment, service level agreements (SLAs) and transfer of the initial project portfolio from the Commission to the JUs. Moreover, the average time taken for the JUs to reach financial autonomy was 725 days²².

The analysis concludes that, while the cost of setting up the current JUs was a one-off cost, the costs of renewing their mandates should be covered by the efforts to set up Horizon 2020 and the cost of their current supervision. The CBA also assumes that, if a new JU is set up under Horizon 2020, the cost will be a one-off expense again and this could be estimated at about € 500 000 a year. In the light of the actual proposals for JUs under Horizon 2020, the set up cost will be lower, through learning from the experience under FP7.

- **The cost of monitoring and supervising** by the Commission services, including the programming of the JUs.

Supervising the JUs has been resource-intensive for the Commission. In particular, the effort involved in supporting the work of the governing boards was underestimated.

In sum, use of a JU to implement a JTI of the current size is *roughly cost neutral* for the Commission, both in terms of the JU's setting up, operation and winding down procedure and in terms of managing any FP7 legacy, *as long as 50% of the administrative running costs are being covered by the private partner*. To secure cost-neutrality for Horizon 2020, the size of

²¹ Figure based on the European Court of Auditors' own analysis covering 22 agencies for the years 2008, 2009, and 2010.

²² Implementation of the JTI programme started before full autonomy was granted to any of the JUs. In the interim period, special task forces operated within DG RTD and DG INFSO (currently DG CONNECT) in collaboration with the interim executive directors to publish calls, recruit staff, evaluate the first calls, sign grant agreements, etc.

the JTI programmes has to increase, cost-reducing simplifications must be implemented and cost-increasing derogations from Horizon 2020 provisions avoided.

Conversely, the benefits of a JTI JU are non-monetary, e.g. shared decision-making with private partners and defragmentation of research and innovation environment in given sectors, which are key for European competitiveness. There may be monetary benefits from the JTI, such as leveraging additional funding for research and innovation, but these were addressed in the Impact Assessment on the JTIs.

2.8.3. Preparatory work for the second interim evaluation

The Council Regulations setting up the JTI JUs require two interim evaluations. The first was performed on time and covered in the 2011 report. The second is due by 31 December 2013 and will, in particular, assess the implementation of previous expert recommendations on a number of issues. These are: the need to reinforce coordination and complementarity with FP7 and national programmes and funds; the need to improve communication and to enhance the visibility of JTI actions aimed at the public and at international level; the need for a coherent system of data collection and performance monitoring through a set of key performance indicators.

In 2012, JTI JUs (Clean Sky, FCH and IMI) jointly cooperated with Commission staff on preparatory work for the second interim evaluation. This concerned in particular the provision of data, statistics and information on programme operations and the inputs required to define consistent terms of reference. Their final reports on the second interim evaluation should be ready in autumn 2013.

ARTEMIS and ENIAC began the evaluation in late September 2012 and appointed six independent experts, coordinated by a panel chair and supported by a recorder, to evaluate the JTIs' relevance, effectiveness, efficiency and research quality. These evaluation criteria will also favour reflection on merging ARTEMIS and ENIAC. Initial conclusions were produced in early 2013 and the final report on the second interim evaluation is expected in November 2013.

3. CLEAN SKY JOINT UNDERTAKING

3.1. Introduction to the Clean Sky Joint Undertaking (CS JU)

The Clean Sky Joint Undertaking (hereinafter referred to as "CS JU") has been established by Council Regulation (EC) 71/2008 of 20 December 2007 as a public-private partnership between the aeronautic industry and the European Union for a period up to 31 December 2017. In its set-up, the European Union is represented by the European Commission and the Aeronautics industry is represented by the leaders of the Integrated Technology Demonstrators (ITDs)²³ and their associates. The ITD leaders are twelve industrial organisations that jointly committed to perform, complete and exploit the Clean Sky programme²⁴. Each leads or co-leads a specific Integrated Technology Demonstrator. The associate members are seventy-four private or public organisations representing industry, academia, SMEs and research centres, selected through a transparent and fair process as permanent members of the Clean Sky JU. They committed to perform and complete certain essential work packages in one or more ITDs for the duration of Clean Sky.

The main objective of Clean Sky JU is to develop environmental technologies impacting all flying segments of commercial aviation in order to contribute to the ACARE targets²⁵ for reduction of emissions and noise in air transport in Europe²⁶, thus contributing to improving the air transport system worldwide. This objective is achieved through coordination of research activities that pool resources from the public and private sectors, and that are carried out by the main aeronautical stakeholders (ITD leaders and associates) directly and by partners selected through open and competitive calls for proposals.

The CS JU is built upon six different technical areas called Integrated Technology Demonstrators (ITD), which develop innovative technologies covering all segments of commercial aviation. Each ITD is led by two founding members and operates through a matrix structure. The ITDs are listed below:

Smart Fixed Wing Aircraft (SFWA) led by Airbus and SAAB – focused on active wing technologies that sense the airflow and adapt their shape as required, as well as on new aircraft configurations to optimally incorporate these novel wing concepts;

Green Regional Aircraft (GRA) led by Alenia Aeronautica and EADS-CASA – dealing with low-weight configurations and technologies using smart structures, low-noise configurations;

Green Rotorcraft (GRC) led by Agusta-Westland and Eurocopter – focused on innovative rotor blades and engine installation for noise reduction, lower airframe

²³ According to Article 1 of the Clean Sky's Statutes, the *Integrated Technology Demonstrators (ITDs)* refer to the six technological areas covered by the Clean Sky Joint Undertaking.

²⁴ The founding ITD leaders of the Clean Sky JU are: Agusta-Westland, Airbus, Alenia, Dassault Aviation, EADS-CASA, Eurocopter, Fraunhofer Gesellschaft, Liebherr, Rolls-Royce, SAAB, Safran and Thales.

²⁵ In 2001, the *Advisory Council for Aeronautical Research in Europe (ACARE)* set the following targets for the aeronautics industry by 2020: 50% reductions of the fuel consumption and the carbon dioxide emissions, 80% reduction of the nitrous oxides emissions, 50% reduction of the perceived external noise and improvement of the environmental impact of the lifecycle of aircraft and related products.

²⁶ Europe in this context refers to the EU Member States and the countries associated to the Seventh Framework Programme of the European Union (2007-2013), i.e. Switzerland, Israel, Norway, Iceland, Liechtenstein, Turkey, Croatia, the Former Yugoslav Republic of Macedonia, Serbia, Albania, Montenegro, Bosnia and Herzegovina and Faroe Islands (December 2010).

drag, diesel engine and electrical systems for fuel consumption reduction and environment-friendly flight paths;

Sustainable and Green Engines (SAGE) led by Rolls-Royce and Safran – integrating technologies for low noise and lightweight low pressure systems, high efficiency, low nitrous oxides and low weight core;

Systems for Green Operations (SGO) led by Thales Avionics and Liebherr Aerospace – coping with all-electric aircraft equipment and systems architectures, thermal management, capabilities for green trajectories and improved ground operations;

Eco-Design (ED) led by Dassault Aviation and Fraunhofer Gesellschaft – addressing the full lifecycle of materials and components, focusing on issues such as optimal use of raw materials, decreasing the use of non-renewable materials, natural resources, energy, emission of noxious effluents and recycling. Multiple links for coherence and data exchange is ensured between the different ITDs.

Complementing these six ITDs, the Technology Evaluator (TE) is a dedicated evaluation platform cross-positioned within the CS project structure. The TE is co-led by DLR and Thales and includes major European aeronautical research organisations as members. Its objective is to assess the environmental impact of the technologies developed by the ITDs and to assess the result of the overall Clean Sky's project output.

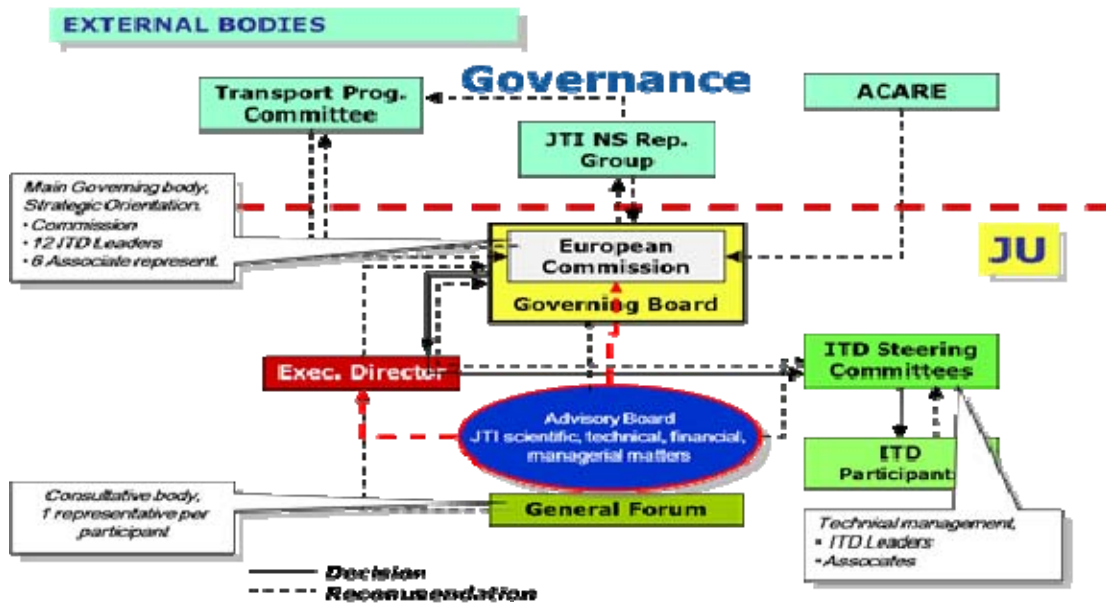
3.1.1. Budget

The total budget of the CS JU is equally divided between the EU and its private members and is set to a maximum of € 1.6 billion. The EU contribution is maximum € 800 million, paid from the budget appropriation allocated to the theme "Transport" of the Specific Programme "Cooperation" under the Seventh Framework Programme (FP7) of the European Union (2007-2013)²⁷, while the industry should commit the resources at least equal to the EU contribution.

3.1.2. Governing structure

The CS JU governance is composed of three bodies: the Governing Board, the Executive Director and the ITD Steering Committees. It is also supported by three advisory groups: the Scientific and Technological Advisory Board (STAB), the National States Representatives Group (NSRG) and the General Forum.

²⁷ Decision 1982/2006/EC of the European Parliament and of the Council of 18 December 2006 concerning the Seventh Framework Programme of the European Community for research, technological development and demonstration activities (2007-2013), OJ L 412, 30.12.2006, p. 1.



The **Governing Board** is composed of the 12 ITDs leaders (the members), the European Union represented by the Commission and 6 Associates.

The **Executive Director** is the legal representative and the chief executive for the day-to-day management of the CS JU in accordance with the decisions of the Governing Board in line with Article 6 of the CS Statutes.

Two advisory bodies provide further input, recommendations and play a coordination role:

The **National States Representative Group (NSRG)** is the focal point on Clean Sky at the national level; it operates as a network of national representatives of each EU Member State and of each other country associated to the Framework Programme. The NSRG ensures the organisation and the outcome of the calls are transparent and fair, assists with the organisation of Info days and dedicated technical workshops, reviews information and provides opinions on the programme progress to the Clean Sky JU, contributes to the update of the strategic orientation of the programme and the involvement of SMEs in Clean Sky.

The **Scientific and Technological Advisory Board (STAB)** is composed of high level scientists and engineers and aims at advising the JU on matters related to scientific and technological analysis, environmental effects forecast, and societal aspects and economics.

The **General Forum** is a statutory assembly open to all members and partners of the Clean Sky programme.

3.2. Overall progress since the establishment of clean sky jti/ju

3.2.1. Programme implementation overall

Clean Sky JU gained operational capacity to implement its budget on 16 November 2009. Until that point, the European Commission was responsible for the establishment and the initial operations of the Clean Sky JU in collaboration with the other private founding members and in accordance with Article 16 of the Council Regulation establishing the Clean Sky JU. During the first years of independent functioning the CS JU achieved progress in both increasing its operational capacity and in running the Clean Sky operations.

Since its establishment, Clean Sky supports research activities carried out by the members of Clean Sky and by partners selected following open and competitive Calls for Proposals, independent evaluations and negotiations leading to the conclusion of grant agreements with partners.

Built upon 6 different Integrated Technology Demonstrators (ITDs), Clean Sky JU ensures the continuous progress in all target technologies. From the beginning of the programme, each ITD has developed the work plan by identifying and selecting the most promising technologies to achieve the objectives based on the ACARE targets for 2020, and to design the associated technology demonstrators to be tested in the second part of the programme. Currently, the development in each ITD is going according to the plans. In 2011, a change in scope of the first engine demonstrator related to the Open Rotor configuration was introduced and the programme has been revised and adapted to this change accordingly, including the impact on the planned flight activity which is part of SFWA ITD. In March 2012, a revised Development Plan was adopted by the Governing Board in order to update the strategic targets of the JU.

Concerning the Technology Evaluator, created in 2008 with the objective to assess the environmental impacts and benefits of the overall Clean Sky's project output, the general requirements were defined in 2009. They were reviewed and detailed in 2011, paying particular attention to the first assessment cycle and to the needs of the trade-off studies. In March 2012, the Technology Evaluator completed its first full-scale simulation and performed the evaluation of Clean Sky's progress at all three assessment levels (Aircraft, Airport, and Air Transport System). Preliminary results show that with research that has been started within the programme, the objectives of Clean Sky will be achieved. The programme has a potential to reduce CO₂ and NO_x emission by 20-40% depending on the aircraft type and bring significant noise reduction.

At the end of 2012, Clean Sky, according to its Regulation and Statutes defining 25% of the EU funding to be allocated to partners selected via Calls for Proposals, has launched 13 calls with the total of 170 M€ EU funding. The topics in each call are defined by each ITD. The calls serve the dual purpose of widening the participation in Clean Sky to further organisations and to identify R&D performers who will participate in the mainstream activities of Clean Sky.

As aircraft fuel economy is also influenced by a flight trajectory management strategy, CS JU has established links with the SESAR Joint Undertaking which investigates Air Traffic Management (ATM) technologies in line with the "Single Sky" initiative of the European Commission. These links are established via the Technology Evaluator, as well as via the SGO ITD that develops the avionics equipment interfacing with ATM, and via management meetings involving the relevant staff members of the two JUs (i.e. for Clean Sky, the SGO Project Officer, up to the two Executive Directors. As mentioned above, a joint review / audit was performed in a leading company of both JUs, in order to check the quality and the comprehensiveness of the interface between the two programmes in the relevant work packages.

In the 4th Quarter of 2010 a first interim assessment of the Clean Sky JU was performed by a Panel of six members designated by the European Commission. The report was delivered to the European Commission and the JU in January 2011. A second interim evaluation is to be completed in the autumn of 2013 and the panel has started its activities in the spring 2013.

3.2.2. *Grant agreements with members*

The majority of the work inside the Clean Sky JU is carried out by its industrial members under the form of grant agreements with named beneficiaries. According to Article 13 (2) (a) of Council Regulation (EC) 71/2008 setting up the Joint Undertaking, an amount of up to € 400 million shall be allocated to the ITD leaders and up to € 200 million – to the associate members. In turn, the ITD leaders and associates engage to contribute resources at least matching the EU contribution.

The Clean Sky JU signed the first seven grant agreements with its members (referred to as "GAM") in 2008: - one for each of the six ITDs, - a supplementary one for the activities of the Technology Evaluator.

These grant agreements will remain in force for the whole duration of Clean Sky, until 31 December 2017. Each year, an amendment is signed in order to update the annual description of work with the corresponding JU financial contribution. No new named beneficiaries joined the CS JU in 2012. The commitments amounted to €17 M€ in 2008; €70.6 M in 2009, €75.7 M in 2010, €103.16 M in 2011 and 111.94 M 2012.

3.2.3. *Description of the 'Integrated Technology Demonstrators' (ITD) activities*

The detailed progress of activities of each ITD in 2012 is presented in Annexe I.

3.3. **Implementation of calls for proposals (CFPs) overall**

At least 25 % of the EU funding to the CS JU must be allocated to Partners selected via Calls for Proposals. Topics are defined by each ITD. They serve the dual purpose of widening the participation to Clean Sky to other organisations and to identify R&D performers called in to participate to the mainstream activities of Clean Sky. Partners selected via Calls for Proposals are being funded in compliance with the upper funding limits set in the Rules of Participation of the 7th Framework Programme.

Activities to be carried out by Partners selected via CFPs are an essential part of the core R&D activities of Clean Sky and have to lock in with the activities carried out by CS JU members other than the European Community.

What is peculiar for Clean Sky Calls for Proposals is that the content of the activities is much more focused, i.e. they are topics and not research themes, with limited duration and specific targeted results expected (at higher Technology Readiness Levels). The topics are prepared by the Topic managers of the ITDs and checked by the Project Officers at the Clean Sky Joint Undertaking (JU).

Another difference from collaborative research calls is that the budget is defined by the topic value, and not by the maximum funding: this to allow a wider participation from all types of entities, independently from the actual eligibility for funding. Furthermore, a single entity can present proposals, with no need for a consortium to be created. Differently from Collaborative research, there is always one winner per topic, provided suitable proposals are submitted and positively evaluated.

Clean Sky Calls for Proposals results, from Call 1 to Call 13, at a glance:

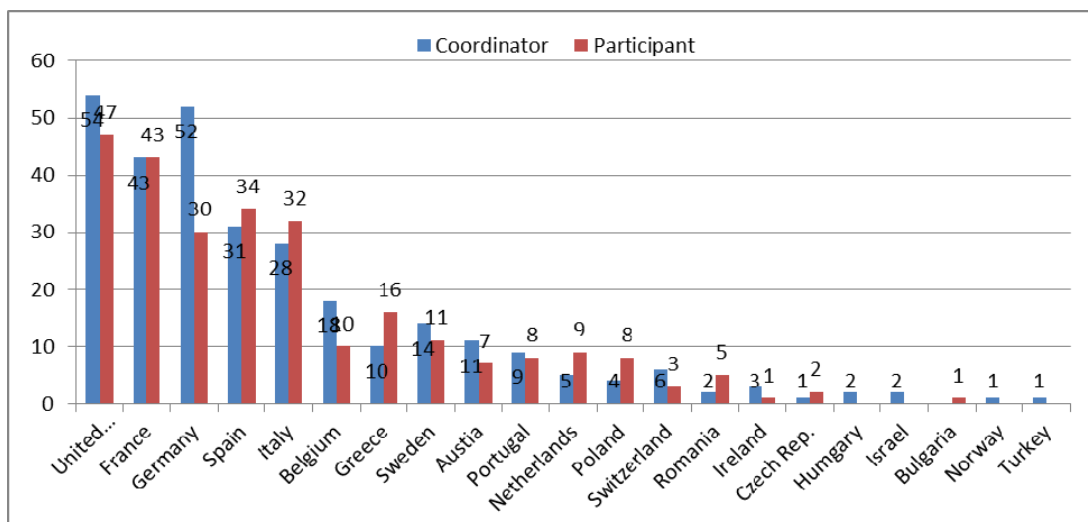
- ***Total cost: 260 M€***
- ***Total funding: 196.8 M€***
- ***Total running projects: 347***

- *Average funding rate: 65.3 %*
- *Number of topics successfully applied to: 417*
- *Number of winning participations: 808*
- *Average number of participants by topic: 1.938*
- *Average budget by project: 408 000€*
- *Number of partners: 462 (NB: there are less partners than “successful participations”, because of entities being selected for funding more than once, in several topics along time)*
- *Average SME share: 33.7 % in funding*
- *Average Academia share: 18 % in funding.*

In addition to that, the proposals received at deadline in the 13 calls launched so far are 1210. Considering the geographic distribution of successful organisations since the setting up of Clean Sky, the overall picture is presented below.

The best players, both in terms of coordinators and participants, are the UK (with a total of 101 participations overall), France (with a total of 86 participations) and Germany (82). Germany furthermore, shows high performance in coordinating projects, ranking 52 only beyond UK that coordinates 54 projects.

Figure 1: Overall geographic distribution of successful organisations (by coordinator and participant)



3.4. Outline of the main activities and achievements during 2012

3.4.1. Running of the JU

3.4.1.1. HR Issues

Clean Sky JU is composed of 18 temporary agents and 6 contract agents (24 staff). Due to the rejection of an increase of posts in its MSPP 2012-2014 and 2013-2015, the JU could not enlarge in staff numbers. However, in order to face the expected increase of workload, 3 interim staff have been hired.

The hiring concerned the functions:

1 Administrative Assistant

2 Project Support Officers to help the Project Officers in the management of projects and the calls for proposals.

In 2012 the implementation of research activities implied for a team of 7 Project officers, 2.5 Financial Officers, 1 Legal Officer also the processing of a greater number of administrative tasks, these were:

Negotiated GAPs:

- Amendments of grant agreements: GAPS= 45, GAMs = 9
- Payments to Partners: 142
- Payments to Members: 14 (covering individual payments to 210 beneficiaries)

In addition to that, the JU administrates all of its running costs internally, e.g. salaries, mission costs, utility invoices, experts reimbursements (over 250 individual payments),

In 2012, 16 of the Temporary Agents posts available from the *initial Governing Board* decision were filled for the full year. 2 Temporary Agents (Legal officer and Accounting officer) left and were recruited within the year. 4 of the 6 contract agents' positions were also filled for the entire year.

In June, the CA FG IV (Ex-Post Audit Officer) left and the recruitment was started. The successful applicant started his contract on 15/1/13. In addition, in September one CA FG II (secretary) left and the recruitment process initiated. This was still on-going at the end of the year as the JU received over 500 applications for the position.

In August, the Communication Officer (TA AD7) left and the recruitment of the successor was achieved in 2012; the selected candidate started on 1/2/2013.

Clean Sky JU has also hired 2 trainees, one as support for the Communication officer and one for the secretariat from September, when the related posts were not occupied and the recruitment not completed yet.

It is expected that the future workload will keep increasing. This entails in particular an increasing of tasks as highlighted below:

- (1) Number of grant agreements to be established for Partners:
 - Calls 1 to 13: 88 GAPs are still in negotiation (currently dealt with by 6 Project Officers who already have on average 50 on-going GAPs each to manage
 - Call 14: 54 projects are foreseen to be negotiated
- (2) Total number of interim or final reports from Partners to be treated:
 - 508 for the currently existing GAPs - this number is growing as more GAPs are signed.
 - 428 for grants currently in negotiation or for still on-going calls. The number is based on 171 topics to be launched at 2.5 periods per GAP.
 - Total reports foreseen: 936
- (3) Number of grant agreements to be amended and monitored for Members (GAMs):
 - 4 annual and 3 multiannual amendments (annexes 1A and 1B), which entail a total number of 210 beneficiaries
 - 7 annual reports for a total number of 210 beneficiaries.

Since no long term solution is reachable under the current situation, the JU has opted for hiring of interim staff as a temporary mitigation action. Due to the lack of continuity and the inefficiency caused by frequent changes of staff, the core business processes dealing with the operational and financial grant management face important risks of underperformance.

In parallel, Clean Sky has done considerable efforts in lean management. These efforts have been focused mainly in optimising IT costs by sharing the IT infrastructure maintenance and support costs (e.g. common IT helpdesk and support contract) and the use of common facilities such as meeting rooms and mail collection with 4 other JUs residing in the same building.

A lean management of Staff has also resulted in a saving of 4.5 posts, which would normally be covered individually in a similar structure. This has been achieved as follow:

- The most crucial HR processes (like recruitment procedures, departures of staff, performance evaluation and the entire administration of the existing team of more than 24 people) have been centralised under the responsibility of the Assistant to the Executive Director. This has avoided hiring a dedicated staff member in the position of HR Assistant.
- The pool of 3 secretaries has been reduced to 2 staff by allocating the tasks relating to calls support and administration to one former secretary.
- The Internal Auditor is performing a coordination and management role for the increasingly heavy burden of the ex-post audit process. This function is combined with the role of quality management officer for the JU too.

3.4.1.2. Legal Issues

A revision of the GAMs model core Grant Agreement and Annex II was carried out since the Commission has decided to commit the remainder of the funds dedicated to the Specific ‘Cooperation’ Programme²⁸ of the Decision No 1982/2006/EC on FP7²⁹. As a consequence of the multi-annuality and on the request of some ITDs, the Grant Agreements for Members (‘GAMs’), concluded on a yearly basis, had to be revised on the basis of the model of FP7 grant agreement. The revisions concerned the reference to programme duration, reporting periods and payment modalities (pre-financing, interim and final payments).

This global commitment allows the CS JU to set-up multi-annual GAMs, either on a two, three or four-year basis, as from 2013 to 2017.

The JU left open the possibility of either scheme (multi-annual GAM annual) to each ITD. The model Grant Agreement has been adapted in such a way as to accommodate any solution. The revised models were approved by Decision of the GB on 13 December 2012 (GB-2012-12-13-12 doc7a Core GA-Annex II).

The Executive Director adopted a decision (no. 69) on the funding of third parties established outside the EU and FP7 Associated countries (ED Decision n° 69). The JU had to assess some requests and, after consulting DG RTD, decided for legal certainty and equal treatment of beneficiaries to establish a procedure to assess such cases.

²⁸ http://eur-lex.europa.eu/LexUriServ/site/en/oj/2006/l_400/l_40020061230en00860242.pdf

²⁹ http://eur-lex.europa.eu/LexUriServ/site/en/oj/2006/l_412/l_41220061230en00010041.pdf

The GB approved a transitional mandate to the Executive Director to ensure overall continuity of the JTI activity and the coordination of the preparatory phase of Clean Sky 2 Programme (CS-GB-2012-12-13 doc9 Mandate_ED_CS2)

3.4.1.3. ICT Issues

The year 2012 was one of on-going development in the area of Information and Communications Technology (ICT) in Clean Sky. In addition to the regular support, software updates and refinements, some notable advances were made.

Clean Sky joined several more framework contracts of the European Commission for ICT hardware and service procurement. This provides more options and flexibility to meet future requirements.

An agreement was concluded in January 2012 with DG RTD to use their ICT facilities to access essential systems for key Clean Sky staff in the event of a disaster situation impacting the Clean Sky ICT facilities. These facilities were successfully tested in June 2012. This forms an important part of the business continuity options from an IT perspective for the CS JU.

A lot of progress was made in further integration with the relevant IT systems of the European Commission. System testing of access to the CORDA data warehouse was completed in 2012 ready for implementation in January 2013.

A new IT system for managing the Grants for Members was developed and implemented (GMT). This required the setup of a new server to host the application and security measures and certification for the on-line user interface.

Further measures were implemented to improve the safekeeping of data. On the server side, a second tape drive was purchased and installed to improve the speed and robustness of the tape backups. On the client side, all desktops and laptops with upgraded with software to backup and synchronise local data with the server to protect against PC hardware failure or accidental deletion.

The Wi-Fi network was improved in several ways. A large project was started to redesign the document file structure and the new architecture was largely in place and more than two-thirds of the documents migrated by the end of 2012.

A pilot for the uploading of electronic versions of financial certificates (CFS) and reports (Form C) from partner grant beneficiaries was successfully completed. In November 2012 automatic generation of invoices was implemented in the contract management system for partner grant beneficiaries (CPM / PDM). This is in turn integrated with the budgetary system (ABAC) in which those invoices are now automatically created at data entry level in the workflow.

Clean Sky staff has regularly participated in the discussions concerning the new IT systems to be implemented for the CfP process in Horizon2020. Clean Sky requirements have been integrated and the first of those systems (SEP) has already been tested in 2012 and is now in use for the submission of proposals in the 14th Clean Sky call for proposals.

Concerning management, a more formal structure has been put in place for the governance of the ICT facilities shared between the JTIs. A road map has been developed to plan the evolution of the ICT facilities over the coming years.

3.4.1.4. Procurements and contract signed in the year 2012 (see table below)

Contractor	Selection procedure	Document Reference	Subject	Signature Date	Duration	Amount >5000 Euro
Start People/CSJU	Framework Contract IMI JU 2011.SC.137	Purchase Order n°25	Interim PO Assistant Exceptional activities long term	24/01/2012	01/03/2012-31/08/2012	40.473
Start People/CSJU	Framework Contract IMI JU 2011.SC.137	Purchase Order n°26	Interim Communication Assistant	24/01/2012	4h/day for 4 weeks 30/01/2012-31/03/2012	5.622,4
PriceWaterHouseCoopers EU Services EESV	Framework Contract association to BUDG FC	No: 30-CE-0227323–Lot1; Specific Contract No: 01_01_29	Accounting advice and assistance to the contracting authority (2011 final accounts)	07/05/2012	20 days (from 07/05/12)	Max 25124
PriceWaterHouseCoopers EU Services EESV	Framework Contract association to BUDG FC	No: 30-CE-0227323–Lot1; Specific Contract No: 01_01_29	Accounting advice and assistance to the contracting authority (2011 final accounts)	13/06/2012	8.5 days (from 13/06/12)	11.492
Framework Contract IMI JU 2011.SC.137	Framework Contract IMI JU 2011.SC.137	Purchase Order n°65	Interim Legal Officer	11/05/2012	01/08/2012-31/10/2012	21.922
Start People/CSJU	Framework Contract IMI JU 2011.SC.137	Purchase Order	Interim PO Assistant Exceptional	11/05/2012	01/08/2012-21/12/2012	33.726

		n°86	activities long term			
Start People/CSJU	Framework Contract IMI JU 2011.SC.137	Framework Contract IMI JU 2011.SC.137 Purchase Order n°100	Interim PO Assistant Exceptional activities long term	30/05/2012	04/06/2012-31/08/2012	48.902
Start People/CSJU	Framework Contract IMI JU 2011.SC.137	Purchase Order n°145	Interim PO Assistant Exceptional activities long term	07/08/2012	01/08/2012-30/09/2012	13.490
Start People/CSJU	Framework Contract IMI JU 2011.SC.137	Purchase Order n°147	Financial Assistant Exceptional activities long term	03/08/2012	20/08/2012-21/12/2012	23.719
Start People/CSJU	Framework Contract IMI JU 2011.SC.137	Purchase Order n°148bis	Interim PO Assistant Exceptional activities long term	01/09/2012	01/10/2012-21/12/2012	20 235.6
JK Events/CSJU	Framework Contract SCIC-D1-C.C 001/2008	Purchase Order No. 164	General Forum 2012	07/09/2012	until 27/09/2012	33.341,3
EFE Group/CSJU	Framework Contract EC n°HR/H3/PR/2011/012 lot1/2	Purchase Order No. 236	Team Building 2012 Trainings	21/11/2012	2 days	5.855
Hotel Thon/CSJU	Low Value Negotiated Procedure - art. 91 FR, 126 IR	Clean Sky 2012/10 Service contract	CS2 Consultation event	5/12/2012	3 days	26.968
FMD Consulting	Low Value Negotiated Procedure - art.	Contract Clean Sky	Ex-post audit service	17/12/2012	8 days	5 000

SPRL/CSJU	91 FR, 126 IR	2012	contact			
Nuxos Publishing Technologies/CSJU	Low Value Negotiated Procedure - art. 91 FR, 126 e) IR	Contract Clean Sky 2012-Extension of Contract 2011/05	CSJU "GMT" data base development	17/12 /2012	Until 30/06/2013	48.000

It has to be noted that the new external service provider (e.g. the Interim Agency Start People) alone account for over € 186 000 in 2012.

3.4.2. *Second Interim Evaluation*

The Council Regulation of Clean Sky JTI Joint Undertaking stipulates that the Commission shall conduct a second interim evaluation by the 31 December 2013 with the assistance of a panel of independent experts, on the basis of the terms of reference established after consultation of the JU. During 2012 Clean Sky has cooperated with the services of the Commission and the FCH and IMI JTIs JUs to start the preparatory work. This concerned in particular the identifications of adequate independent experts and inputs provided for the definition of the terms of reference.

3.4.3. *Achievements at Programme level*

2012 was the third full year of independent functioning of the Joint Undertaking. The CS JU achieved progress in both increasing its operational capacity and in running the operations.

Clean Sky maintained close links with the SESAR Joint Undertaking, which investigates air traffic management technologies in line with the Single European Sky initiative, with dedicated meetings at different levels.

A significant change occurred in 2012: a revised Development Plan was adopted by the Governing Board in March 2012. This document updates, once a year, the strategic targets of the JU: environmental forecasts, key technologies, demonstrators contents and schedule.

The main evolution concerned the SAGE ITD, where a new project was created, SAGE 6, dedicated to NO_x emissions decrease. To fund this project, one of the two Open Rotor projects (SAGE 1) was reduced in funding and in scope, while the other (SAGE 2) was fully confirmed and committed up to the engine ground test.

3.4.3.1. Key milestones

- Publication and evaluation of the 3 CS JU's calls for proposals in 2012 as planned, with the related evaluations in the same year;
- Amendment to the model Grant Agreement for Partners (GAP) and the model Grant Agreement for Members (GAM);
- Internal processes monitoring;

- More focussed involvement of the Scientific and Technological Advisory(STAB);
- Improved interaction with the National Sate Representatives Group (NSRG)
- Implementation of Internal Audit Plan and Ex-Post Audit Strategy;
- Implementation of the Communication and Dissemination Strategy.

3.4.3.2. ITDs Examples of achievements

At the level of ITDs, a number of projects delivered important final results. These are:

- In the GRA ITD – Structural Health Monitoring using Magnetostrictive Sensors.

Within GRA ITD a project titled “Induction Heating and Health Monitoring Solutions for Smart Aircraft Maintenance using Adapted Composite Patches–INDUCER” (255770) has been implemented by GMI, TWI and NTUA, Topic Manager being Alenia Aeronautica. Apart from innovative heating principle applied (namely induction heating), the project was focusing on the development of “sensing arrays” using magnetostrictive sensors for remote (non-contact) strain sensing (health monitoring) of bonded composite repairs. Extensive numerical simulation of coupled strain / magnetic field has been performed, following by the development / adaptation of full chain of interrogation equipment and acquisition / processing software. The project finished with a successful lab scale demonstration of developed methodology for strain mapping of composite repairs (smart repairs)

- In the SFWA ITD – Inductive Curing of Bonded Composite Repairs.

“Induction based Curing Tool for Optimized heating of composite Repairs – INDUCTOR” (270574) has been recently finalized by GMI and NTUA, having Fraunhofer IFAM playing the role of the Topic Manager.

INDUCTOR led to the development of a fully operational induction heating equipment, including control and Human Machine Interface software, capable of curing composite repairs at a faster rate of curing, achieving better temperature homogeneity and radically reducing power consumption. The developed equipment is accompanied by a set of coils, optimized for the application of composite repairs. Range of application include composite to composite, composite to metal as well as thermoplastic repairs.

3.4.3.3. Progress in the implementation of the Strategic Research Agenda

The targets set at the beginning of the Clean Sky programme, were the subject of a re-assessment of validity and consistency with respect to evolution of the outside scenario and the actual progress of the activities related to the technology maturation and implementation in the planned demonstrators.

The original content of Clean Sky as defined in the proposal was compliant with the requirements of the Strategic Research Agenda (SRA) with respect to the Greening of Air Transport, identifying the technical domains where new technologies are worth exploring and developing to the level of maturity needed for innovating future aircraft.

A re-assessment of actual progress and validity of assumptions was performed, resulting in an updated work plan (Development Plan) and updated forecast of achievable environmental benefits at the end of the programme. To this scope the

role of Technology Evaluator and the dialogue with all ITDs (especially the “vehicle” one with their Conceptual Aircraft Definition) was essential, as provided by the First Internal Assessment performed and published in early 2012.

3.4.3.4. Implementation of calls for proposals (cfps) in 2012

According to Article 13 (2) (b) of the same regulation, the remaining 25% of the EU funding to the Clean Sky JU (amounting to at least € 200 million) are allocated to partners selected via open and competitive calls for proposals.

According to the Clean Sky's Rules for Participation and Rules for Submission of Proposals and the Related Evaluation, Selection and Award procedures any legal entity established in an EU Member State or in a country associated to the FP7 may participate in a CS project. A proposal may involve one or several participants. Examples of potential participants are research institutes, universities, industry, including SMEs, and end-users.

3.4.3.5. Topic definition

The call topics are proposed by each ITD Steering Committee and reviewed by the CS JU Executive Office and by the European Commission. The calls are broadly published by all suitable channels, including the Clean Sky's website. According to the requirements of the ITD and the work package, a single stage submission and evaluation process is followed. Once a proposal is submitted, eligibility check and independent evaluations take place.

3.4.3.6. The evaluation of proposals

Evaluation is performed on the basis of the following principles:

- Excellence of projects selected;
- Transparency of decisions;
- Fairness and impartiality of evaluations;
- Confidentiality of all information;
- Efficiency and speed of evaluation;
- Compliance with ethical and security principles.

The evaluation of proposals is carried out by a panel of experts comprising two internal experts from the ITD responsible for the call and two external experts in an open and transparent competitive procedure. Topic managers representing the ITD leaders, as well as Clean Sky staff members, also take part in the evaluation process. The presence of independent observers aims to verify and guarantee that the above-mentioned rules and principles are followed.

To ensure a high degree of transparency, the CS JU invited two different observers in 2012, one for the Calls 11 and 12 (Fulvia Quagliotti) and one new call 13 (Arrigo Mezzano).

Each observer had full access to all stages of the evaluation and to consensus meetings. Their Evaluation Reports are available on the website (<http://www.cleansky.eu>).

The evaluations are performed against six pre-determined evaluation criteria. For each criterion, a score is given on a scale from 0 (proposal fails to address the criterion) to 5 (proposal addresses all aspects of the criterion). All factors have equal weight. For a proposal to be considered for funding, it needs to pass the following

thresholds: a minimum 3/5 for each of the 6 criteria and a minimum 20/30 total score.

Nº	Evaluation criterion	Score	Weight	Threshold
1.	Technical excellence	0 to 5	1	3/5
2.	Innovative character	0 to 5	1	3/5
3.	Compliance with the call for proposals specification and timetable (relevance),	0 to 5	1	3/5
4.	Adequacy and quality of respondent's resources, management and implementation capabilities and track record	0 to 5	1	3/5
5.	Appropriateness and efficient allocation of the resources to be committed (budget, staff, equipment)	0 to 5	1	3/5
6.	Contribution to European competitiveness	0 to 5	1	3/5
	Total score:			20/30

The evaluation process consists of several steps:

1. Briefings of the experts to explain the process and the rules for evaluation;
2. Eligibility Review Committee to ensure a coherent legal interpretation of all cases and equal treatment of participants;
3. Individual remote evaluation, the results of which are included in an individual evaluation report;
4. Consensus meeting for each proposal, the results of which are included in a consensus evaluation report;
5. Topic meeting to examine and compare the various consensus reports, the results of which are included in an evaluation summary report. A topic report is also established with a list of ranked proposals above thresholds, a list of proposals failing one or more thresholds and a list of ineligible proposals, if any.

If the proposal passes the thresholds and is selected for funding, it enters into the next phase – the negotiation. The process is concluded by the signature of a contract, called Grant Agreement with Partners (referred to as "GAP").

3.4.3.7. Calls specificities

It is important to note that the calls for proposals launched by the Clean Sky JU differ from FP7 collaborative research calls and calls launched by the other JTI JUs. The content of the activities is much more focused, i.e. there are topics, rather than research themes, with a limited duration and specific targeted results expected at higher technology readiness levels.

The calls supplement the technical competences of the Clean Sky's members by performing highly specific activities, which, on the other hand, have to "slot in" with the overall technical work plan of the CS JU. For this reason, only one contract is awarded for each of the topics that are published, and compliance with the technical

description is imperative. However, due to the very specific nature, it is possible to participate in a call as a single entity and not in a consortium, as allowed by the Clean Sky's Rules for Submission of Proposals.

Another difference from collaborative research calls is that the budget is defined by the topic value, and not by the maximum funding, which allows a wider participation from all types of entities, independently from the actual eligibility for funding.

Since Call 5 a dedicated Negotiation Kick-off meeting involving the successful organisations of given topics and the related topic managers is held by the JU about 4 week after evaluation, in order to expedite the dialogue between the future partner and the topic manager, and the preparation of all documents needed for the signature of the Grant Agreement for partners.

In 2012 the JU performed another "reporting and closure of GAPs meeting" with partners who had already been invited to report or who were about to report to the JU in line with the grant agreements signed with the JU. This meeting allowed reaching those partners who needed technical, administrative or legal assistance with the reporting for their grant agreements. As many actors are new to Clean Sky and some are even new to the FP7 research funding, this session was very useful for all concerned. This initiative will continue for all future calls.

3.4.3.8. Aggregated information 2012

A total of 158 topics were published in 2012, in the different calls as in the table above (Calls 11 to 13, namely 2012-01, 2012-02, 2012-03).

The average response in the year is confirmed at 2.2 proposals per topic, i.e. more than 344 proposals in total for 158 topics.

The success rate of topics in the average is again 79%, as in 2011, due either to no proposals submitted or to negative evaluation of proposals.

The JU has taken all available actions to improve participation, like more accurate description of some topics, wider dissemination, and a dedicated, early communication with potential applicants for the most critical topics. Several Info Days have been performed, with successful participation.

The eligibility has worsened compared with 2011, from 12 proposals to 26; however, in a few cases this is a consequence of the cancelation of the topic during the evaluation, and not of the actual ineligibility of the proposals themselves.

The monitoring of associates involvement in Calls has continued in 2012, with proper action to be taken at JU level in 2013. The rebalance will take place at global level, between member and CFP budget.

Table 1: Aggregated information on calls launched and managed in 2012

					PUBLICATION			OUTCOME			GA Ps
call #	ref	date publ	closing date	evaluation week	VA LUE	# topics	max funding	VA LUE	# topics	Req. Funding	#GA signed
11	2012-01	13-Jan-12	3-Apr-12	21-May-12	48,7	69	36,6	42,3	58	25,4	32
12	2012-02	11-Apr-12	10-Jul-12	17-Sep-12	43,1	42	32,4	37,7	36	24,2	
13	2012-03	5-Jul-12	18-Oct-12	26-Nov-12	39,8	47	29,9	29,1	30	14,6	
total					131,6	158	98,9	109,1	124	64,2	

3.4.3.9. Evaluations outcome

A total of 483 participants took part to the calls in 2012, 245 were selected for funding with an overall success rate of 51 %.

186 participants belong from SMEs and 94 of them were selected for funding with a promising success rate of 51%.

Projects selected for funding were globally 120 out of 214 proposals above the threshold. Over 90 projects were included in the reserve list.

Table 2: Aggregated information on participation by type and success rate in 2012

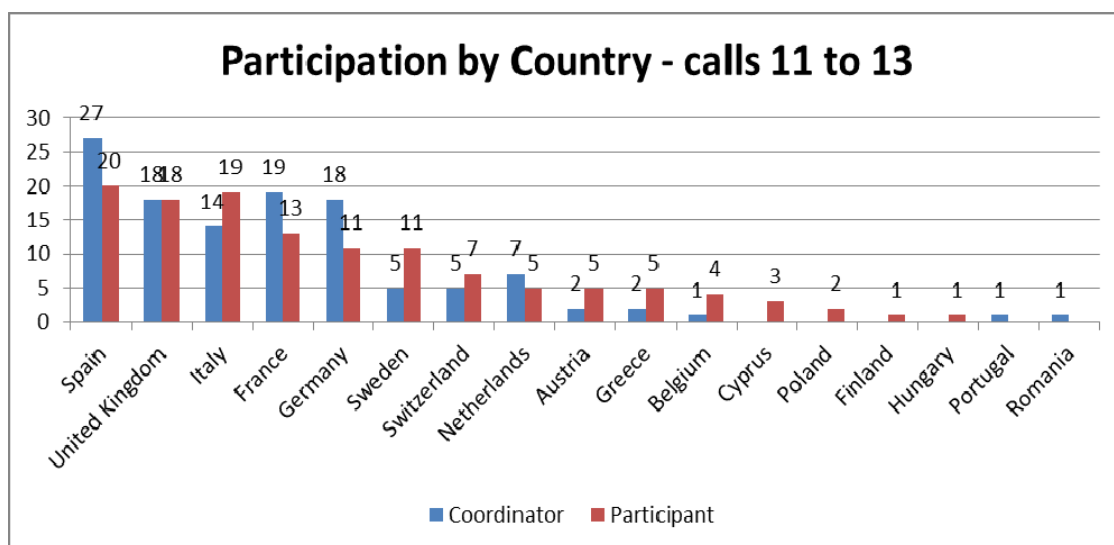
Type participant	Nr of participants in the Proposals	Nr of participants in the funded Projects	Participants success rate
Public Bodies			
Research organisations	98	53	54%
Higher or secondary education	107	54	50%
Private for profit (excl. education)	92	44	48%
SMEs	186	94	51%
Others			
Total	483	245	51%

Table 3: Aggregated information on results from evaluation in 2012

		SUBMITTED PROPOSALS			EVALUATION RESULTS				
call #	ref	# proposals	# eligible proposals	% of retained	Above threshold	Selected for funding	# redress	Reserve List	topic success rate
11	2012-01	159	142	89,31%	96	54	5	42	33,96%
12	2012-02	109	104	95,41%	69	36	1	33	30,28%
13	2012-03	76	71	93,42%	49	30	1	19	39,47%
	total	344	317	92,71%	214	120	7	94	35%

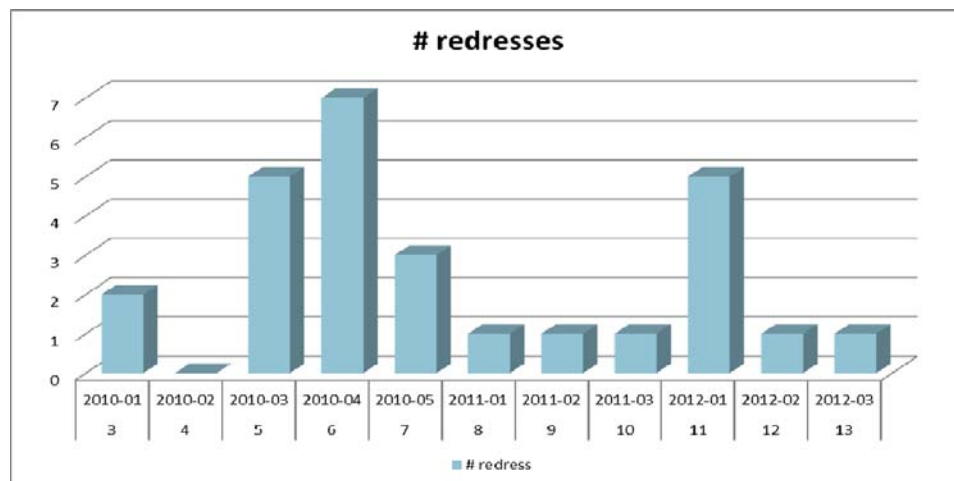
Concerning the geographic distribution of successful participants, the graph below shows the aggregated situation in calls 11 to 13.

Figure1: Successful participations by country in 2012



In 2012, the 245 organisations selected for funding belong from 17 Countries. The best players, both in terms of coordinators and participants, are Spain (47 participation with 27 coordinators) the UK (with 36 participations equally distributed in coordination and participation), Italy (with 33 participation, of which 14 as coordinator and 19 as partner) and France with an opposite situation compared to Italy (33 total with 19 coordinators and 13 partners). Participants from EU-12 are from Cyprus, Poland, Hungary and Romania. Switzerland is the only Associated Country which took part in successful projects in 2012 with 5 coordination and 7 participations.

3.4.3.10.Redress statistics



In calls 12 and 13, only one redress per call was submitted, as in 2011; only Call 11, scored 5 requests for redress. This is basically explained by the largest number of topics (69) and related proposals (159), while no other correlation appears to be applicable (each redress is a specific topic, in different ITDs).

In all cases the Redress Committee judged the relevance of the complaint: in all case no change occurred to the ranking list as resulting from the evaluation.

Apart from the peculiar case in Call 11, the effectiveness and correctness of the evaluation process is confirmed.

3.4.4. Governance - Major decisions taken by the Governing Board and other JU bodies

3.4.4.1. Governing Board

The Governing Board is composed of 19 members: the EC, with veto rights on matters of public concern, the 12 founding members of Clean Sky and one Associate member for each of the 6 ITDs, representing itself and the other Associates in the same ITD. These Associates in 2012 were: ONERA, MTU, Hellenic Aerospace, Green Systems Aircraft Foundation and INCAS. The Chair and Vice-Chair of the Governing Board are elected for one year term, renewable once. On its meeting of December 14th, 2011, the Governing Board re-elected respectively Charles Champion (Airbus) and Catalin Nae (INCAS) as Chair and Vice-Chair for 2012.

- The CS JU Governing Board (GB) held four meetings in 2012 (30 March, 21 June, 11 October and 13 December). The following 6 written procedures were implemented:
- 21/1/2012 - Written Procedure 2012 – 01 to adopt Documents N° CS-GB-2012-001 Updating Annexes VI and VII of the Grant Agreements for Members and for Partners (GAMs and GAPs), and a Special Clause for GAMs
- 16/2/2012 - Written procedure 2012 – 03 for the adoption of the Annual Provisional Accounts 2011
- 26/3/2012 - Written procedure 2012 – 04 for adoption of Budget amendment no. 1 to AIP and ABP 2012
- 19/6/2012 - Written procedure 2012 – 07 to adopt decision n° 58 validation of in kind contributions 2008 2009 2010 2011

- 18/6/2012 - Written procedure 2012 – 08 to adopt decision n° 59 final accounts and budgetary implementation report 2011
- 19/12/2012 - Written Procedure 2012 – 10 to adopt calls decision no. 10 11 12 outcome

The Governing Board has adopted during 2012 the following key documents in its meetings (non-exhaustive list):

- 30 March 2012:
 - CS JU Development Plan
 - CS JU Staff Committee Decision
- 21 June 2012:
 - Assessment of the Clean Sky Annual Activity Report 2011
 - Adoption of the Panel recommendation for the extension of the Executive Director (ED) contract
- 11th October 2012:
 - Budget amendment n° 2 for 2012
 - Appointment of the Accounting Officer
- 13th December 2012:
 - Election of the Chairman (Mr. Alessandro Franzoni) and Vice Chairman (Mr. Ric Parker) for 2013
 - GAM model grant agreement Core and Annex II
 - AIP 2013, Budget 2013 and Establishment Plan 2013
 - GB Decision on a transitional mandate to the Executive Director on the preparatory phase of Clean Sky 2

It can be noted that most of the decisions have been adopted unanimously or very close to unanimity, showing a smooth and efficient decision-making process. Each Governing Board is prepared by a "Sherpa Group" meeting, chaired by the JU.

3.4.4.2. Executive Director

The staff was kept at the previous level of 24, according to the Staff Policy Plan adopted – despite a request of 3 supplementary posts, accepted by the industrial members of the Governing Board but eventually rejected by the European Commission, as stated in the report on risk management. This situation was faced through the hiring of some interim support and trainees.

The Executive Director is supported by two managers: the Coordinating Project Officer and the Head of Administration and Finance. One Project Officer per ITD and the TE allows the JU to play its coordination role.

As stated above, an agreement was reached at the Governing Board to appoint the Internal Audit Service (IAS) as the internal audit function of the JU. The IAS strategic audit plan was adopted by the Governing Board in December 2011. The first audit was performed in November 2012 an assurance audit on the topic “Grant Management – Annual Planning (GAMs and topics of the calls)”. In March 2013 the JU has received the Final Audit Report, which contained one very important and seven important recommendations. The JU’s management has provided comments to the auditors’ findings and has accepted the recommendations. An action plan for

implementing the auditors' recommendations has been proposed by the JU and agreed by the IAS.

Main recommendations were concerning:

- (1) delays in the execution of the programme and related budget under spending.

The IAS sees a systematic risk for CSJU of not reaching its strategic objectives and of not using its resources efficiently. The JU has described in its comments the actions started in the year 2012 to adapt the budget allocation to individual ITDs;

- (2) evaluation of resources consumption. The IAS criticizes, that, whereas the annual budget planning is built at the level of beneficiaries (work packages), the monitoring of the budget implementation is done at the level of deliverables by the JU. The JU agrees to reinforce its controls over the ITDs annual budgeting but states in its comments, that planning of the budget cannot be extended to the level of deliverables. The IAS agrees to the actions proposed by the JU, which enforce the controls for assessing the budget on work package level set up by the ITD coordinators through the Project Officers of the JU.

The management (internal and external, i.e. for the ITD coordination and management activity) relies on a few key documents: the Quality Manual, the Manual of Financial Procedures, the Management Manual, and the Development Plan – the latter being approved at the level of the Governing Board.

3.4.4.3. ITD Steering Committees

Each Integrated Technology Demonstrator (ITD) is in charge of one specific technology line within the CS programme. The ITD and Technology Evaluator (TE) Steering Committees are responsible for technical decisions taken within each ITD and the TE and have met regularly in the course of 2012. The relevant Project Officer, supported when needed by the Coordinating Project Officer or the Executive Director, attends these meetings. The Executive Director in particular chairs the TE Steering Committee meetings.

3.4.4.4. Scientific and Technological Advisory Board

The Scientific and Technological Advisory Board (STAB) is an advisory body of now 10 high-level scientists and engineers, all independent from CS JU stakeholders. Its purpose is to focus on the scientific and technical analysis of Clean Sky from different perspectives: besides environmental impact; technology and scientific forecast; societal aspects; economics. Chaired by David Ewins, Professor at the Bristol University and the Imperial College, it met five times in 2012.

The STAB provided recommendations on the necessity to focus on the mainstream of large demonstrators, the schedule management, the strengthening of the system-level vision and the management of resources in the leading companies. Two STAB members, on average, participated in each ITD annual review, according to their expertise area, mostly with the same distribution as in 2011, for continuity purposes, while some rotation is also organized for the sake of cross experience and for bringing fresh views. The main recommendations and general views on the technical progress were forwarded by the Executive Director to the Governing Board and discussed.

In 2012, “interim progress reviews” involving for each ITD, the reviewers, the JU project officer, coordinating project officer and Executive Director, the coordinators and when necessary the work package leaders, were held six month after the annual

review, in order to check the implementation of the recommendations and to update the reviewers on the technical progress. These interim reviews proved quite helpful and demonstrated a satisfactory situation in most work packages, or sub-projects.

Besides this, dedicated reviews were organized when deemed necessary by the Executive Director, in particular as concerns the GRC 5 project, dedicated to the management of trajectory and mission for rotorcrafts. The work programme, on the request of the JU Project Officer, had been deeply revisited, and the update was submitted to this review with STAB and external reviewers. The result was satisfactory and the revised work programme endorsed, with some recommendations.

The STAB was also involved in a review performed jointly with SESAR, focussed on Clean Sky and SESAR activities in the field of development of Flight Management Systems (FMS). The purpose of the review was to identify potential interfaces between respective programmes as well as potential overlaps. The main conclusion of the review was that no undue overlap was noticed. Recommendations for further improvement of the interface were provided.

3.4.4.5. National State Representative Group (NSRG)

Article 10 of the Council Regulation setting up the Clean Sky Joint Undertaking outlines that the NSRG will review information and provide opinion on programme progress, on compliance and on the meeting of targets. It will also update strategic orientations or link to Framework Programme Collaborative Research. It shall also provide input to Joint Undertaking on the interface with relevant national research programmes and identification of potential areas of cooperation, as well as specific measures taken at national level with regard to dissemination events, dedicated technical workshops and communication activities.

It consists of one representative of each EU Member State and of each other country associated with the Framework Programme. It is chaired by one of these representatives. To ensure that the activities are integrated, the Clean Sky Executive Director and the Chair of the Governing Board or his representative attend the NSRG meetings and the Chair of the NSRG attends as an observer at the Clean Sky Governing Board.

During 2012 the NSRG met four times and was represented at the Governing Board meetings. Two of the meetings were held outside Brussels, one at SAAB in Linköping where members reviewed SFWA in detail and the other hosted by Airbus in Toulouse where the members visited the Flight Test aircraft and control centre.

In February, Jim Lawler was re-elected as Chair and Gerben Klein Lebbink as Vice Chair. This year the members were invited and many chose to actively participate in the General Forum in November.

The National States continue to be very supportive of Clean Sky and members take a proactive and supportive role particularly in its' relations with the [European Council](#).

The Group has taken an active interest in the rules and conditions being used for Calls for Proposals and the selection of Partners in order to ensure and demonstrate transparency and accountability. The NSRG has received and discussed the reports of the independent observers.

The NSRG has also been interested in monitoring the development of the different ITDs and the maturing of the Technology Evaluator. They welcomed the continuing risk assessment system which ensures that the interfaces between individual ITDs themselves as well as the Technology Evaluator work and the resulting refocusing in

terms of work and budgets as they develop and the priorities of the leaders change. In particular, the NSRG formally recognised and supported the developments which necessitated a change in the SAGE ITD.

The NSRG also recognised the issue around the JU current understaffing.

National States have taken a very supportive view on the continuation of the JTI instrument under H2020. A national states view was developed as a joint initiative of the Clean Sky NSRG and the ACARE Member States Group. The document was the collective view of the representatives involved in the NSRG and ACARE Member States Group and was not a formal view of any of the States involved. These are being formulated in the European Council process. The document reflected that Clean Sky is proving to be an effective and efficient instrument to mature and demonstrate technologies and brings added value to Europe. The National States support the preparation of a future JTI (Clean Sky 2) provided that the lessons learned and successes of Clean Sky are taken into account to improve the JTI instrument further. Specific recommendations were made relating to Governance, Content, Initiation and Processes.

Following the study carried out in 2011 on the role and activities of the NSRG, the specific actions identified were actively pursued. These related to:

- Representation from all relevant states and their attendance at meetings. 29 of a potential 39 States have nominated representatives but only 14 attend regularly. There are a few MS which have not nominated representatives. It was agreed with the European Commission that these will be specifically approached in the context of any further Clean Sky programme.
- Coordination with national programs. Ideas were discussed by the states with large programmes. MS with “smaller” or no dedicated aerospace programmes could use a selective approach to put collaborative projects together using National funds. Clean Sky JU is expected to point out projects that could possibly be funded in this way.
- Information dissemination and Info days: suggestions on how much information, how soon, to whom it needs to be disseminated, etc. have been developed. The general consensus is: as much as possible, as soon as possible, using the National Contact Point system. A number of actions were taken in calls 12 and 13 and the effects are being monitored. Ideally, information should be made available in the Annual Implementation Plans for consultation in advance of calls to allow for feed-back on proposed budgets/content and to prepare resources.
- Major Clean Sky events should be held about every 9 months, with a fundamental presentation of the progress, the current issues and the upcoming calls, plus possibly dedicated sub-meetings per ITD. These are to be supplemented by local events in different parts of the EU. With “failed” topics special events are recommended.
- In cases where a topic is a follow up project then it has been suggested that the potential applicant should have access to the full information of the previous project, including results, so that the competition is fair and transparent. There is a proposal to maintain a list of topics that have not been answered on the website. This has not been implemented at present.

- The JU has identified a list of communication actions where the support of the NSRG members is needed. With the appointment of the new Communication Officer, this now needs to be developed to define the specifics.

3.4.5. *General Forum*

The General Forum is a statutory assembly open to all members and partners of the Clean Sky programme.

On November 21st 2012, this meeting gathered more than 120 of Clean Sky members and stakeholders from SMEs, Academia, Research organisations and Industry.

The meeting was divided in 2 parts: a plenary session in the morning followed by workshops on specific topics in the afternoon.

In the morning, the presentations focused on programme implementation in 2011 (technical and financial), forecast for 2013 and implementation of recommendations from 2011 General Forum among others. The preparation of the continuation of Clean Sky was also presented.

In the afternoon, three workshops gathered inputs from participants on:

- (1) Communication and dissemination of results,
- (2) Networking within Clean Sky and
- (3) Innovation in Calls.

During these workshops, moderated by members of the JU staff, presentations by Clean Sky's stakeholders were followed by a session for debate and discussion.

In total, six recommendations were issued.

Clean Sky's Members and Partners are invited to further promote their activities by referring to the programme and using the Clean Sky logo, but also by providing the JU with feedback and materials to be disseminated.

The JU acknowledged the need to inform prospective partners early on the topics, and recommended them to use National Contact Points and clusters when forming consortia. Concerning calls, CS JU will try and engage non-aerospace companies and further explain the purpose of the topics.

3.4.6. *Main communication activities*

The communication activities are managed according to the Communication Strategy adopted by the Governing Board, and updated when necessary. The last update dates back to December 2011. On the basis of this strategy, identifying objectives, target audiences, messages and tools, an annual communication plan is built.

3.4.6.1. Website

Clean Sky improved its website in 2012: in particular the technical information on each ITD, which were deeply revised and updated; besides that, the official information about the beneficiaries of grant agreements is periodically updated.

3.4.6.2. Publications

In 2012 regularly published the "Skyline" newsletter and communicated with stakeholder and public in general with frequent e-news.

Furthermore 15 press releases and press clipping were published in 2012.

In order to update users on technical achievements, in June 2012 a new brochure on the Strategic Research and Innovation Agenda was posted on-line as well as Special issues of the “Skyline” magazine presented the assessment of the first Technology Evaluator. (<http://www.cleansky.eu/sites/default/files/documents/cs-te-assessment-special-edition-2012.pdf>)

The ITD Annual Report Summary was issued on October 2012.

3.4.6.3. Events

Clean Sky organised overall 8 events, including Information Days on calls that were held in Madrid, Turin, and Brussels.

In addition to that the JTI JU participated to 12 other major international events. In particular, Clean Sky participated in the “Innovation Zone” in Farnborough Air Show and the stand was visited in particular by Rt Hon David Willetts, the UK Minister for University and Science.

An effort was also made to raise the interest of students to aeronautics, environment and Europe: mainly thanks to the involvement of STAB members, successful conferences took place in Amsterdam, Bristol, Paris and Berlin, with audiences of up to 150 students.

The possible continuation of Clean Sky in Horizon 2020, usually called Clean Sky 2, was subject to a lot of activity from the industry and the European Commission. The Joint Undertaking was mandated to coordinate this action, in particular to contribute to the public consultation. A large consultation day took place in ILA in Berlin, in September, where the general outline of the draft programme was presented and where external inputs were provided.

The General Forum took place in November 2012 gathering over 120 participants.

3.4.6.4. Awareness rising

The awareness of the European institutions about Clean Sky achievements is considered as a priority, concerning both the satisfactory progress to the objectives and the wide participation. It has been noticed that the high level of SME participation in the programme, through the Calls for Proposals, was not recognized enough. Actions have been taken in this direction, for instance through appointments with MEPs.

In April 2012 Janusz Sznajde, from the Institute of Aviation in Poland, was interweaved to promote the experience of a Polish organisation being coordinator of a Clean Sky project (STARLET project: <http://starlet.ilot.edu.pl/description.html>).

3.4.7. *Success stories*

3.4.7.1. Wind tunnel test campaigns

A series of wind tunnel test campaign were performed in 2012 on three different technologies

The first one is the Natural Laminar Flow (NLF) for laminar wing. NLF is established as a key technology stream within CleanSky Smart Fixed Wing Aircraft in order to reduce aircraft drag. The BLADE demonstrator (Breakthrough Laminar Aircraft Demonstrator in Europe) will be based on an A340 Flying Test Bed modified in the outer wings with two NLF wing portions.

As part of the process to mature NLF for application, ETW (European Transonic Wind Tunnel) has performed experiments with a large low-sweep half model at

flight-relevant Reynolds numbers. The completed European research project TELFONA, led by Airbus, had already demonstrated the applicability of ETW for NLF wing design. TELFONA's results have demonstrated that ETW's flow quality enables laminar testing close to free flight conditions.

In the framework of Clean Sky, ETW has been used to contribute to a wing design methodology aiming at robust laminar performance taking into account different surface imperfections. The transition locations were measured by the German Aerospace Research Center (DLR) Göttingen using CryoTSP. The data will serve to validate CFD predictions on NLF wing designs including such imperfections as they may occur on a real aircraft.

Two other wind tunnel tests were also performed concerning Open Rotor and wing anti-icing and de-icing systems.

The Rolls-Royce and SNECMA have performed independently a series of tests on their own test rigs to assess uninstalled characteristics of their Open Rotor design (especially the blades), and then participated to performance and aero-acoustics test on a complete model together with Airbus in DNW.

Finally, three systems for wing anti-icing and de-icing, which do not use bleed air from the engine anymore, were investigated and dedicated Icing Wind tunnel tests were performed: two electro-thermal systems, developed by Liebherr and Zodiac, and one electro-mechanical system, developed by SAAB.

3.4.7.2. Composite repair technology for aircraft maintenance

A series of projects were performed by the GMI AERO French SME and other partners.

As an example, the ADVANCED project (271691) - "Advanced heating system and control mode for homogeneous high temperature curing of large composite repairs" has been recently completed by GMI and the NTUA, Topic Manager being Aircelle (Group SAFRAN). It concerned the development of innovative solutions for the application of very large composite repairs, to be performed outside autoclaves. Even though achieving the very strict temperature tolerances (usually in the area of +/-5 at 180 or 225°C) for repairs of several m² is rather challenging, the expected benefits are significant, as reduction of autoclave utilization induces direct reduction both to the overall repair cost and to the CO₂ footprint of the repair. The developed equipment has been successfully tested and approved at industrial environment, on an extremely demanding application (A380 reverser).

3.5. Call(s) implemented in 2012

3.5.1. CALL 11 SP1-JTI-CS-2012-01

3.5.1.1. Summary information

Call Identifier	SP1-JTI-CS-2012-01
Publication date	13 January 2012
Deadline	3 April 2012
Evaluation	9-11 May 2012; 21-25 May 2012
Indicative Total budget (in €)	EUR 48,7 millions
EU contribution after evaluation	EUR 25.4 millions
In-kind contribution after evaluation	EUR 12,9 millions
Where relevant, the contribution from the	N/A

Member States or National funding, or other contributions	
Reference to call topics	http://ec.europa.eu/research/participants/portal/page/cooperation?callIdentifier=SP1-JTI-CS-2012-01

The Clean Sky JU published its eleventh call for proposals on 13 January 2012. The call was open for 69 topics covering activities within all ITDs without the Technology Evaluator (TE) and grouped in 16 areas, further re-grouped under the six ITDs as shown in the table below and in Annex II (full list of topics by ITD and Area).

Table 4: Topics overview

Identification	ITD - Area - Topic	Nr of topics	Indicative budget (K€)	Maximum funding (K€)
JTI-CS-ECO	Clean Sky - EcoDesign	14	3,295	2,471
JTI-CS-ECO-01	Area-01 - EDA (Eco-Design for Airframe)		3,045	
JTI-CS-ECO-02	Area-02 - EDS (Eco-Design for Systems)		250	
JTI-CS-GRA	Clean Sky - Green Regional Aircraft	11	9,960	7,470
JTI-CS-GRA-01	Area-01 - Low weight configurations		4,260	
JTI-CS-GRA-02	Area-02 - Low noise configurations		4,300	
JTI-CS-GRA-03	Area-03 - All electric aircraft		1,400	
JTI-CS-GRC	Clean Sky - Green Rotorcraft	4	1,450	1,088
JTI-CS-GRC-01	Area-01 - Innovative Rotor Blades		400	
JTI-CS-GRC-03	Area-03 - Integration of innovative electrical systems		650	
JTI-CS-GRC-06	Area-06 - Eco Design for Rotorcraft		400	
JTI-CS-SAGE	Clean Sky - Sustainable and Green Engines	11	16,150	12,113
JTI-CS-SAGE-02	Area-02 - Open Rotor Demo 2		13,150	
JTI-CS-SAGE-03	Area-03 - Large 3-shaft turbofan		2,600	
JTI-CS-SAGE-05	Area-05 - Turboshaft		400	
JTI-CS-SFWA	Clean Sky - Smart Fixed Wing Aircraft	15	11,350	8,513

JTI-CS-SFWA-01	Area01 – Smart Wing Technology		4,500	
JTI-CS-SFWA-02	Area02 - New Configuration		6,850	
JTI-CS-SGO	Clean Sky - Systems for Green Operations	14	6,540	4,905
JTI-CS-SGO-02	Area-02 - Management of Aircraft Energy		4,700	
JTI-CS-SGO-03	Area-03 - Management of Trajectory and Mission		1,590	
JTI-CS-SGO-04	Area-04 - Aircraft Demonstrators		250	
	Totals (€)	69	48,745	36,559

The total indicative budget of the call was set to € 48 745 000, of which the EU contribution could be up to € 36 558 750 (50-75% of the topic maximum budget indicated).

3.5.1.2. Analysis of proposals submitted

Applicants were invited to submit their proposals by 3 April 2012. In total, **159 proposals** involving applicants from **19 countries** were received. Out of those 159 proposals, **142 were considered eligible** for evaluation.

They were evaluated by **161 independent experts**.

Table 5: Participants by type in the submitted proposals and success rate

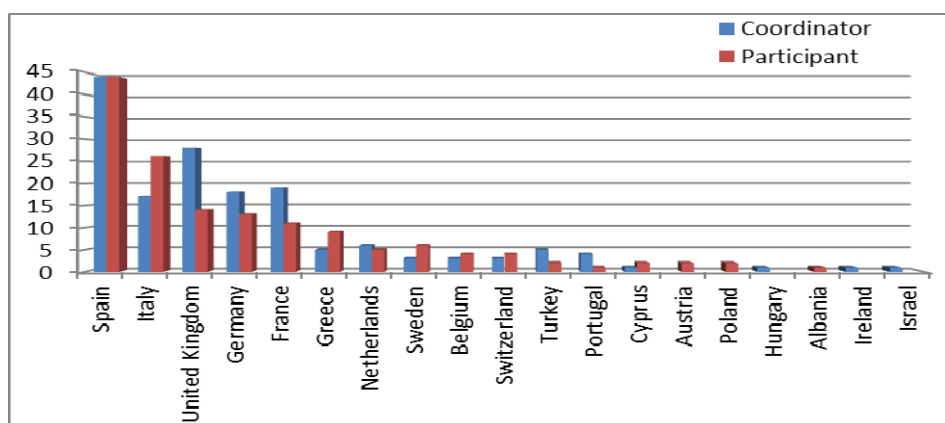
Type participant ³⁰	Nr of participants in the Proposals	Nr of participants in the funded Projects	Participants success rate
REC	19	23	42%
HSE	29	22	45%
SME	51	41	35%
PRC	26	20	38%
PUB ³¹	0	0	0
OTH	0	0	0
Total	125	106	39%

All call applicants distributed per country are given in the figure below. Spain, Italy, the UK and Germany submitted the highest number of projects.

Figure 3: Applicants per country

³⁰ Explanation of acronyms:
REC – Research Centre; HSE – Higher or Secondary Education; SME – Small Medium Enterprise; PRC – Private Companies; PUB – Public Body; OTH - Other

³¹ For both PUB and OTH, current tables show zero because the initial allocation to the first four categories of all participants; according to that selection, this is still valid and will be revised only if some new case is presented where a more appropriate allocation to either PUB or OTH is necessary. For statistical purpose, we deem the current attributions are correct.



The first 5 best players were Spain (with 88 participations), Italy (43), the UK (42), Germany (31) and France (30), which altogether counted for 234 participations out of a total of 305.

The EU-12 Countries took part with a total of 6 participations whilst Associated Countries accounted for 16, best players were Switzerland and Turkey with 7 participations each.

3.5.1.3. Evaluation results

The on-site evaluation of the proposals took place in Brussels between 21 and 25 May 2012 following the methodology described in Section 4.3. It was preceded by individual remote evaluations. To ensure high degree of transparency, the CS JU invited one independent observer to verify if the evaluations have been done according to the set evaluation guidelines and rules.

Out of the 142 eligible proposals, 96 passed the thresholds, while 46 failed one or more thresholds.

In terms of the topics failed (because not answered or with no successful proposal selected), this is the situation per ITD:

Table 6: Topics failed per ITD

ITD		Unanswered	Failed
SFW	<i>Smart Fixed Wing Aircraft</i>	1	0
GRA	<i>Green Regional Aircraft</i>	0	1
GRC	<i>Green Rotorcraft</i>	1	1
SAGE	<i>Sustainable and Green Engines</i>	3	0
SGO	<i>Systems for Green Operations</i>	2	1
ECO	<i>Eco-Design</i>	1	0
Total		8	3

The evaluation results, after processing all submitted proposals, are presented in the table below.

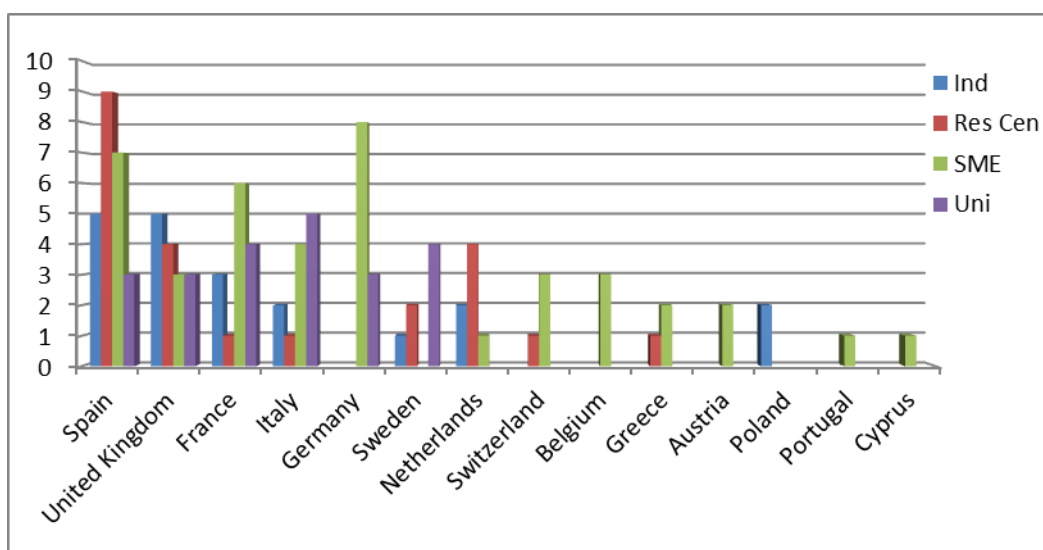
Table 7: Evaluation results overall

ITD/Area	Submitted proposal			Evaluation results				
	Submitted proposals	Eligible proposals	% of retained	Above threshold		Proposals selected for funding		Reserve list
SFWA	32	31	96.87%	23	74.19%	13	41.93%	10
GRA	44	36	81.81%	24	66.66%	10	27.77%	14
GRC	4	3	75.00%	2	66.66%	2	66.66%	0
SAGE	17	17	100.00%	11	64.70%	8	47.05%	3
SGO	20	19	95.00%	14	73.68%	10	52.63%	4
ED	42	36	85.71%	22	61.11%	11	30.55%	11
total	159	142	89,31%	96	67,61%	54	38,03%	42

The 54 proposals proposed for funding accounted for 106 participations from 14 European countries.

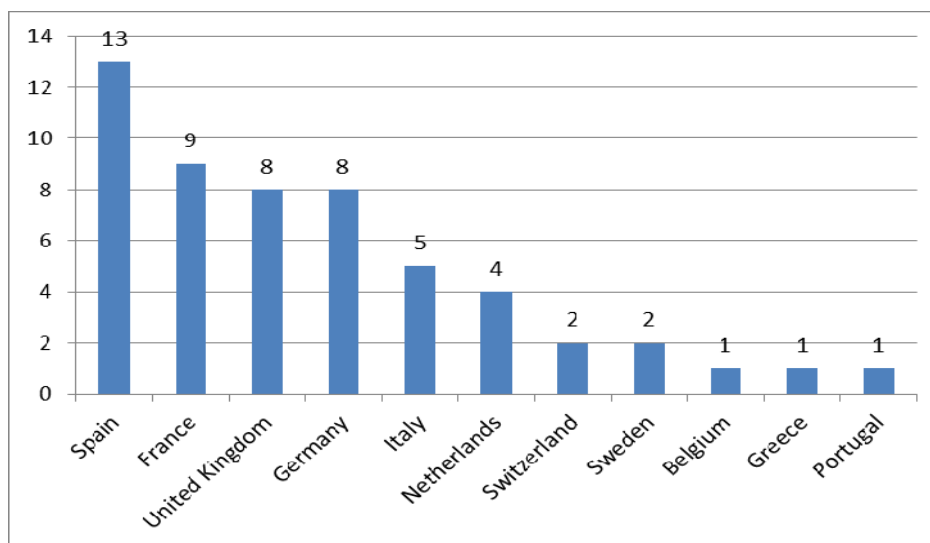
Of those, 22 (21%) came from academia, 20 (19%) represented the industry and 23 (22%) were research institutions. The SME participation was 38% (41 companies were SMEs), requesting a total funding of € 10 689 197 (42% of the total requested funding). Below you may find the geographical distribution of the 106 participations.

Figure 4: Successful participants per country and typology



The geographical distribution of the proposals selected for funding is shown in the graph below, Spain taking the leading position with 13 proposals, followed by France with 9 and the United Kingdom and Germany are equal with 8 proposals each. Switzerland is the only Associated Country that took part to this call.

Figure 5: Proposals selected for funding per country



3.5.2. CALL 12 SP1-JTI-CS-2012-02

3.5.2.1. Summary information

Call Identifier	SP1-JTI-CS-2012-02
Publication date	11 April 2012
Deadline	10 July 2012
Evaluation	17-21 September 2012
Indicative total budget (in €)	EUR 43,1 millions
EU contribution after evaluation	EUR 24,2 millions
In-kind contribution after evaluation	EUR 11,4 millions
Where relevant, the contribution from the Member States or National funding, or other contributions	N/A
Reference to call topics	http://ec.europa.eu/research/participants/portal/page/cooperation?callIdentifier=SP1-JTI-CS-2012-02#wlp_call_FP7

The Clean Sky JU published its twelfth call for proposals on 11 April 2012. The call was open for **42 topics** covering activities within all ITDs without the Technology Evaluator (TE), which were grouped in 17 areas, further re-grouped under the six ITDs as shown in the table below and in Annex II (full list of topics by ITD and Area).

Table 8: Topics overview

Identification	ITD - Area - Topic	Nr of topics	Indicative budget (K€)	Maximum funding (K€)
JTI-CS-ECO	Clean Sky - EcoDesign	5	720	540
JTI-CS-ECO-01	Area-01 - EDA (Eco-Design for Airframe)		520	
JTI-CS-ECO-02	Area-02 (EDS - Eco-Design for Systems)		200	
JTI-CS-GRA	Clean Sky - Green Regional Aircraft	2	2,840	2,130
JTI-CS-GRA-01	Area-01 - Low weight configurations		240	
JTI-CS-GRA-05	Area-05 - New configurations		2,600	
JTI-CS-GRC	Clean Sky - Green Rotorcraft	5	4,590	3,443
JTI-CS-GRC-01	Area-01 - Innovative Rotor Blades		710	
JTI-CS-GRC-02	Area-02 - Reduced Drag of rotorcraft		800	
JTI-CS-GRC-03	Area-03 - Integration of innovative electrical systems		1,000	
JTI-CS-GRC-05	Area-05 - Environmentally friendly flight paths		2,080	
JTI-CS-SAGE	Clean Sky - Sustainable and Green Engines	9	16,350	12,263
JTI-CS-SAGE-02	Area-02 - Open Rotor Demo 2		13,500	
JTI-CS-SAGE-03	Area-03 - Large 3-shaft turbofan		1,850	
JTI-CS-SAGE-04	Area-04 - Geared Turbofan		1,000	
JTI-CS-SFWA	Clean Sky - Smart Fixed Wing Aircraft	9	12,700	9,525
JTI-CS-SFWA-01	Area01 – Smart Wing Technology		1,700	
JTI-CS-SFWA-02	Area02 - New Configuration		7,500	
JTI-CS-SFWA-03	Area03 – Flight Demonstrators		3,500	
JTI-CS-SGO	Clean Sky - Systems for Green Operations	12	5,990	4,493
JTI-CS-SGO-02	Area-02 - Management of Aircraft Energy		4,540	
JTI-CS-SGO-03	Area-03 - Management of Trajectory and Mission		900	
JTI-CS-SGO-04	Area-04 - Aircraft Demonstrators		550	
	Totals (€)	42	43,190	32,393

The total indicative budget of the call was set to € 43 190000, of which the EU contribution could be up to € 32 393 500 (50-75% of the topic maximum budget indicated).

3.5.2.2. Analysis of proposals submitted

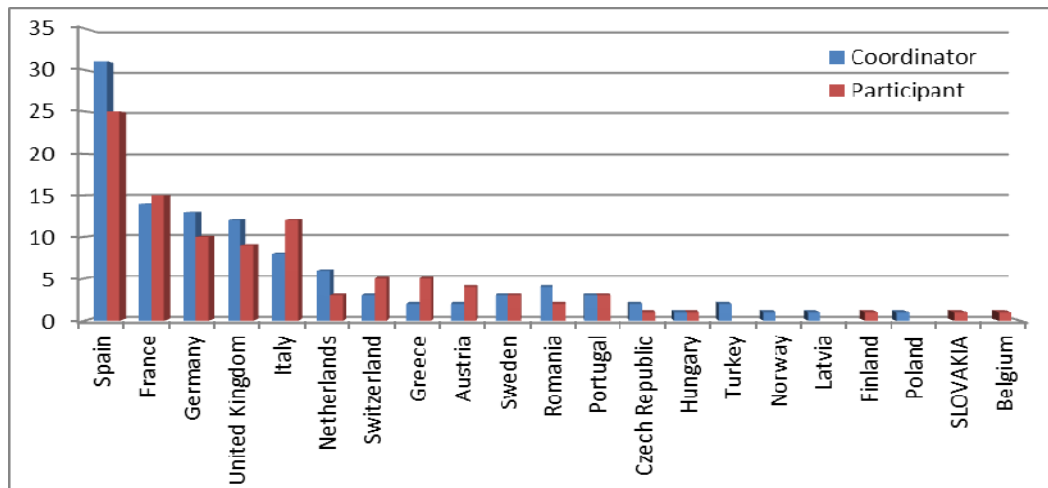
Applicants were invited to submit their proposals by 10 July 2012. In total, 109 proposals were submitted in response to the 42 open topics addressed by the present call, involving applicants from 21 countries. 5 were found to be ineligible and the remaining 104 eligible proposals were evaluated by 110 independent experts. The table below presents the distribution of participants by typology in the submitted proposals.

Table 9: Participants by type in the submitted proposals and success rate

Type participant ³²	Nr participants of in the Proposals	Nr participants of in the funded Projects	Participants success rate
REC	53	17	43%
HSE	49	14	51%
SME	86	32	43%
PRC	54	13	56%
PUB	0	0	0
OTH	0	0	0
Total	242	76	48%

All calls applicants distributed per country are given in the figure below.

Figure 6: Applicants per country



Again Spain, France, Germany, United Kingdom and Italy submitted the highest number of proposals, both as coordinator and participant. The EU- 12 countries were represented by Romania (6 participations), Czech Republic (3), Hungary (2), Latvia, Poland and Slovakia (1). Associated Countries, by Switzerland (8), Turkey (2) and Norway (1).

3.5.2.3. Evaluation results

The on-site evaluation of the proposals took place in Brussels between 17 and 21 September 2012 following the methodology described in Section 4.3. It was

³²

–Refer to notes 6 and 7

preceded by individual remote evaluations. To ensure high degree of transparency, the CS JU invited one independent observer to verify if the evaluations have been done according to the set evaluation guidelines and rules. Out of the 104 eligible proposals, 69 passed the thresholds, while 35 failed one or more thresholds.

In terms of the topics failed (because not answered or with no successful proposal selected), the final situation of successful topics vs. published ones was as follows:

Table 10: Topics failed per ITD

ITD		Unanswered	Failed
SFW	<i>Smart Fixed Wing Aircraft</i>	0	0
GRA	<i>Green Regional Aircraft</i>	0	0
GRC	<i>Green Rotorcraft</i>	0	1
SAGE	<i>Sustainable and Green Engines</i>	0	1
SGO	<i>Systems for Green Operations</i>	1	2
ECO	<i>Eco-Design</i>	0	1
Total		1	5

The evaluation results, after processing all submitted proposals, are presented in the table 12 below.

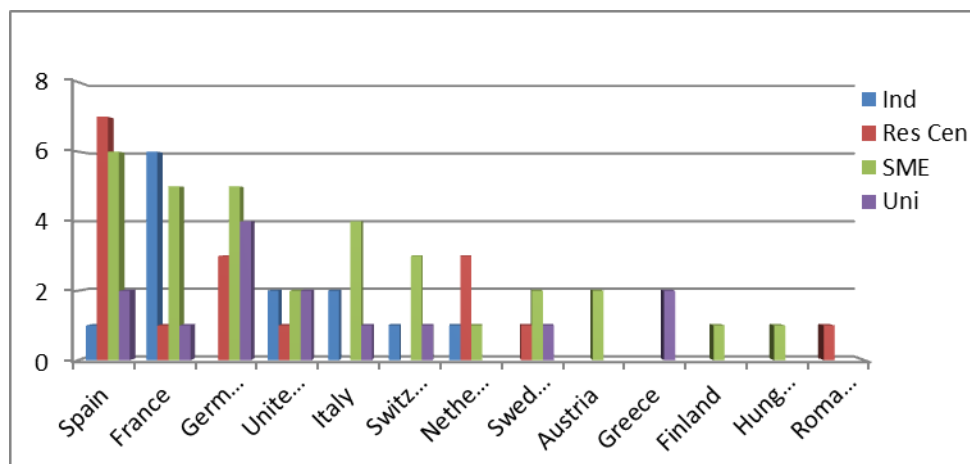
Table 11: Evaluation results

ITD/Area	Submitted proposal			Evaluation results				
	Submitted proposals	Eligible proposals	% of retained	Above threshold		Proposals selected for funding		Reserve list
SFWA	17	17	100.00%	15	88.23%	9	52.94%	6
GRA	9	8	88.88%	3	37.50%	2	25.00%	1
GRC	19	18	94.73%	11	61.11%	4	22.22%	7
SAGE	19	19	100.00%	12	63.15%	8	42.10%	4
SGO	19	19	100.00%	14	73.68%	9	47.36%	5
ED	26	23	88.46%	14	60.86%	4	17.39%	10
total	109	104	95,41%	69	66,35%	36	34,62%	33

The 36 proposals proposed for funding accounted for 76 participations from 13 European countries.

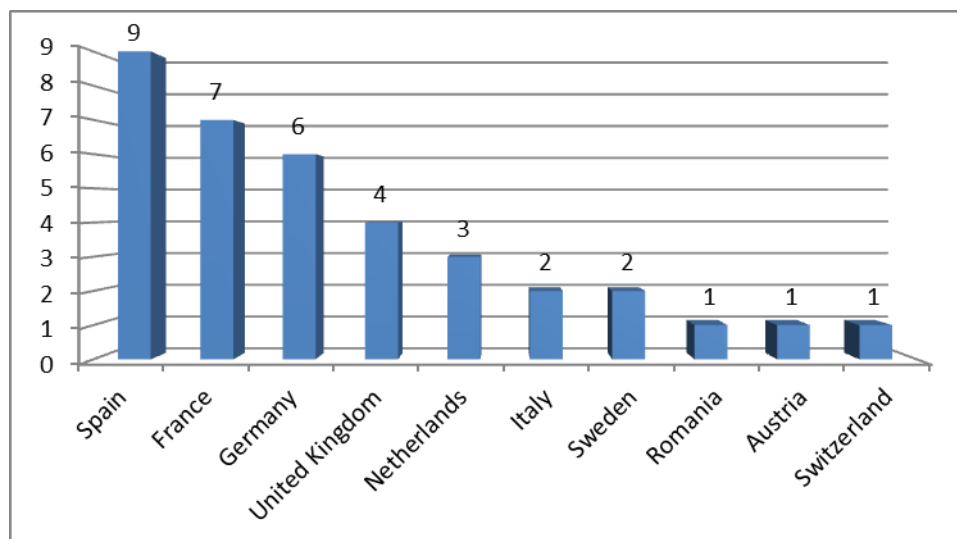
Of those, 14 (19%) came from academia, 13 (17%) represented the industry and 17 (22%) were research institutions. The SME participation was 42% (32 companies were SMEs), requesting a total funding of € 6 765 120 (28% of the total requested funding). Below you may find the geographical distribution of the 76 participations.

Figure 7: successful participants per country and typology



The geographical distribution of the proposals selected for funding is shown in the graph below, Spain taking the leading position with 9 proposals, followed by the France, Germany and United Kingdom.

Figure 8: Proposals selected for funding per country



3.5.3. CALL 13 SP1-JTI-CS-2012-03

3.5.3.1. Summary information

Call Identifier	SP1-JTI-CS-2012-03
Publication date	5 July 2012
Deadline	18 October 2012
Evaluation	26-30 November 2012
Indicative Total budget (in €)	EUR 39,8 millions
EU contribution after evaluation	EUR 14,5 millions
In-kind contribution after evaluation	EUR 5,5 millions
Where relevant, the contribution from the Member States or National funding, or	N/A

other contributions	
Reference to call topics	http://ec.europa.eu/research/participants/portal/page/cooperation?callIdentifier=SP1-JTI-CS-2012-03#wlp_call_FP7

The Clean Sky JU published its thirteenth call for proposals on 5 July 2012. The call was open for 47 topics grouped in 13 areas, further re-grouped under the six ITDs as shown in the table below and in Annex II (full list of topics by ITD and Area).

Table 12: Topics overview

Identification	ITD - Area - Topic	Nr of topics	Indicative budget (K€)	Maximum funding (K€)
JTI-CS-ECO	Clean Sky - EcoDesign	7	1,270	953
JTI-CS-ECO-01	Area-01 - EDA (Eco-Design for Airframe)		1,270	
JTI-CS-GRA	Clean Sky - Green Regional Aircraft	1	400	300
JTI-CS-GRA-01	Area-01 - Low weight configurations		400	
JTI-CS-GRC	Clean Sky - Green Rotorcraft	5	2,550	1,913
JTI-CS-GRC-01	Area-01 - Innovative Rotor Blades		1,650	
JTI-CS-GRC-02	Area-02 - Reduced Drag of rotorcraft		600	
JTI-CS-GRC-06	Area-06 - Eco Design for Rotorcraft		300	
JTI-CS-SAGE	Clean Sky - Sustainable and Green Engines	12	18,450	13,838
JTI-CS-SAGE-02	Area-02 - Open Rotor Demo 2		8,550	
JTI-CS-SAGE-03	Area-03 - Large 3-shaft turbofan		6,400	
JTI-CS-SAGE-06	Area-05 - Lean Burn		3,500	
JTI-CS-SFWA	Clean Sky - Smart Fixed Wing Aircraft	8	10,725	8,044
JTI-CS-SFWA-01	Area01 – Smart Wing Technology		300	
JTI-CS-SFWA-02	Area02 - New Configuration		9,750	
JTI-CS-SFWA-03	Area03 – Flight Demonstrators		675	
JTI-CS-SGO	Clean Sky - Systems for Green Operations	14	6,450	4,838
JTI-CS-SGO-02	Area-02 - Management of Aircraft Energy		5,950	
JTI-CS-SGO-03	Area-03 - Management of Trajectory and Mission		500	
	Totals (€)	47	39,845	29,884

The total indicative budget of the call was set to € 39 845,000, of which the EU contribution could be up to € 29 883,75 (50-75% of the topic maximum budget indicated).

3.5.3.2. Analysis of proposals submitted

Applicants were invited to submit their proposals by 18 October 2012. In total, **76 proposals were submitted** in response to the 47 open topics addressed by the present call, involving applicants from **14 countries**. 5 of them were found to be ineligible, and the remaining **71 eligible proposals** were evaluated by **102 independent experts**.

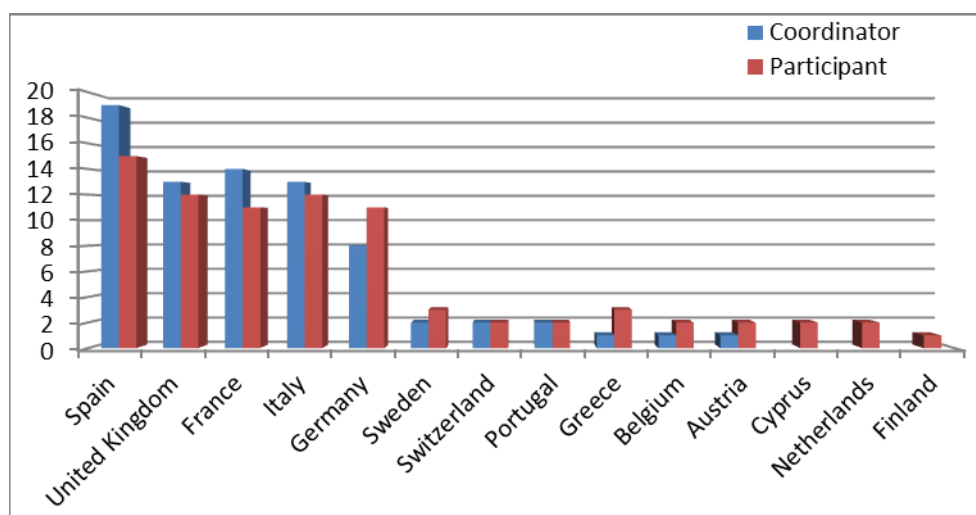
The table below presents the distribution of participants in the submitted proposals:

Table 13: Participants by type in the submitted proposals and success rate

Type participant ³³	Nr of participants in the Proposals	Nr of participants in the funded Projects	Participants success rate
REC	26	13	19%
HSE	29	18	17%
SME	49	21	18%
PRC	12	11	42%
PUB	0	0	0
OTH	0	0	0
Total	116	63	21%

All calls applicants distributed per country are given in the figure below.

Figure 9: Applicants per country



Spain with a total of 34 participations, the UK (25), France (25) and Italy (25) followed by Germany (19) took the lead as number of proposal submitted both as coordinator and participant. Cyprus was the only Country from the EU-13 being represented (2 participations) as Switzerland was the only Associated Country represented with 4 participations.

³³

–Refer to notes 6 and 7

3.5.3.3. Evaluation results

The evaluation of the proposals took place in Brussels between 26 and 30 November 2012 following the methodology described in Section 4.3. To ensure high degree of transparency, the CS JU invited one independent observer to verify if the evaluations have been done according to the set evaluation guidelines and rules. Out of the 71 eligible proposals, 49 passed the thresholds, while 22 failed one or more thresholds.

In terms of the topics failed (because not answered or with no successful proposal selected), the final situation of successful topics vs. published ones was as follows:

Table 14: Topics failed per ITD

ITD		Unanswered	Failed
SFW	<i>Smart Fixed Wing Aircraft</i>	3	0
GRA	<i>Green Regional Aircraft</i>	0	0
GRC	<i>Green Rotorcraft</i>	0	1
SAGE	<i>Sustainable and Green Engines</i>	3	2
SGO	<i>Systems for Green Operations</i>	3	3
ECO	<i>Eco-Design</i>	2	0
Total		11	6

The evaluation results, after processing all submitted proposals, are presented in the table below:

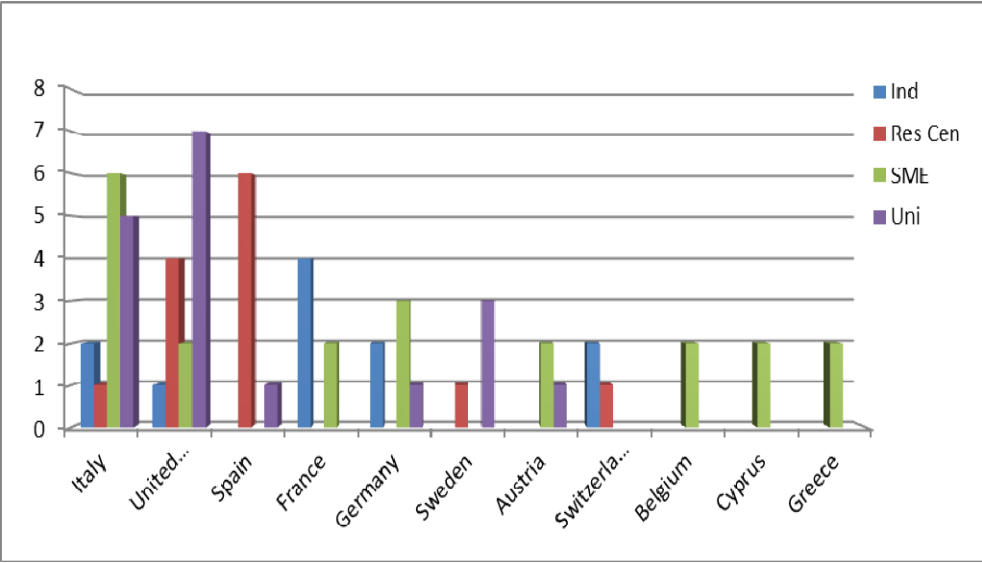
Table 15: Evaluation results

ITD/Area	Submitted proposal			Evaluation results				
	Submitted proposals	Eligible proposals	% of retained	Above threshold		Proposals selected for funding		Reserve list
SFWA	10	10	100.00%	9	90.00%	5	50.00%	4
GRA	6	6	100.00%	3	50.00%	1	16.66%	2
GRC	10	10	100.00%	7	70.00%	4	40.00%	3
SAGE	17	14	82.35%	11	78.57%	7	50.00%	4
SGO	23	22	95.65%	13	59.09%	8	36.36%	5
ED	10	9	90.00%	6	66.66%	5	55.55%	1
total	76	71	93,42%	49	69,01%	30	42,25%	19

The 30 proposals proposed for funding accounted for 63 participations from 11 European countries.

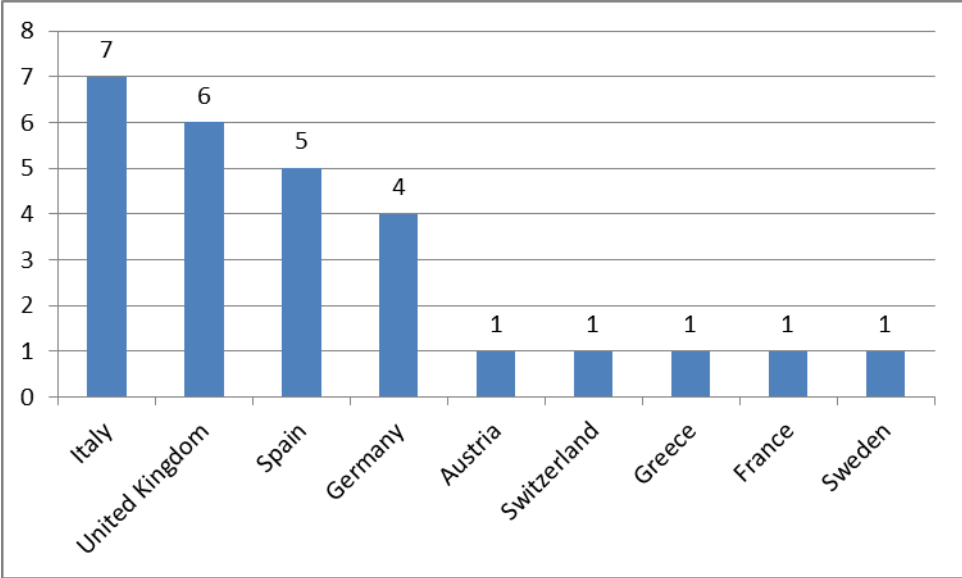
Of those, 18 (29%) came from academia, 11 (17%) represented the industry and 13 (21%) were research institutions. The SME participation was 33% (21 companies were SMEs), requesting a total funding of € 4 712 933 (33% of the total requested funding). Below you may find the geographical distribution of the 63 participations.

Figure 10: Successful participants per country and typology



The geographical distribution of the proposals selected for funding is shown in the graph below, Italy taking the leading position with 7 proposals, followed by the United Kingdom, Spain and Germany.

Figure 11: Proposals selected for funding per country



3.6. Grant Agreements/Project Portfolio

3.6.1. Grant agreements signed (commitment amounts)

During 2012 there were signed 102 GAPs belonging to Calls 2, 5, 6, 7, 8, 9, 10 and 11. They are listed below together with the call they were part of.

No	Project Number	Project Acronym	Project Title	Call Identifier	CS contribution	JU contribution	In-kind contribution	Total contributions
1	267210	ELPOC	Electrical Power Control – More Electric Aircraft	SP1-JTI-CS-2009-02	495,510		495,510	991,020
2	271815	LOSPA	Model Design and Manufacturing of the Turbofan Configuration for Low Speed Aerodynamic and Acoustic Testing	SP1-JTI-CS-2010-03	978,754		326,252	1,305,006
3	271886	NOISE TTE	Landing Gear Noise Attenuation	SP1-JTI-CS-2010-03	114,412		35,138	149,550
4	277741	DATACAST	Development of a low cost Advanced gamma Titanium Aluminide Casting Technology	SP1-JTI-CS-2010-04	323,000		227,000	550,000
5	278438	HI-POTENTIAL	Higly Innovative Isothermal Forging of Gamma TIAL Alloy for LPT blades	SP1-JTI-CS-2010-04	284,408		284,409	568,817
6	287087	AeroSim	Development of a Selective Laser Melting (SLM) Simulation tool for Aero Engine applications	SP1-JTI-CS-2010-05	700,290		268,114	968,404
7	286786	ICARO	In-field CFRP surfaces Contamination Assessment by aRtificial Olfaction tool	SP1-JTI-CS-2010-05	177,778		59,259	237,037
8	296687	BFCleaner	Borate Free Cleaners for Aluminum Alloys	SP1-JTI-CS-2011-01	66,279		30,101	96,380
9	296549	ISINTEGRER	Industrialization setup of Thermoplastics in situ consolidation process	SP1-JTI-CS-2011-01	195,539		88,901	284,440
10	296722	HVRCFM	The Conversion of Recycled Carbon Fibre Yarn and Tape Into High Value Fabrics and Materials	SP1-JTI-CS-2011-01	187,500		62,500	250,000

No	Project Number	Project Acronym	Project Title	Call Identifier	CS contribution	JU contribution	In-kind contribution	Total contributions
11	296700	BESTT	Development, Construction and Integration of Bench Systems for Ground Thermal Tests	SP1-JTI-CS-2011-01	1,495,853		498,618	1,994,470
12	296138	MAGNASENSE	Magnetostrictive sensor applications for self-sensing of composite structures	SP1-JTI-CS-2011-01	165,000		55,000	220,000
13	296514	STRAINMON	Strain Monitoring in Composite Stiffened Panels Using Sensors	SP1-JTI-CS-2011-01	74,940		24,980	99,920
14	296595	AFSIAL	Advanced fuselage and wing structure based on innovative Al-Li alloys	SP1-JTI-CS-2011-01	339,425		105,475	444,900
15	296617	SMYTE	Advanced concepts for trailing edge morphing wings - Design and manufacturing of test rig and test samples - Test execution	SP1-JTI-CS-2011-01	157,715		51,556	209,271
16	296693	HERRB	Helicopter Electric Regenerative Rotor Brake	SP1-JTI-CS-2011-01	523,745		174,584	698,329
17	296648	TRAVEL	Tilt Rotor ATM Integrated Validation of Environmental Low Noise Procedures	SP1-JTI-CS-2011-01	573,640		222,760	796,400
18	296671	LeVeR	Lean Burn Control System Verification Rig	SP1-JTI-CS-2011-01	545,503		405,327	950,830
19	296515	OREAT II	Open Rotor Engines Advanced Technologies II	SP1-JTI-CS-2011-01	940,371		940,372	1,880,743
20	296503	HT° Motor windings	Reliability assessment of key technologies for high temperature electrical machines	SP1-JTI-CS-2011-01	219,383		73,595	292,978
21	296701	LHTFP CB	Demonstration of a large, high temperature, flexible printed circuit board	SP1-JTI-CS-2011-01	357,852		238,203	596,054
22	296115	ALTD	Large 3-shaft Demonstrator	SP1-JTI-CS-2011-01	2,547,129		2,226,834	4,773,963

No	Project Number	Project Acronym	Project Title	Call Identifier	CS JU contribution	In-kind contribution	Total contributions
			Aeroengine intake acoustic liner technology development				
23	296585	LEAN	Development of lightweight steel castings for efficient aircraft engines	SP1-JTI-CS-2011-01	502,914	258,422	761,335
24	296543	ViMaQ	Hot sheet metal forming of aerospace materials - Virtual manufacturing and enhanced quality	SP1-JTI-CS-2011-01	290,750	207,250	498,000
25	296526	INTFOP	Integrating Forging and Process Simulation for turbine disks	SP1-JTI-CS-2011-01	182,500	182,500	365,000
26	296541	AMI4BLISK	Automated Geometrical Measurement and Visual Inspection for Blisks	SP1-JTI-CS-2011-01	765,493	527,870	1,293,363
27	296474	E-SEMA	Development of Electric Smart Actuator for gas turbine engines	SP1-JTI-CS-2011-01	588,533	379,267	967,800
28	296540	HiTNiFo	Development of an advanced design and production process of High Temperature Ni-based Alloy Forgings	SP1-JTI-CS-2011-01	260,875	194,125	455,000
29	296250	HITECAST	High temperature Ni-based super alloy casting process advancement	SP1-JTI-CS-2011-01	325,000	175,000	500,000
30	296587	LIGHT-TANK	Feasibility study and prototypes manufacturing of oil tank in thermoplastic for Helicopter Engine	SP1-JTI-CS-2011-01	307,887	141,989	449,876
31	296551	HEXENOR	Development of Helicopter EXhaust Engine NOise Reduction technologies	SP1-JTI-CS-2011-01	666,065	417,764	1,083,829
32	296507	RODTRAC	Robustness of distributed micron-sized roughness-element for transition control	SP1-JTI-CS-2011-01	375,000	125,000	500,000

No	Project Number	Project Acronym	Project Title	Call Identifier	CS JU contribution	In-kind contribution	Total contributions
33	296613	INARAS	Automated Riblets Application on Aircraft Parts	SP1-JTI-CS-2011-01	412,468	137,490	549,958
34	296345	STARLET	Basic Wind Tunnel Investigation to Explore the Use of Active Flow Control Technology for Aerodynamic Load Control	SP1-JTI-CS-2011-01	190,140	59,711	249,851
35	296681	HIVOLA	High Voltage amplifier for MEMS-based Active Flow Control (AFC) Actuators	SP1-JTI-CS-2011-01	334,499	111,500	445,998
36	296092	GBSSD (3)	Ground Based Structural & Systems Demonstrator Phase 3 - Component and sub-system manufacture	SP1-JTI-CS-2011-01	1,448,175	1,448,175	2,896,350
37	296588	PROUD	PRECISSION OUTER WING ASSEMBLY DEVICES	SP1-JTI-CS-2011-01	2,191,512	731,488	2,923,000
38	296642	FRARS-2	Future Regional Aircraft Requirements Survey - Part 2	SP1-JTI-CS-2011-01	74,340	24,780	99,120
39	298156	CARHAY2011	Design, Manufacturing and Impact Testing of Advanced Composite Materials	SP1-JTI-CS-2011-02	110,591	33,064	143,655
40	297173	COMAG	Development and Implementation of Conductive coating for Magnesium sheets in A/C	SP1-JTI-CS-2011-02	120,000	40,000	160,000
41	298037	BIFTTEC	Bamboo Innovative Fiber for Technical Textile and Environment Conservation	SP1-JTI-CS-2011-02	112,259	35,968	148,227
42	298090	BME Clean Sky 027	Development of an innovative bio-based resin for aeronautical applications	SP1-JTI-CS-2011-02	262,500	87,500	350,000
4	2981	Riblet	Light Scattering on Micro	SP1-JTI-CS-	149,194	50,750	199,944

No	Project Number	Project Acronym	Project Title	Call Identifier	CS JU contribution	In-kind contribution	Total contributions
3	06	Sensor	Structured Surface Coatings	2011-02			
44	298114	JIF4FLIGHT	Final Assembly Line Assembly Jigs and Fixtures for flight test demonstrator	SP1-JTI-CS-2011-02	1,049,610	949,710	1,999,320
45	298131	IRIDA	Industrialisation of Out-of-Autoclave Manufacturing for Integrated Aerostructures	SP1-JTI-CS-2011-02	382,500	112,500	495,000
46	298147	STARTGENSYS	ADAPTATION KIT DESIGN & MANUFACTURING: APU DRIVING SYSTEM	SP1-JTI-CS-2011-02	269,600	133,000	402,600
47	298164	MOSKIN	Morphing Skin with a Tailored Non-conventional Laminate	SP1-JTI-CS-2011-02	296,950	103,050	400,000
48	298176	ARMLIGHT	Design, development and manufacturing of an electro-mechanical actuator and test rig for AiRcrafts Main LandIng Gear acTuation systems.	SP1-JTI-CS-2011-02	473,693	274,338	748,031
49	298182	AGF	Active Gurney Flap	SP1-JTI-CS-2011-02	202,423	97,155	299,577
50	298187	ACcTION	Advanced Pylon Noise Reduction Design and Characterization through flight worthy PIV	SP1-JTI-CS-2011-02	390,860	179,300	570,160
51	298192	GUM	Active GURney on Main Rotor blades	SP1-JTI-CS-2011-02	341,550	141,850	483,400
52	306648	I-PRIMES	I-PRIMES: an Intelligent Power Regulation using Innovative Modules for Energy Supervision	SP1-JTI-CS-2011-03	187,200	62,400	249,600
53	307767	DynaPit	Nose Fuselage/Cockpit Dynamic Characterization for Internal Noise Attenuation	SP1-JTI-CS-2011-03	149,879	49,960	199,839

No	Project Number	Project Acronym	Project Title	Call Identifier	CS contribution	JU contribution	In-kind contribution	Total contributions
54	306928	CALAS	Computational Aero-acoustic Analysis of Low-noise Airframe Devices with the Aid of Stochastic Method	SP1-JTI-CS-2011-03	112,500		37,500	150,000
55	306880	DSOT300-125S	development and manufacturing of programmable electrical load and advanced PSM for electrical energy management testing in flight demo	SP1-JTI-CS-2011-03	73,350		24,451	97,801
56	307727	SPLS	Smart programmable load and source	SP1-JTI-CS-2011-03	155,475		54,525	210,000
57	308129	REGENESYS	Multi-source regenerative systems power conversion - REGENESYS	SP1-JTI-CS-2011-03	681,929		229,305	911,234
58	306997	GREEN BARRELS	Contra-Rotating Open Rotor (CROR) Propeller barrels	SP1-JTI-CS-2011-03	1,649,994		549,998	2,199,992
59	308265	HOSTEL	Integration of a HOT STReam Liner into the Turbine Exit Casing (TEC)	SP1-JTI-CS-2011-03	374,999		125,000	499,999
60	307866	MICMEST	Microwave Clearance Measurement System for Low Pressure Turbines	SP1-JTI-CS-2011-03	349,993		349,993	699,986
61	307869	ELWIPS	Electro-thermal Laminar Wing Ice Protection System Demonstrator	SP1-JTI-CS-2011-03	857,913		451,977	1,309,890
62	304851	MATPLAN	CONSTRUCTION OF BESPOKE EVALUATION POWER MODULES~(MATPLAN)	SP1-JTI-CS-2011-03	150,694		95,730	246,424
63	307309	PECOAT	Novel Coating Systems For Power Electronics In Aerospace Environments	SP1-JTI-CS-2011-03	363,176		121,058	484,234
64	306513	ALT	Formulation and characterization of new	SP1-JTI-CS-2011-03	311,447		128,931	440,378

No	Project Number	Project Acronym	Project Title	Call Identifier	CS contribution	JU contribution	In-kind contribution	Total contributions
			aluminium alloys produced by ingot metallurgy for high temperature applications (250°C)					
65	307834	SAA-Seal	Corrosion protection of Aluminium unpainted parts: development of an appropriated Cr free sealing process on thin SAA layer ($\leq 5 \mu\text{m}$)	SP1-JTI-CS-2011-03	179,985	59,995		239,980
66	307111	AMICO AT	Development of new antimicrobial nanostructured durable coatings for fuel tanks	SP1-JTI-CS-2011-03	224,970	74,990		299,960
67	307659	MAGNOLYA	Advanced environmentally friendly chemical surface treatments for cast magnesium helicopter transmission alloys preservation	SP1-JTI-CS-2011-03	150,000	50,000		200,000
68	307397	HYPOTHESIS	Feasibility study of intelligent High Integrated Power Electronic Module (HIPEM) for Aeronautic Application	SP1-JTI-CS-2011-03	374,460	124,820		499,280
69	307526	ARMONEA	Anotec Real-time MOdel for Noise Exposure of Aircraft	SP1-JTI-CS-2011-03	199,962	87,454		287,416
70	306927	KLEAN	Knowledge-based EFB for green flight trajectory decision aid	SP1-JTI-CS-2011-03	559,491	186,497		745,988
71	323514	COMPipe	Composite Pipes and Fittings for Aero-Engines Dressing	SP1-JTI-CS-2012-01	1,062,500	702,096		1,764,596
72	323540	VIPER	Valve hIgh PERformances for flow control separation in aircraft	SP1-JTI-CS-2012-01	299,906	97,344		397,250

No	Project Number	Project Acronym	Project Title	Call Identifier	CS contribution	JU contribution	In-kind contribution	Total contributions
73	323380	robustAFC	Performance Evaluation of a highly robust Fluid Actuator for AFC	SP1-JTI-CS-2012-01	298,950		99,650	398,600
74	323458	MEMS MATURITY	MEMS Gyro - Maturity assessment of performance and integration	SP1-JTI-CS-2012-01	572,625		190,875	763,500
75	323535	ResAcc	Development of a readout circuit for a resonant accelerometer	SP1-JTI-CS-2012-01	596,723		196,008	792,730
76	323423	MAGBOX	Aeronautical Magnetic Gear Box	SP1-JTI-CS-2012-01	183,627		64,607	248,234
77	323392	HIPERLAM	High-Fidelity and High-Performance Laminar Wing Optimization	SP1-JTI-CS-2012-01	187,499		62,501	250,000
78	323452	HiReLF	Transonic High Reynolds Number Testing of a Large Laminar Wing Half Model	SP1-JTI-CS-2012-01	899,979		299,993	1,199,972
79	323543	L-CRORCTS	Low speed aerodynamic test of large CROR aircraft model in a closed test section	SP1-JTI-CS-2012-01	1,499,880		499,960	1,999,840
80	323419	ROTOPOWER	DEVELOPMENT OF KEY TECHNOLOGY COMPONENTS FOR HIGH POWER-DENSITY POWER CONVERTERS FOR ROTORCRAFT SWASHPLATE ACTUATORS	SP1-JTI-CS-2012-01	258,749		86,251	345,000
81	323528	HTCS	Passive cooling solution validation for aircraft application	SP1-JTI-CS-2012-01	225,000		75,000	300,000
82	323453	HIROPEAM	High rotational heat pipe experimental analysis and modelisation for turbomachine purpose	SP1-JTI-CS-2012-01	215,722		71,907	287,629

No	Project Number	Project Acronym	Project Title	Call Identifier	CS JU contribution	In-kind contribution	Total contributions
83	323475	E-SLEEVE	Direct filament wound rotor carbon resin sleeves by bulk curing and layer-by-layer Electron beam polymerisation	SP1-JTI-CS-2012-01	149,325	45,875	195,200
84	323444	SOG PEERS	SOG Power Electronics with Energy Recycling System	SP1-JTI-CS-2012-01	693,746	693,747	1,387,493
85	323520	OPTO-CLAVE	Design, implementation and validation of an automatic learning cure cycle optimisation process for the eco-efficient autoclave processing of composite materials	SP1-JTI-CS-2012-01	74,780	25,039	99,819
86	323405	LRI-HiT	Investigations of liquid resin impregnation and out-of-autoclave curing of composites for the high temperature aerospace applications	SP1-JTI-CS-2012-01	365,159	134,760	499,918
87	323474	MIFACRIT	Methodology Toolbox for Accelerated Fatigue Testing of FRP Materials: Micro-structural Failure Criterion for Multi-axial Fatigue of FRP Structures	SP1-JTI-CS-2012-01	149,903	49,967	199,870
88	323395	IMAGINE	Integrated Approach to Manage Glass Fiber Aircraft Insulation Waste	SP1-JTI-CS-2012-01	121,610	98,070	219,680
89	323418	RASAC	RAMAN spectroscopy for identification of aerospace composites	SP1-JTI-CS-2012-01	162,926	50,694	213,620
90	323417	LIBSACC	Laser Induced Breakdown Spectroscopy for identification of Aerospace Composites	SP1-JTI-CS-2012-01	110,872	33,249	144,120
91	323476	AEROBEAM	Direct Manufacturing of stator vanes through electron beam melting	SP1-JTI-CS-2012-01	100,951	32,650	133,601
9	3234	AiMeRe	Aircraft Metal Recycling	SP1-JTI-CS-	171,246	107,961	279,207

No	Project Number	Project Acronym	Project Title	Call Identifier	CS contribution	JU contribution	In-kind contribution	Total contributions
2	02			2012-01				
93	323485	AChSo	Automated Chemical Stitching and Preforming	SP1-JTI-CS-2012-01	220,183	73,160		293,343
94	323454	SELFRAGCFRP	High Voltage Pulse Fragmentation Technology to recycle fibre-reinforced composites	SP1-JTI-CS-2012-01	217,500	217,500		435,000
95	323464	MASDENADA	MAS DE NADA: Modeling and Advanced Software Development for Electrical Networks in Aeronautical Domain Analysis	SP1-JTI-CS-2012-01	187,200	62,400		249,600
96	323422	AFLOG	Advanced Floor Grids for Green Regional A/C New Concept of Design, Manufacturing and Installation in Ground Full Scale Demo	SP1-JTI-CS-2012-01	1,466,000	719,000		2,185,000
97	323466	WILDCRAFT	Wireless Smart Distributed end System for Aircraft	SP1-JTI-CS-2012-01	188,478	67,821		256,299
98	323470	WAVECOM	Microwave assisted curing for carbon fiber reinforced epoxy composites	SP1-JTI-CS-2012-01	104,236	43,340		147,576
99	323410	PUMA	PUMA	SP1-JTI-CS-2012-01	158,559	158,629		317,188
100	323420	Disacop	Disassembly of eco-designed helicopter demonstrators	SP1-JTI-CS-2012-01	149,977	50,008		199,985
101	323301	ITURB	Optimal High-Lift Turbine Blade Aero-Mechanical Design	SP1-JTI-CS-2012-01	629,325	209,775		839,100
102	323427	WELDMINDT	Open rotor Engine WELDED parts inspection using MINIaturizable NonDestructive Techniques	SP1-JTI-CS-2012-01	374,500	113,455		487,955

No	Project Number	Project Acronym	Project Title	Call Identifier	CS contribution	JU contribution	In-kind contribution	Total contributions
Total					€ 43,746,956	€ 22,552,877	€ 66,299,833	

3.6.2. Grant Agreements for which activities have ended and/ or final results are available

#	Project Number	Project Acronym	Project Title	Project Call Identifier	Project EC Contribution	Project Total Cost	In-Kind Contribution	Project End Date
1	255741	SMA SH	Smart Methodologies and multilevel/multiscale Analysis of composite stiffened panel for Structural Health monitoring	SP1-JTI-CS-2009-01	312.847,00	417.130,00	104.283,00	31/01/12
2	255878	DIN NO-CROR	Design of innovative CROR blade and pylon	SP1-JTI-CS-2009-01	305.867,00	409.930,00	104.063,00	31/01/12
3	270601	GBS SD(2)	Design & Manufacture of a ground based structural/systems demonstrator (Phase 2)	SP1-JTI-CS-2010-01	249.807,00	499.615,00	249.808,00	31/01/12
4	271829	NUR MSYS	Original design & manufacturing of a New Upstream Rotating Measurement System for gas turbine exhaust gases studies	SP1-JTI-CS-2010-03	144.210,00	202.280,00	58.070,00	29/02/12
5	285152	DTV	DTV : Dispatch Towing Vehicle, for "Engines Stopped" Aircraft Taxiing	SP1-JTI-CS-2010-05	950.952,00	1.909.220,00	958.268,00	29/02/12
6	270625	MAC OTEC H	Design and manufacturing of smart composite panels for wing applications and development of structural	SP1-JTI-CS-2010-01	88.899,90	119.933,20	31.033,30	31/03/12

#	Project Number	Project Acronym	Project Title	Project Call Identifier	Project EC Contribution	Project Total Cost	In-Kind Contribution	Project End Date
			health monitoring techniques					
7	270574	INDUCTOR	Induction based Curing Tool for Optimized heating of composite Repairs	SP1-JTI-CS-2010-01	112.500,00	150.000,00	37.500,00	30/04/12
8	270647	ICE-TRACK	Support of Icing Tests (Runback-Ice behaviour of surfaces) and Icing Mechanisms	SP1-JTI-CS-2010-01	172.100,00	229.467,60	57.367,60	30/04/12
9	271494	CS-GYRO	MEMS gyrometer for wing behaviour measurement	SP1-JTI-CS-2010-02	600.000,00	800.000,00	200.000,00	30/04/12
10	270591	SIEDIT	Development of a Slat with Integrated Electrical Deicers for Icing Wind Tunnel Tests	SP1-JTI-CS-2010-01	185.000,00	370.000,00	185.000,00	02/05/12
11	270586	WINGTECH_EVALUATION	WING BOX TECHNOLOGY EVALUATION - TRADE-OFF STUDY FOR THE RANKING OF NEW TECHNOLOGIES BEST FITTING WING	SP1-JTI-CS-2010-01	89.765,00	119.687,00	29.922,00	31/05/12
12	278170	NEURAL	Neural network computation for fast trajectory prediction	SP1-JTI-CS-2010-04	112.316,00	149.755,00	37.439,00	31/05/12
13	255811	EMAS	Electric Motor And Sensor design and manufacture	SP1-JTI-CS-2009-01	138.900,00	189.600,00	50.700,00	30/06/12
14	267678	CORRA	Sensor for Convective and Radiative Heat Loss	SP1-JTI-CS-2009-02	44.550,00	59.400,00	14.850,00	30/06/12
15	270539	EASYPATCH	Prefabricated CFRP Parts	SP1-JTI-CS-2010-01	112.050,00	149.420,00	37.370,00	30/06/12

#	Project Number	Project Acronym	Project Title	Project Call Identifier	Project EC Contribution	Project Total Cost	In-Kind Contribution	Project End Date
16	270593	AWAHL	Advanced Wing And High-Lift Design	SP1-JTI-CS-2010-01	319.544,00	450.000,00	130.456,00	30/06/12
17	271691	ADVANCED	Advanced heating system and control mode for homogeneous high temperature curing of large composite repairs	SP1-JTI-CS-2010-03	165.000,00	220.000,00	55.000,00	30/06/12
18	287122	BASE	Business Aviation for Sustainable Economy	SP1-JTI-CS-2010-05	177.727,50	236.970,00	59.242,50	30/06/12
19	270624	POTRA	Parametric optimisation software package for trajectory shaping under constraints	SP1-JTI-CS-2010-01	158.288,00	296.999,00	138.711,00	04/07/12
20	267567	LAMBLADE	Development and provision of a numerical model to solve laminar-turbulent boundary-layer transition and boundary-layer velocity profiles for unsteady flow conditions	SP1-JTI-CS-2009-02	92.400,00	123.240,00	30.840,00	31/07/12
21	255750	FLIGHT-NOISE	Advanced Turbofan-Equipped Aircraft Noise Model	SP1-JTI-CS-2009-01	247.443,00	329.924,40	82.481,40	31/08/12
22	255907	MASLAB	Multipurpose Aircraft Simulation Laboratory	SP1-JTI-CS-2009-01	250.000,00	500.000,00	250.000,00	31/08/12
23	255909	ACTIPPTSENS	Active Pressure, Position and Temperature sensors for Turboshift engines.	SP1-JTI-CS-2009-01	599.658,00	799.550,20	199.892,20	31/08/12
24	267525	TIALBLADE	(BLADES INTO) HIGH TEMPERATURE	SP1-JTI-CS-2009-02	172.476,75	233.105,00	60.628,25	31/08/12

#	Project Number	Project Acronym	Project Title	Project Call Identifier	Project EC Contribution	Project Total Cost	In-Kind Contribution	Project End Date
			MATERIAL					
25	267608	SMART	Saber Model Automatic tRanslation Tool, a software for Saber models conversion to multi-systems simulation platforms	SP1-JTI-CS-2009-02	149.310,00	199.080,00	49.770,00	31/08/12
26	270535	CLEANCOMPFIELD	Construction and Assembly of a Prototype Surface Pre-treatment Tool for In-filed use	SP1-JTI-CS-2010-01	112.500,00	150.000,00	37.500,00	31/08/12
27	270644	CLEANLE	Concept Study of a cleaning device for wing leading edges	SP1-JTI-CS-2010-01	29.955,00	39.940,00	9.985,00	31/08/12
28	296514	STRAINMON	Strain Monitoring in Composite Stiffened Panels Using Sensors	SP1-JTI-CS-2011-01	74.940,00	99.920,00	24.980,00	31/08/12
29	255739	AFC-TEFL-HLC	Active flow control application on trailing edge flap for high-lift configuration	SP1-JTI-CS-2009-01	224.993,00	299.990,00	74.997,00	30/09/12
30	255752	LEBOX	Leading Edge Box Design for Swept Flow Control Wing	SP1-JTI-CS-2009-01	223.997,00	298.663,00	74.666,00	30/09/12
31	278144	SUPERBLEND	Development of Thermoplastic Polymer blend with Low Melting Point and with Similar Properties than PEEK	SP1-JTI-CS-2010-04	149.628,00	199.504,00	49.876,00	30/09/12
32	323452	HIRSELF	Transonic High Reynolds Number Testing of a Large Laminar Wing Half Model	SP1-JTI-CS-2012-01	899.979,00	1.199.972,00	299.993,00	24/10/12
33	271838	LH-LHT-RFT	Flight-tests with multi-functional coatings	SP1-JTI-CS-2010-03	58.350,00	116.700,00	58.350,00	27/10/12

#	Project Number	Project Acronym	Project Title	Project Call Identifier	Project EC Contribution	Project Total Cost	In-Kind Contribution	Project End Date
34	270571	MISPA	Proposal for the Development of an Applicator for Microstructured Paint Coatings Resulting in Significant Drag Reduction of Treated Surfaces	SP1-JTI-CS-2010-01	182.608,00	252.873,72	70.265,72	31/10/12
35	270666	ESC RITP	Electrical Simulation Criteria & Tool Performances	SP1-JTI-CS-2010-01	100.000,00	200.000,00	100.000,00	31/10/12
36	270669	COMPARE	COMPARative evaluation of NDT techniques for high-quality bonded composite REpairs	SP1-JTI-CS-2010-01	112.497,00	150.000,00	37.503,00	31/10/12
37	270577	ME MFAC	A Microfabricated Actuator for Active Flow Control on Aircraft	SP1-JTI-CS-2010-01	94.988,00	189.976,00	94.988,00	05/11/12
38	251798	EMI COPTER	Emission analysis. Tools required to perform the emission analysis and evaluation methodology	SP1-JTI-CS-2009-01	299.543,00	399.391,00	99.848,00	30/11/12
39	271492	WIN GACCS	Wing Dynamics Acceleration Sensor	SP1-JTI-CS-2010-02	450.000,00	600.000,00	150.000,00	30/11/12
40	271498	NLF FD	NLF Starboard Leading Edge & Top cover design & manufacture	SP1-JTI-CS-2010-02	1.850.000,00	3.700.000,00	1.850.000,00	30/11/12
41	286030	WIN DTUNNEL	DESIGN AND MANUFACTURE OF A WIND TUNNEL TEST HARDWARE	SP1-JTI-CS-2010-05	291.225,00	388.300,00	97.075,00	30/11/12
42	287100	μ SA M	Micro Synthetic Jet Actuator Manufacturing	SP1-JTI-CS-2010-05	224.419,50	299.226,00	74.806,50	30/11/12

#	Project Number	Project Acronym	Project Title	Project Call Identifier	Project EC Contribution	Project Total Cost	In-Kind Contribution	Project End Date
43	296631	TAR TASEAL	Chromate free and energy efficient sealing of TSA anodic films for corrosion protection	SP1-JTI-CS-2011-01	75.000,00	100.000,00	25.000,00	30/11/12
44	296658	NOC ONDES	Novel Continuous Descent Simulation Test Support	SP1-JTI-CS-2011-01	187.121,00	249.496,80	62.375,80	14/12/12
45	296642	FRA RS-2	Future Regional Aircraft Requirements Survey - Part 2	SP1-JTI-CS-2011-01	74.340,00	99.120,00	24.780,00	15/12/12
46	323543	L-CROR CTS	Low speed aerodynamic test of large CROR aircraft model in a closed test section	SP1-JTI-CS-2012-01	1.499.880,00	1.999.840,00	499.960,00	24/12/12
47	267679	SMY LE	LE coupon based technology	SP1-JTI-CS-2009-02	148.360,00	197.814,60	49.454,60	31/12/12
48	270531	FLO COSYS	Efficient System for Flow Control Actuation	SP1-JTI-CS-2010-01	45.450,00	60.600,00	15.150,00	31/12/12
49	270573	EXP ECT	Examination of Practical Aspects of Innovative Bonded Composite Repair Techniques	SP1-JTI-CS-2010-01	56.250,00	75.000,00	18.750,00	31/12/12
50	270583	VED ISYS	Versatile and Eco-efficient Direct Drive Systems for Testing the Starters/Generators of Aircraft Engines	SP1-JTI-CS-2010-01	484.363,00	645.820,00	161.457,00	31/12/12
51	270599	BME CLEAN SKY 032	Resin, Laminate and Industrial Nanoparticles Concept and Application. Industrialization	SP1-JTI-CS-2010-01	134.999,00	180.000,00	45.001,00	31/12/12
52	270658	STR AINWISE	Hardware & Software Development of Wireless Sensor Network Nodes for	SP1-JTI-CS-2010-01	552.048,00	795.393,00	243.345,00	31/12/12

#	Project Number	Project Acronym	Project Title	Project Call Identifier	Project EC Contribution	Project Total Cost	In-Kind Contribution	Project End Date
			Measurement of Strain in Airborne Environment					
53	271858	DIMAG	Development and Implementation of Magnesium sheets in A/C	SP1-JTI-CS-2010-03	52.500,00	70.000,00	17.500,00	31/12/12
54	287020	PALAST	Assessment of the interaction of a passive and an active load alleviation scheme	SP1-JTI-CS-2010-05	142.020,00	189.360,00	47.340,00	31/12/12
55	296687	BFCLEANER	Borate Free Cleaners for Aluminium Alloys	SP1-JTI-CS-2011-01	66.279,00	99.998,00	33.719,00	31/12/12
			totals		14.849	22.511.204,52	7.661.	

4. INNOVATIVE MEDICINES INITIATIVE JOINT UNDERTAKING

4.1. Introduction to the Innovative Medicines Initiative JU (IMI JU)

The Innovative Medicines Initiative Joint Undertaking (hereinafter referred to as "IMI") has been established by Council Regulation (EC) 73/2008 of 20 December 2007 as a public-private partnership between the pharmaceutical industry, represented by the European Federation of Pharmaceutical Industries and Associations (EFPIA), and the European Union, represented by the European Commission.

The IMI JU has been set up for a period up to 31 December 2017 with the main objectives to build a collaborative eco-system for pharmaceutical R&D in Europe and to speed up the development of more effective and safer medicines for patients. In achieving this, IMI creates large-scale networks of innovation in pharmaceutical research. Joining forces in the IMI research and training projects, leading pharmaceutical companies and SMEs, academia, regulatory agencies and patients' organisations cooperate with each other to tackle the major challenges in drug development and to improve people's health. This brings up socio-economic benefits to European citizens and society and increases the competitiveness of the European pharmaceutical industry.

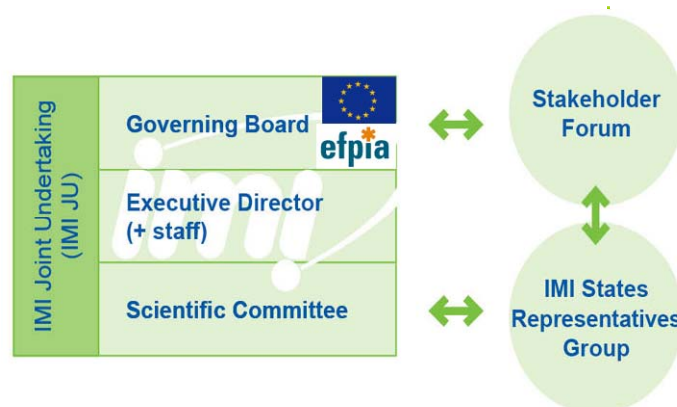
The objectives of the IMI JU are achieved through coordination of research activities that pool resources from public and private sectors. These activities are carried out by the members of EFPIA directly, and by partners selected through calls for proposals.

4.1.1. Budget

The maximum Union contribution to the IMI Joint Undertaking covering running costs and research activities shall be €1 billion. The contribution is paid from the appropriation in the general budget of the European Union allocated to the 'Health' theme of the Specific Programme "Cooperation" implementing the Seventh Framework Programme.

EFPIA provides monetary contribution to the IMI JU running costs, in an amount equal to the contribution of the Union. The pharmaceutical companies' members of EFPIA jointly fund the IMI research activities through contributions in kind at least equal to the financial contribution of the Union.

4.1.2. Governing structure



The **Governing Board** – is composed of the two founding members (the European Commission and the EFPIA) and any future members of the IMI JU and it is responsible for the IMI JU operations. Further governance bodies are:

The **Executive Director**, supported by the Executive Office (IMI JU staff); he is the legal representative of the JU and responsible for its day-to-day management.

The **States Representatives Group** is an advisory group composed of representatives from Member States and countries associated to the Seventh Framework Programme.

The **Stakeholder Forum**, representing all stakeholders (researchers from academia, SMEs, industry, clinicians, regulators, patients, etc.); it takes place annually with the aim of exchanging views on the on-going and planned research activities.

The **Scientific Committee** - is composed of 15 members that have been appointed further to suggestions made by the States Representatives Group and gives strategic science-based recommendations to the IMI JU, advises on the continued relevance of the Research Agenda and the scientific priorities, which are the basis for Call Topics.

4.2. Overall progress since the establishment of the imi jti/ju

The IMI JTI/JU performed in 2012 an extensive analysis of the on-going projects by extracting project achievements from progress reports, interim reviews as well as the scientific publications resulting from the projects. As envisioned in the Strategic Research Agenda (SRA) of 2007, the projects from the early calls focus more on the early stages of the drug development process such as pre-clinical development and its translation, biomarkers and drug safety assessment. However the trend towards later phases of the value chain such as clinical as well as chemical development becomes visible with calls launched after the update of the SRA in 2011. In particular with the 5th and 6th Call there has been a shift towards “think big” projects such as European Lead Factory – ELF, and the antimicrobial resistance programme New Drugs for Bad Bugs - ND4BB.

The measurable outputs resulting from on-going projects and in some cases expected outcomes from recently launched “think big” projects have been divided into 7 categories:

- Establishment of robust validated models for drug development
- Development of clinically relevant biomarkers
- Identification of new drug targets
- Improved drug safety prediction, prevention and monitoring
- Establishment of key standards and tools for drug development
- Clinical trials - improved design and process
- New in silico tools for drug development
- Education and Training for new generation R&D scientists

The table below presents most significant examples of outcome/achievement by category.

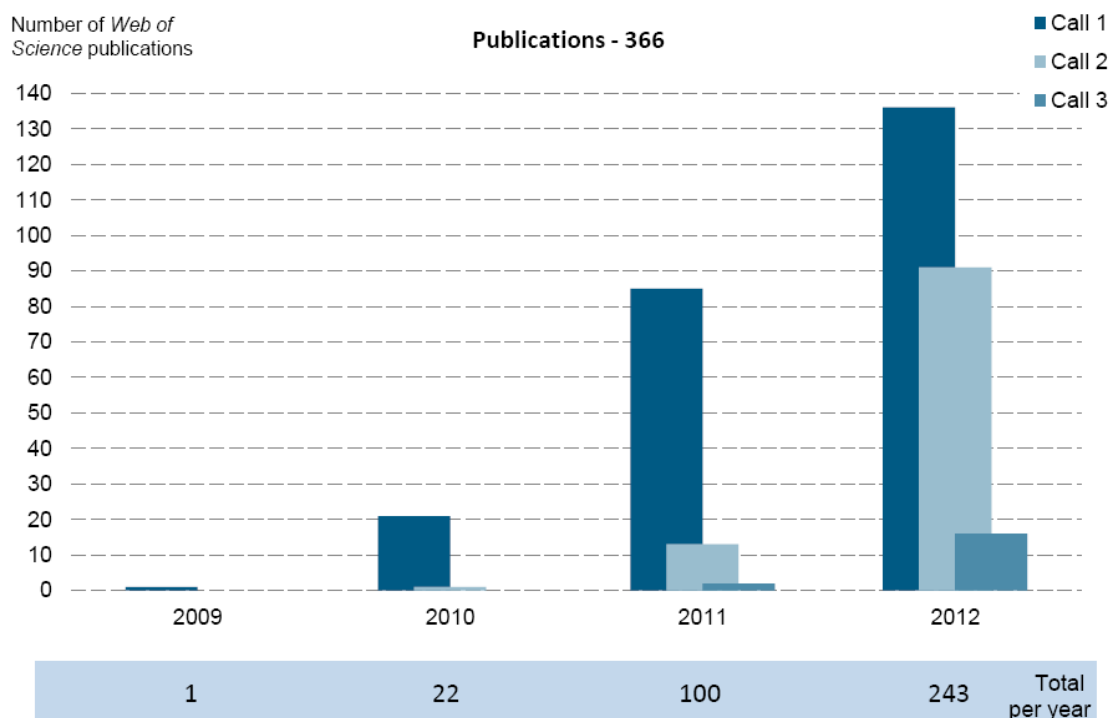
1) Establishment of robust validated models for drug development		
Project	Area	Results description
NEWMEDS	schizophrenia, depression	<p>Evaluated 14 animal models of schizophrenia in the proteomic biomarker panel developed by the consortium. Identified 4 preclinical models mimicking serum clinical biomarker signatures of first onset schizophrenia patients.</p> <p>Developed a circuit (hippocampal-prefrontal) model of schizophrenia and validated it against currently available agents.</p> <p>Developed new imaging techniques via new PET probes, and developed translatable animal-human imaging methodologies (fMRI).</p> <p>Developed and pre-validated translatable rodent touchscreen technology for precisely measuring cognitive dysfunction (together with PHARMACOG).</p>
2) Development of clinically relevant biomarkers		
Project	Area	Results description
PHARMACOG	Alzheimer's disease	<p>Identified novel biomarkers sensitive to disease progression in transgenic mice.</p> <p>Demonstrated that cortical resting state EEG is sensitive to the cognitive decline in mild AD patients and might represent a cost-effective and non-invasive marker with which to enrich cohorts of AD patients that decline faster for clinical studies.</p>
3) Identification of new drug targets		
Project	Area	Results description
MARCAR	Safety	<p>Identified a sustained liver-specific epigenetic switch within non genotoxic carcinogens target genes.</p> <p>Gained novel insight into early mechanisms of non genotoxic carcinogens that might lead to novel target identification.</p>
4) Improved drug safety prediction, prevention and monitoring		
Project	Area	Results description

e-TOX	knowledge management safety	<p>Is building a toxicology information database utilising toxicology legacy reports from pharma partners to develop better in silico tools for toxicology prediction of new compounds (2087 reports extracted, 2904 cleared, 3643 planned in total).</p> <p>Assembled ChOX database using public data covering 175,000 compounds annotated to > 400 targets with > 700,000 activities extracted from 10,000 publications.</p> <p>Developed an in silico model for predicting cardiac toxicity.</p> <p>Developed 83 in silico models – internal pre-validation on-going.</p> <p>Developed toxicogenomics model for interpretation of transcriptomics and toxicogenomics data in order to predict inter-species toxicological profiles.</p>
5) Establishment of key standards and tools for drug development		
Project	Area	Results description
RAPP-ID	infectious diseases	Developed a device and protocol related to breath-born aerosol sampling - patenting on-going .
6) Clinical trials - improved design and process		
Project	Area	Results description
NEWMEDS	schizophrenia depression	<p>The analysis of the combined data from 23,401 schizophrenia patients has resulted in a proposal for reduction in the length of schizophrenia clinical trials as well as a reduction in the number of patients required to be enrolled.</p> <p>Initiated a clinical trial to develop new approach of combining medications with therapy.</p>
7) New in silico tools for drug development		
Project	Area	Results description
OpenPHACTS	knowledge management	Integrated 7 pharmacological information sources into a modular platform to query and analyse the data (>450 M triples) and developed 4 example applications.
8) Education and Training for new generation R&D scientists		

Project	Area	Results description
PHARMATRAIN	E&T in Pharmaceutical Medicine	<p>Successfully launched the Cooperative European Medicines Development Course - a postgraduate qualification in medicines development that will provide students from Estonia, Hungary, Lithuania, Poland, Portugal, Romania, Serbia, Slovakia, Slovenia, and Turkey the very best teaching in the pharmaceutical field.</p> <p>317 students have been following various courses (49% from EFPIA companies).</p> <p>Signed Memoranda of Understanding (MoUs) with university of California and Peking.</p>

4.2.1. Bibliometric Analysis

A bibliometric analysis of IMI projects was also conducted with the assistance of a contractor and the first report delivered in October 2012. By the end of 2012, a total of 366 publications resulting from IMI projects were identified.



82.7% of IMI project publications have been published in a total of 119 journals to date, of which 95 are ranked in the top quartile of journals (by Journal Impact Factor) in their specific research fields. These journals include Nature, JAMA, PNAS and Nature Genetics. The average citation impact for IMI project research is 1.55 for the 2-year period, 2010-2011, where world average is 1.0. For comparison, the EU's average citation impact relative to world baseline for the same 2-year period in similar research fields was 1.14.

Up today, around 4500 scientists collaborate under the IMI public-private partnership umbrella. They have a common mission, namely to facilitate and accelerate the development of better and safer medicines for the benefit of patients and society across Europe. The strong interest elicited all over the world by the IMI programme to tackle anti-microbial resistance and the creation of the IMI European Lead Factory demonstrates that IMI effectively contributes to restoring European leadership and competitiveness in the pharmaceutical sector.

From the first call launched in 2008 until now, 40 Grant Agreements have been signed for a total of 51 research topics.

Overall, 3.535 organisations demonstrated interest to the IMI calls for proposal and participated to the first step submission. Among these, 737 have been retained for funding.

4.3. Call implementation – aggregated information from the establishment up to 2012

From the establishment up to 2012 IMI JU launched 8 Calls covering a total of 51 topics. No Grants Agreements have been signed for Calls 7 and 8 yet however Calls 1 to 6 resulted in the signature of 40 Grant Agreements with an outcome of €579,8M. The table below gives a more detailed overview on IMI Calls from the establishment up to 2012.

Table 1: Aggregated information on calls implemented from 2008 until 2012

Call Reference	Publication date	Evaluation date	Nr of topics	Nr of GA signed	Indicative budget [max funding] (M€)	Outcome of the call (M€)
Call 1 - 2008	30/04/2008	9-17 September 2008 2 Feb – 4 March 2009 (incl remote and panel) + re-evaluation of 2 FPPs (topic 14 Emtrain-17-Poptrain) 4 au 8 May 2009	18	15	122,7	110,4
Call 2 - 2009	27/11/2009	23-26 Feb 2010 13-16 July 2010	9	8	76,8	80,7
Call 3 - 2010	22/10/2010	14-15 Feb 2011 5-8 July 2011	7	7	114	111,8

Call Reference	Publication date	Evaluation date	Nr of topics	Nr of GA signed	Indicative budget [max funding] (M€)	Outcome of the call (M€)
Call 4 - 2011	18/07/2011	21-23 Nov 2011 17-20 April 2012	7	7	105	97,9
Call 5 - 2012	6/03/2012	18-20 June 2012 27 Sept 2012	1	1	80	80
Call 6 - 2012	24/05/2012	25-27 July 2012 29-30 Oct 2012	2	2	109	99
Call 7 - 2012	17/07/2012	8-9 Nov 2012 25-26 March 2013	2	N/A	13	N/A
Call 8 - 2012	17/12/2012	9-12 April 2013 27-29 April 2013	5	N/A	143,3	N/A
Enso Call	21/08/2012				5,2	5,9
Total			51	40	769	585,7

In terms of **Calls participations (excluding EFPIA) up to 2012** there were a total of 3535 participants in the Expression of Interest of which 737 submitted Full Project Proposals. All Full Project Proposals submitted where selected for funding. The table below gives an account of the total participants by type in the different stages and respective success rate. It has to be noted that, due to the two-stage evaluation, number of participations in FPPs and especially in funded projects might be higher than in the stage of Expression of interests. This is mainly due to recommendations made by expert evaluators following which additional partners could have been included in the consortia in order to have all the capabilities to carry out the research as described in the work plan.

Table 2: Aggregated information on participation by type and success rate

Type of participant	Nr of participants in the EoI	Nr of participants in the FPP	FPPs % of retained	Nr of participants in Funded Projects	participants success rate
Research organisations	1.451	183	12,61%	183	12,61%
Higher or secondary education	1.404	384	27,35%	387	27,56%
Private for profit (excl. education)	0	0			
SMEs	636	109	17,14%	109	17,14%
Others	44	58	131,82 %	58	131,82%
Total	3.535	734	20,76 %	737	20,85%

With regards to the grand total of beneficiaries including EFPIA participations there were 1,100 of which 363 were EFPIA representing 33% of the total beneficiaries. The Academia represented 35% of participations whilst Research Organisations represented 16.6%, SMEs 9.9%, Patients organisations 1.7%, Regulatory Agencies just short of 1% and the remaining 2.8% of participations were from Other Partners. The table below shows the exact number of participations by type of beneficiaries:

Participation by typology of beneficiaries in the 40 Projects (Calls 1 to 6 Grant Agreements signed)	
Academia	387
Research Organisations	187
SMEs	109
Patient's Organisations	19
Regulatory Agencies	8
Other Partners	31

Total IMI Participations	737
EFPIA	363
Total Participations	1104

The graphic below shows the percentage of SME in participations overall and in budget allocated from Call 1 to 7.

Overview on participation of EFPIA and non-EFPIA organisations and allocation of funding, from the setting up until 2012 (in 37 of the running projects).

Figure 1: participation overall including EFPIA and non-EFPIA organisations

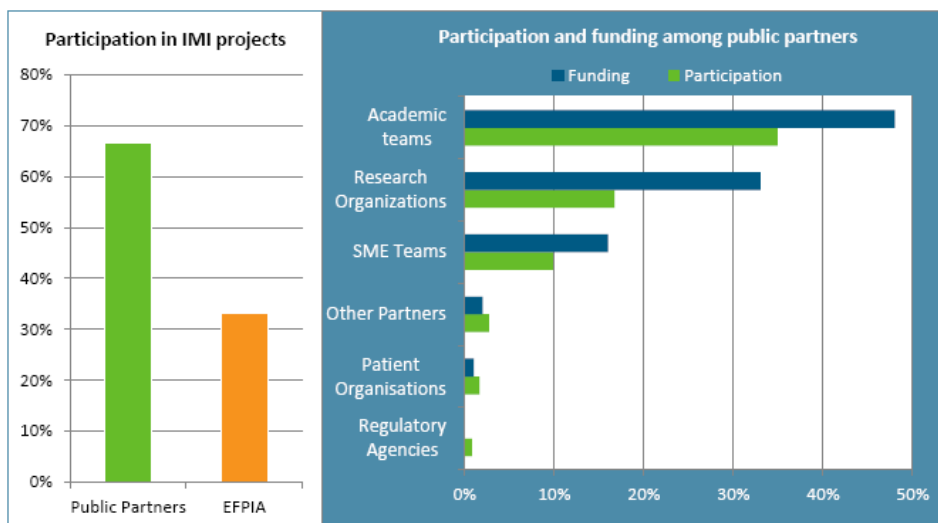
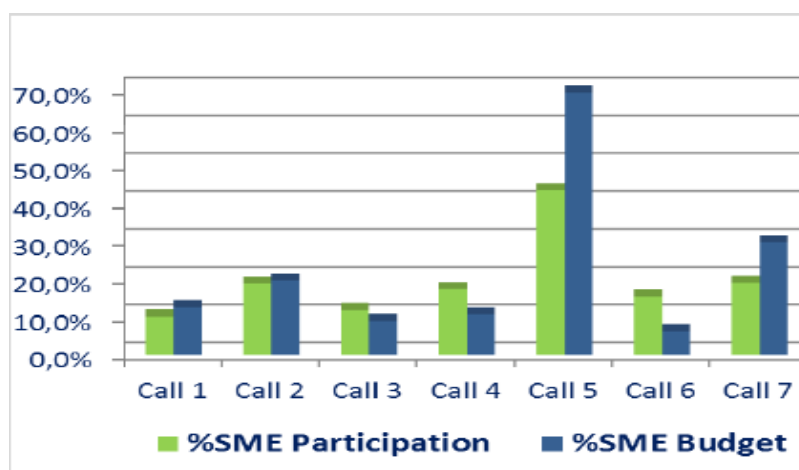
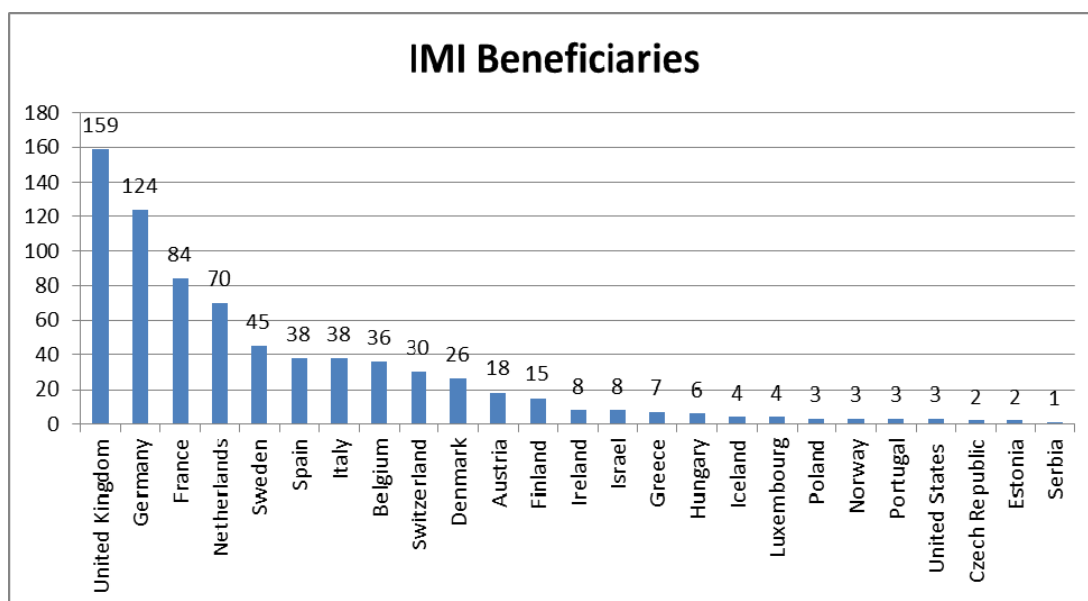


Figure 2: SMEs participation in calls 1 to 7



In terms of the overall geographic distribution of successful organisations (by coordinator and participant) as most of the project coordinators are from the EFPIA companies, the chart below does not include these.

Figure 3: Participation by country in successful projects



Considering the geographic distribution of successful organisations, both coordinators and participants but excluding EFPIA companies, the best players are the UK with 159 successful organisations followed by Germany with 124, France (84) and Netherlands (70).

Switzerland, Israel, Iceland, Norway and Serbia from the Associated Countries counted all together for 46 participations (about 6% of the total). EU-13 is represented by Hungary (6 participations), Poland (3), Estonia (2), their participations is about 1% of the total. United States has as much participations as Poland, Norway and Portugal.

4.3.1. *Samples of Key Performance Indicators*³⁴

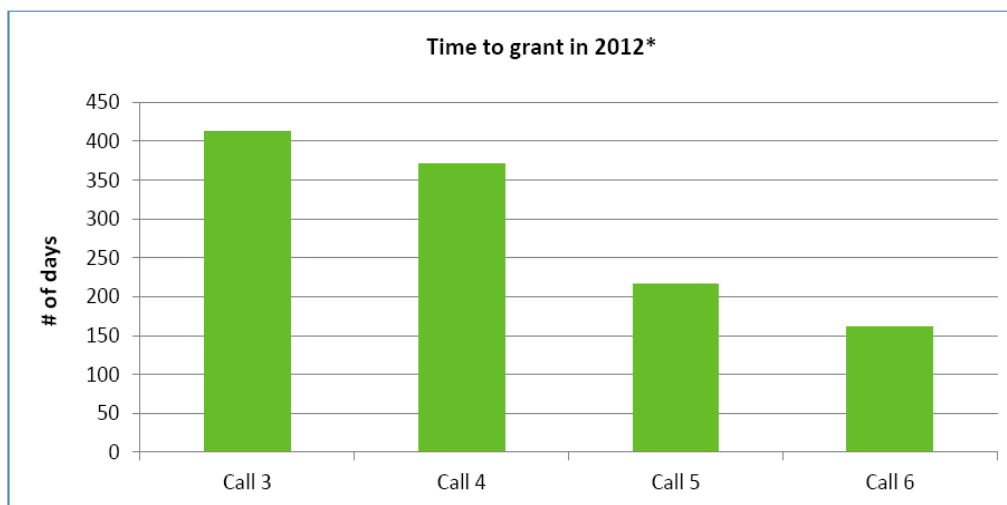
4.3.1.1. Time to Grant (TtG)

As a result of the simplification exercise and the associated process streamlining (outcome of the work of the Simplification Task Force established in autumn 2011), IMI's time to grant record has improved.

For example, an ethics screening of the highest-ranked Expressions of Interest is performed to identify critical issues early on, so that they can be taken up in the preparation of the Full Project Proposal. That way time-consuming 'repair' after the 2nd stage evaluation can be avoided. It is now also clear that the negotiations about the project agreement, which the consortium partners must conclude amongst themselves, need to start already during the preparation of the Full Project Proposal. Administrative checks on applicants now also start before the Full Project Proposal is submitted. The templates for the different application stages and the project reporting have been simplified. Great effort has been made to avoid asking redundant questions while collecting all the necessary information. In parallel the call process and the grant management is being implemented in a revised electronic system SOFIA (submission of information)

³⁴ For more in depth information on the actual result indicators please refer to the Annual Activity Report which is publicly available in the JU web page.

The following graphic shows 2012 achievements per Call in terms of TtG. The timeline calculation goes from the deadline for submission of Expressions of Interest (EoIs) until Grant Agreement signature.



*Includes two Call 3 projects with grant agreements signed in 2012; the seven Call 4 projects, Call 5 project and one Call 6 project.

4.3.1.2. Time to Pay (TtP)

The following figure sets out the breakdown per transaction type and enables a comparison with the two previous years. Details about Time to pay are set out in the subsequent graphs:

Operational costs

Budget year	Number of payments	Average time of report submission after the end of the reporting period* (days)	Average suspension period** (days)	Average time to pay (days)	Average processing time (days)	Payment on time %	Late payment %
2010	1	84	87	66	237	100	0
2011	16	88	62	54	205	94	6
2012	26	76	65	60	201	96	4

Running costs

Maximum payment time limit	Payment on time %		Late payment %		Average time to pay (days)	
	2011	2012	2011	2012	2011	2012
Year						
30 days	51	85	49	15	39	17
45 days	60	90	40	10	44	23
60 days	71	84	29	16	47	25

4.4. Outline of the main activities and achievements in 2012

4.4.1. Overview of 2012 achievements

Objectives in the AIP 2012 and Targets	Action and outcome
Research Target : Commitment appropriations as close as possible to 100% but $\geq 95\%$	Activities
Monitoring of on-going projects (Call 1 and 2) Launch of Call 3 and 4 projects Launch of 4 new Calls for Proposals	<ul style="list-style-type: none"> <input type="checkbox"/> 14 interim reviews (13 from Call 1 projects, 1 from Call 2) <input type="checkbox"/> 3 Cross-projects meetings, 2 cross-projects brochures supported <input type="checkbox"/> All seven Call 3 projects and six of seven Call 4 projects kicked off their activities in 2012 <input type="checkbox"/> Preparation for kick off of EMIF project in early 2013 <input type="checkbox"/> Calls 5, 6, 7 and 8 launched between March and December, incorporating the outcome of the simplification exercise (streamlined process supported by dedicated IT tool) <input type="checkbox"/> First Call for Proposals to Explore New Scientific Opportunities (ENSO) launched in August 2012 : 5 applications submitted Result : 95,76 % of operational budget execution
Communication No specific targets	
Promotion of IMI by enhancing stakeholders' outreach, taking advantage of success stories and testimonies of on-going projects	<ul style="list-style-type: none"> <input type="checkbox"/> IMI Communication strategy developed under the auspices of the Governing Board <input type="checkbox"/> 16 events targeting policy makers and opinion and industry leaders <input type="checkbox"/> Series of events to promote IMI to potential applicants and multipliers, including webinars, workshops and info sessions and active participation in 13 Member States national infodays <input type="checkbox"/> 9 press releases and 11 public newsletters <input type="checkbox"/> 366 publications from IMI projects <input type="checkbox"/> Average of 8100 unique visitors per month on IMI website (up 20% from 2011)
Key	performance Indicators

Objectives in the AIP 2012 and Targets	Action and outcome
Target : Bibliometric indicator: Citation scores of project publications	
<p>Set of indicators critical for monitoring IMI's achievements in terms of:</p> <ul style="list-style-type: none"> <input type="checkbox"/> strategic relevance and added value of IMI in reinforcing pharma R&D in Europe by addressing bottlenecks and gaps in drug research. <p>Target of percentage of participants in signed grant agreements that are SMEs</p> <ul style="list-style-type: none"> <input type="checkbox"/> monitoring the operational performance of the Executive Office. 	<p>Performance monitoring methodology developed (e.g. bibliometric data screening on IMI project publications). See details in page 5</p> <p>Total IMI contribution €496,851,540</p> <p>Total SME funding €93,711,345 % SME 18.9%</p>
Management of the Executive Office	
<p>Staffing 100 % of filled positions</p> <p>Finance Target : Operational costs: Commitment appropriations as close as possible to 100% but ≥ 95% Payment</p>	<ul style="list-style-type: none"> <input type="checkbox"/> Staff ceiling of 36 reached in mid-2012 (100%) <input type="checkbox"/> Staff Committee established <input type="checkbox"/> Optimal operational budget execution: 95.58% in commitments and 100% in payments

Objectives in the AIP 2012 and Targets	Action and outcome
<p>appropriations as close as possible to 100% but \geq 80%</p>	<p>73,19 % on commitment and 60,21 % on payment appropriations</p>
<p>Running costs: 100% commitment and payment appropriations</p>	<p>12 pre-financing payments with a TTP average of 5 days</p>
<p>Average Time to Pay (TTP) Pre-financing payments: \leq 15 days</p>	<p>26 Interim payments (cost claims) made in 2012 with an average TTP of 60 days. 11 grants signed in 2012 with a TTG average of 346 days</p>
<p>Interim payments to beneficiaries: \leq 45 days</p>	
<p>Average Time to Grant (TTG): \leq 290 days</p>	<p><input type="checkbox"/> 1317 financial transactions made</p>
<p>Audits</p>	<p><input type="checkbox"/> Improvement in payments time-lines, in particular reduction of late payments for running costs by a third compared to 2011</p>
<p>Information and Communications</p>	<p><input type="checkbox"/> First joint IMI-EFPIA financial management workshops for IMI projects</p> <p><input type="checkbox"/> 55 ex-post audits of beneficiaries finalised</p> <p><input type="checkbox"/> Internal control environment strengthened</p> <p><input type="checkbox"/> Preparation and launch of first audits of in-kind (EFPIA companies)</p> <p><input type="checkbox"/> 4 visits by European Court of Auditors</p>
<p>Information and Communications</p>	<p><input type="checkbox"/> Core-business tool (SOFIA) subject to significant development improvements. Now SOFIA enables the full creation of XML files</p>

Objectives in the AIP 2012 and Targets	Action and outcome
Technology	<p>to be transferred to CORDA with the following data: Expressions of Interest (EoI), Full Project Proposal (FPP), Negotiation and Project data.</p> <ul style="list-style-type: none"> <input type="checkbox"/> Technical consolidation of dedicated platforms for IMI Governance bodies as a vector of communication <input type="checkbox"/> Several new tools set up for the internal environment, including an electronic document management system

4.4.2. *Running of the IMI JU*

4.4.2.1. Human Resources issues

In total, the IMI JU could hire up to 36 staff (temporary and contract agents) in 2012, including one Executive Director, 8 project officers, one Head of Administration & Finance Unit, one Internal Audit Manager, one External Relations Manager, one Communication and Event Manager and other.

Recruitments were conducted in 2012 in line with the Multi-Annual Staff Policy Plan approved by the Governing Board. The authorised maximum ceiling of 36 staff members was reached on 1 July 2012. The post incumbency rate was very good. 6 new staff members in 2012 joined IMI as follows:

the Science pillar increased by 3 additional Scientific Project Officers and 1 Administrative Assistant. Another Administrative Assistant replaced a staff member who resigned at the end of 2011.

In Administration and Finance, a new Administrative Assistant joined following a resignation.

The following selection processes launched in 2012 will be completed in 2013:

Ex-Post Audit and Finance Officer (AD5)

Communication and Events Officer (AD7)

4.4.2.2. IT issues

Following the development of Contract Negotiation and Project Phase the XML Export to CORDA has been enhanced to include data from these two phases. The development work has now been completed. SOFIA enables the full creation of XML files to be transferred to CORDA with the following data: Expressions of Interest (EoI), Full Project Proposal (FPP), Negotiation and Project data. The interface is currently in a phasing test. Further steps will be conducted with DG RTD to confirm adequate reception, loading and availability of IMI data in CORDA.

4.4.2.3. Procurement activities

The large majority of IMI's procurement in 2012 was done under existing multi-annual framework contracts. Of the framework contracts, the most significant in volume, namely in IT services, audits and interim staff provision, have been concluded jointly with other Joint Undertakings to avoid duplication and minimise administrative effort.

The Joint Undertakings took the decision in 2012 to increase the contract volume ceiling of the framework contracts in IT infrastructure services, telecommunications services and software development (JTI/IT/2010/NP/01 - Lots 1-3) under a negotiated procedure under Art.126(1)(f) of the Implementing Rules of the Financial Regulation. The possibility was foreseen in the original tender specifications, because the Joint Undertakings had just been established, which made it difficult to estimate long-term needs.

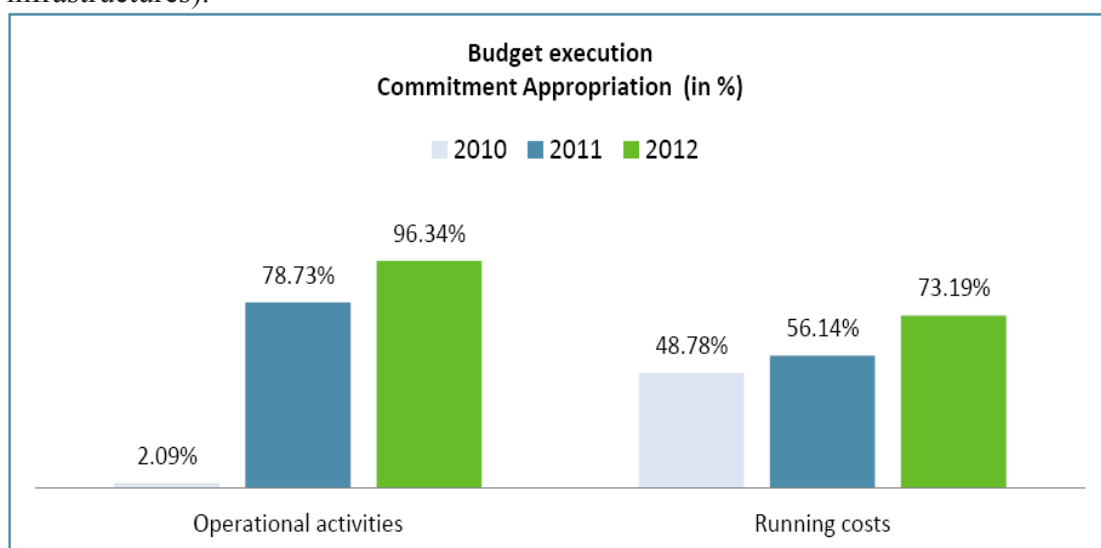
IMI also participates where possible in the European Commission’s framework contracts. In 2012, the most significant of these in usage volume terms was in the field of support services for event organisation.

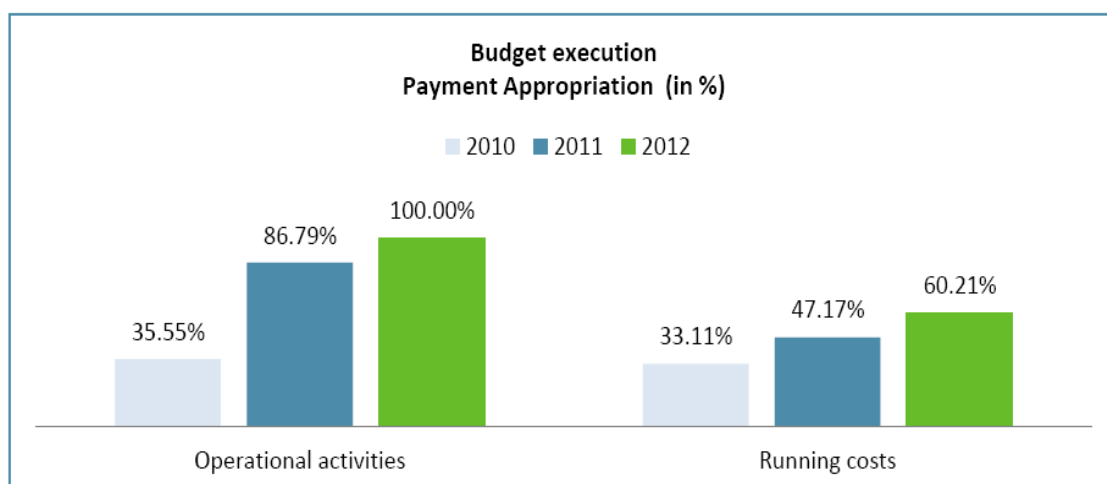
There were only two new larger tender procedures carried out in 2012. The table below gives the details on these including the procedure used in each case, the publication date, the award date and the name of the contractor(s). Only tenders with a value exceeding EUR 60,000 are listed here.

Tender procedures in 2012				
Reference and subject	Procedure	Publication date	Award date	Contractor(s)
<u>IMI/2012/SC/85</u> Service contract to provide bibliometric data analysis of IMI’s projects.	Negotiated procedure with min. 5 candidates – Service contract	31/05/2012	11/07/2012	Thomson Reuters Scientific Inc., United States
<u>IMI/2012/SC/139</u> Framework contract for the provision of meeting premises and related services.	Open procedure – Framework contract with a cascade of max. 3 contractors	22/09/2012	21/12/2012	1. Le Nouveau Palace, Belgium 2. Renaissance Hotel, Belgium 3. The Hotel, Belgium

4.4.2.4. Budget and finance

In 2012, the budget execution improved significantly compared to 2011, with 95.76% execution in commitment appropriations and 96.70% in payment appropriations. The graphs below set out achievements both for operational activities (Call-related) and for the running costs of the Executive Office (staff and infrastructures).





Regarding execution on carry overs, significantly progress has been made as 100% of the amounts carried over from 2011 has been consumed in 2012.

	Carried over from 2011	Executed in 2012
CE	62.411.561	62.411.561
CP	10.675.204	10.675.204

The new amounts carried over from 2012 to 2013 have decreased compared to those of 2011.

	Carried over to 2013
CE	20.825.936
CP	424.656

Concerning financial operations, IMI handled a total of 1317 financial files (payments, commitments, recovery orders and budget transfers) in 2012.

4.4.3. *Second Interim Evaluation*

The Council Regulation of the Innovative Medicines Initiative (IMI) JTI Joint Undertaking stipulates that the Commission shall conduct a second interim evaluation by the 31 December 2013 with the assistance of a panel of independent experts, on the basis of the terms of reference established after consultation of the JU. During 2012 the IMI JTI JU has cooperated with the services of the Commission and the Clean Sky and FCH JTIs JUs to start the preparatory work. This concerned in particular the identifications of adequate independent experts and inputs provided for the definition of the terms of reference.

4.4.4. *Progress in the implementation of the strategic research agenda*

Following the updating of the SRA in 2011, increasing stress has been a shift towards “think big” projects. In particular, with the 5th and 6th Calls focus has been put on European Lead Factory – ELF, and the antimicrobial resistance programme New Drugs for Bad Bugs - ND4BB.

The European Lead Factory comprises two topics:

- European Screening Centre

– Joint European Compound Collection

This theme falls under key research priority number 4 of the revised Strategic Research Agenda: ‘Beyond High Throughput Screening - pharmacological interactions at the molecular level’, which is correlated to the following Areas of Interest: Strategies in R&D, Tools and Techniques.

4.4.5. *Major decisions taken by the governing board and other ju bodies*

The Governing Board oversees the implementation of IMI’s activities. As from April 2012, Mr Roch Doliveux (EFPIA) became Chairman and Dr Rudolf Strohmeier (EC) Vice-Chairman for a one year mandate. In 2012, 21 decisions have been approved by the Board. The Governing Board met three times (March, June, October), adopting various decisions and reports that include the Annual Activity Report 2011, the Annual Implementation Plan for 2013, Call texts and budgets and the outcome of evaluations. In addition, monthly teleconferences between the Chair, Vice-Chair and the Executive Director were held for information purposes.

The Scientific Committee held three meetings in 2012 (March, June, October), Chaired by Professor C. Noë. Key activities included update on IMI projects achievements, notably on the occasion of interim reviews of Call 1 projects, and consultation on future and new call topics.

Through its annual Stakeholder Forum, IMI engages key stakeholders in discussions about its activities. IMI held its 2012 Stakeholder Forum on 30 May, the event gathered over 150 participants. Updates on IMI project achievements and future calls topics were presented and discussed. A debate on IMI's impact on the pharmaceutical research and development (R&D) landscape took also place.

4.4.6. *Main communication activities*

In 2012, the IMI communication strategy and key messages focused on communicating the success of IMI. As the overview below shows, IMI has generated a wide visibility through various events, publications and other communication actions as described in the table below:

. EVENTS	Date & Place	Outcome / Report
<i>Key events targeting policy makers, opinion leaders and industry leaders</i>		
European Voice Debate on Healthcare □ Presentation on IMI	19 March 2012 Brussels	□ Article in European Voice □ Visibility towards EU journalists and opinion/decision makers
DIA Euomeeting □ Session + Exhibition stand	26-28 March 2012 Copenhagen	Visibility towards industry/opinion leaders.
Innovation in Healthcare without Borders, European Commission □ Exhibition stand	16 April 2012 Brussels	Visibility towards SMEs
Hearing at the European Economic and Social Committee	4 May 2012 Brussels	Visibility to national EU opinion makers
European Parliament Lunch Debate (The	8 May 2012	Visibility towards

Parliament Magazine), hosted by Lambert Van nistelrooij, MEP □ Presentations on IMI	Brussels	MEPs.
IMI Stakeholder Forum □ on IMI's impact on pharma R&D	30 May 2012 Brussels	Over 150 people attended
European Partnership for Action Against Cancer (EPAAC) Research Forum □ Presentations on IMI on patient involvement	2 July 2012 Brussels	Outreach to patients' organisations
EuroScience Open Forum (ESOF) □ Presentations on IMI	13 July 2012 Dublin	Visibility towards media.
Innovation Days – a Pharma & Biotech event □ Presentation on IMI	1 October 2012 Poland	Visibility towards SMEs and industry
European Health Forum Gastein □ EPFIA lunch debate: Dialogue, transparency, trust □ IMI/EPFIA session : Connecting new science, research healthcare needs	4 October 2012 Austria	Strong visibility towards policy makers / industry decision makers
Innova Health Cyprus Presidency event □ IMI satellite event 'IMI – Putting Policy Into Practice' □ IMI involvement in main event & resulting report	11 October 2012 Cyprus	Strong visibility and positive recognition by policy makers / industry decision makers.
German Pharmaceutical Industry Association (BPI) Parliamentary Evening □ Key note speech on IMI	17 October 2012 Brussels	Exposure to industry and EU policy makers
Regulatory aspects in Innovative Medicines Initiative Projects (EMA) □ IMI chairs session	7 November 2012 London	Encouraging involvement of regulators
IMI European Parliament Event, hosted by Amalia Sartori, MEP Health Research at a Crossroads – Are Public-Private Partnerships the Way Forward?	13 November 2012 Brussels	□ ~140 attendees □ Personal contacts with MEPs and high-level opinion makers
IMI participation in InnovaHealth event in the European Parliament (by European Alliance for Personalised Medicine), hosted by Petru Luhan, MEP	29 November 2012 Brussels	Personal contacts with MEPs
<i>Key events to promote IMI's Calls to potential applicants and multipliers key actions</i>		
Launch of 4th Call projects □ Press release + through other communication channels	5 December 2012	
ENSO Call promotion □ Webinar for coordinators of on-going	25 October 2012	

projects	
IMI support and/or staff presenting IMI at national info days	Throughout 2012 Austria, Cyprus, Czech Republic, France, Germany, Lithuania, Malta, Poland, Portugal, Romania, Spain, Sweden, Switzerland
5th Call promotion <input type="checkbox"/> Open Info Day <input type="checkbox"/> Webinars <input type="checkbox"/> Web + email campaign	27 February 2012, Brussels 5 and 20 February 2012
6th Call promotion <input type="checkbox"/> presentation at FP7 Health Info Day <input type="checkbox"/> workshop at IMI Stakeholder Forum <input type="checkbox"/> presentation at FP7 Health NCP meeting <input type="checkbox"/> webinars	29 May 2012, Brussels 30 May 2012, Brussels 31 May 2012, Brussels 24, 25 May and 12 June 2012
7th Call promotion <input type="checkbox"/> Webinars <input type="checkbox"/> Info session during IMI Stakeholder Forum	12, 17, 20 July, 2 August 2012 30 May 2012
Health NCP webinar (Health NCP Net) <input type="checkbox"/> On IMI Calls, rules, procedures, communication This was highly successful and will be repeated in the future	17 September 2012
BioPartnering Future Europe (focus on SMEs) <input type="checkbox"/> Presentation on IMI Calls	8 October 2012, Brussels
8th Call promotion <input type="checkbox"/> Webinars on AMR topics for SRC & SC <input type="checkbox"/> Webinars for applicants (+ for NCPs & SRG) on all topics	15 October 2012 6,11,12,13,17 December 2012

4.4.6.1. SMEs awareness rising

As part of its commitment to communicating better with all stakeholders, IMI pursued its efforts towards SMEs. The JU Staff attended many meetings with SME organisations, ensured that the voice of SMEs is heard at its stakeholder meetings.

A Stakeholder Workshop Addressing ‘Public-Private Partnership in Innovative Health Research under Horizon 2020’ was held in Brussels, on 19 September 2012. This workshop addressed the experience of SMEs in Public-Private Partnerships (PPPs), particularly IMI, and gathered important lessons learnt for inclusion in any future PPP under Horizon 2020.

SMEs, both those involved in IMI projects and those not involved, were invited to attend and contribute. The IMI JU, the European Commission and EFPIA presented the current status of SME participation in and future perspectives under Horizon 2020.

There was strong support for IMI and the benefits that working in a PPP can bring, however, based upon experience, areas of improvement were suggested. These included the need to speed up decision making and the Call process and recruitments

into consortia. There was general support for a future PPP under Horizon 2020 and the societal benefits that such an initiative could bring. It was clearly felt that a future PPP should have a broader range of partners and be easier to access for SMEs in order for it to be truly successful.

4.4.7. *Success Stories*

Chronic pain affects one in five European citizens and adequate treatments are often lacking. The **EUROPAIN** consortium has revealed important findings that contribute to a better understanding of the mechanisms of chronic pain. For instance, the scientists discovered similarity between pain caused by chemotherapy and the cold-induced pain caused by concentrated menthol. They have also identified a molecule that causes the pain of sunburn, raising hopes for the development of new, more effective painkillers. The scientists hope that this newly discovered pain mechanism in sunburn will help them to understand more about pain in other inflammatory conditions like arthritis and cystitis as well. Studying brain imaging (scans), the researchers have found that changes in how the brain functions in patients with chronic pain can also be seen after minimal pain in healthy volunteers.

The **SUMMIT** consortium is developing methods to identify risk factors for chronic complications in diabetes patients. Diabetic complications, leading to stroke or problems with the heart, kidneys and eyes, impose an immense burden on the quality of life of the patients and account for more than 10% of health care costs in Europe. Together with other initiatives, SUMMIT has generated the largest data collection of genomic studies (Genome Wide Association Studies) up to date, including over 26 000 individuals with or without vascular or kidney complications of type 1 and type 2 diabetes. It will help the scientists to identify genetic factors that increase the risk of diabetic complications. A series of studies examining potential metabolic markers or indicators of vascular complications of diabetes is near completion. SUMMIT combines genetic, biomarker and imaging data to identify non-invasive imaging markers of complications in blood vessels from carotid (large artery in neck and chest) examinations. For visualizing the high-risk atherosclerotic plaques (rich in fat deposits and inflammation) the consortium has developed a non-invasive ultrasound based technology. SUMMIT has constructed computer models that will help to predict complications and response to treatment, on the basis of changes in the body.

The **MARCAR** consortium has developed and proved the effectiveness of methods that help identify chemical changes in the genetic material (chromosomes) that are related to cancer (non-genotoxic carcinogenesis). The detection of these so-called epi-genetic changes can be used as early biological indicators (biomarkers) to predict if drugs in development are likely to cause unwanted effects (cancer) in patients. The findings will therefore contribute to a better assessment of the safety of candidate drugs. In addition, MARCAR has demonstrated that magnetic resonance imaging (MRI) can be used to reliably detect liver tumors in mice when they are just 1 mm across - previously more invasive techniques were needed to pick up tumors of this size. As MRIs are non-invasive, they can be repeated at different stages of the study, meaning that fewer animals are needed to obtain reliable results. The fact that MRIs can be used to detect tumors at an early stage and to monitor their reversibility makes them an invaluable tool in assessing the cancer risk of potential drugs. MARCAR's development of early biomarkers and non-invasive tumor imaging methods should ultimately help reduce the need for long-term experiments in animals.

4.5. Calls implemented in 2012

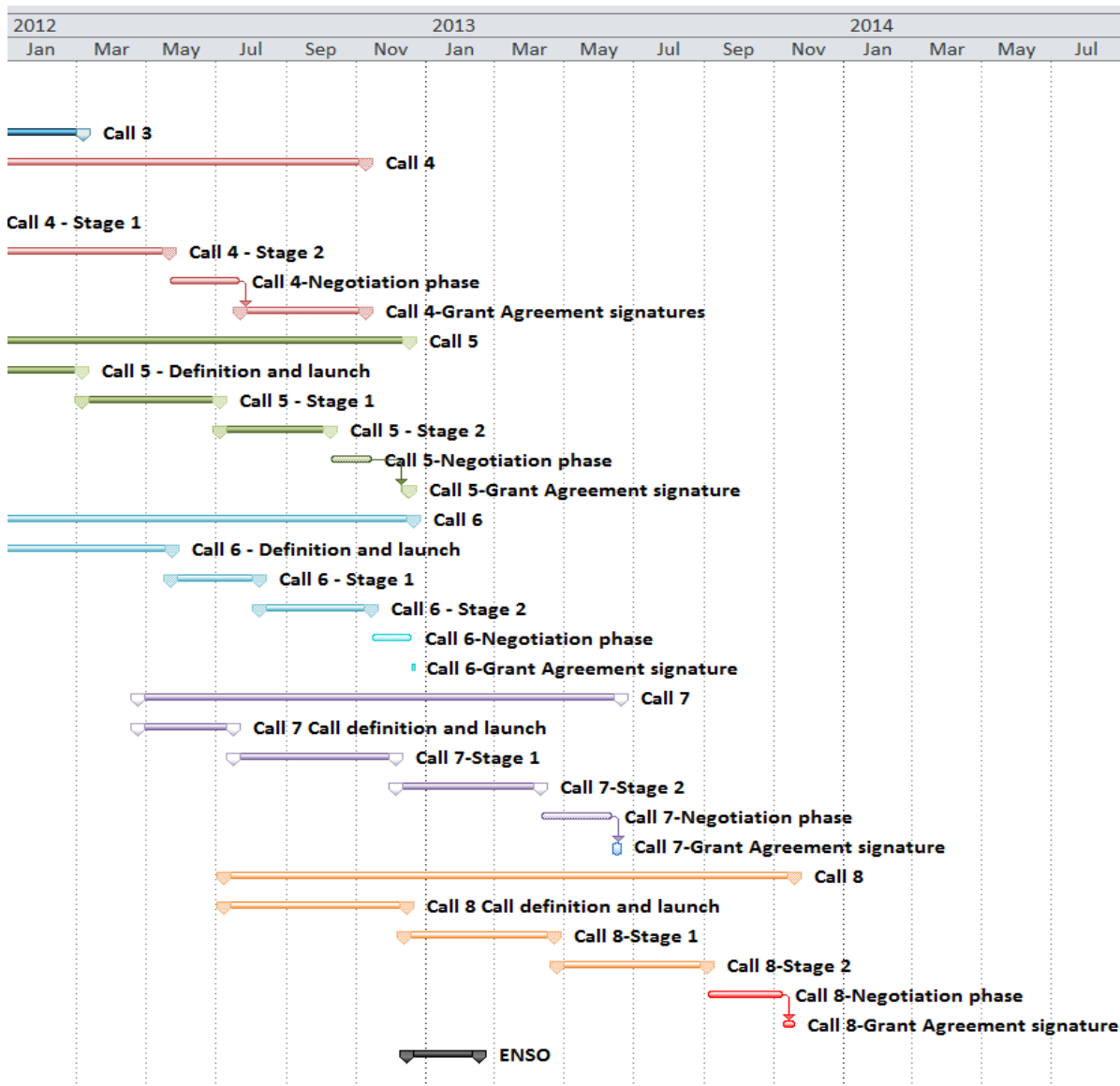
4.5.1. Calls implementation - Overview

The year 2012 was a landmark for the Innovative Medicines Initiative. With the launch of 4 new Calls for Proposals (5, 6, 7 and 8) and a Call to Explore New Scientific Opportunities (Enso Call) for a total IMI JU contribution of € 351.018.540 matched by the industry for an amount of in kind contribution of € 322.910.064 and the kick-off of 13 new projects, IMI committed almost half of its available budget in a single year. This unprecedented effort resulted in the successful mobilization of the different stakeholders, as reflected by the high quality funding applications that IMI received, involving 487 industrial and academic teams.

During 2012, IMI consortia developing new tools and methods to improve assessment of drug actions or implementing new education and training programmes reported striking results. While these first achievements are very encouraging, their effective translation into standards of care will require novel innovative approaches, taking advantage of the neutral platform represented by IMI. To help achieve this goal, in 2012 IMI launched new projects focusing on defining real effectiveness and risk/benefit evaluation of drugs and vaccines.

In addition to the implementation of the final stages of Calls 3 and 4, five new Calls (Calls 5 to 8 and the ENSO Call) were launched in 2012. The new streamlined Call process, including simplified forms and the improved SOFIA submission tool, was fully implemented from the 5th Call.

These changes shortened the time needed from Call launch to project funding, and therefore allowed the full implementation (including Grant Agreement signature) of both Calls 5 and 6 within one year. An overview of these activities is displayed in the chart below (2012 – 2013).



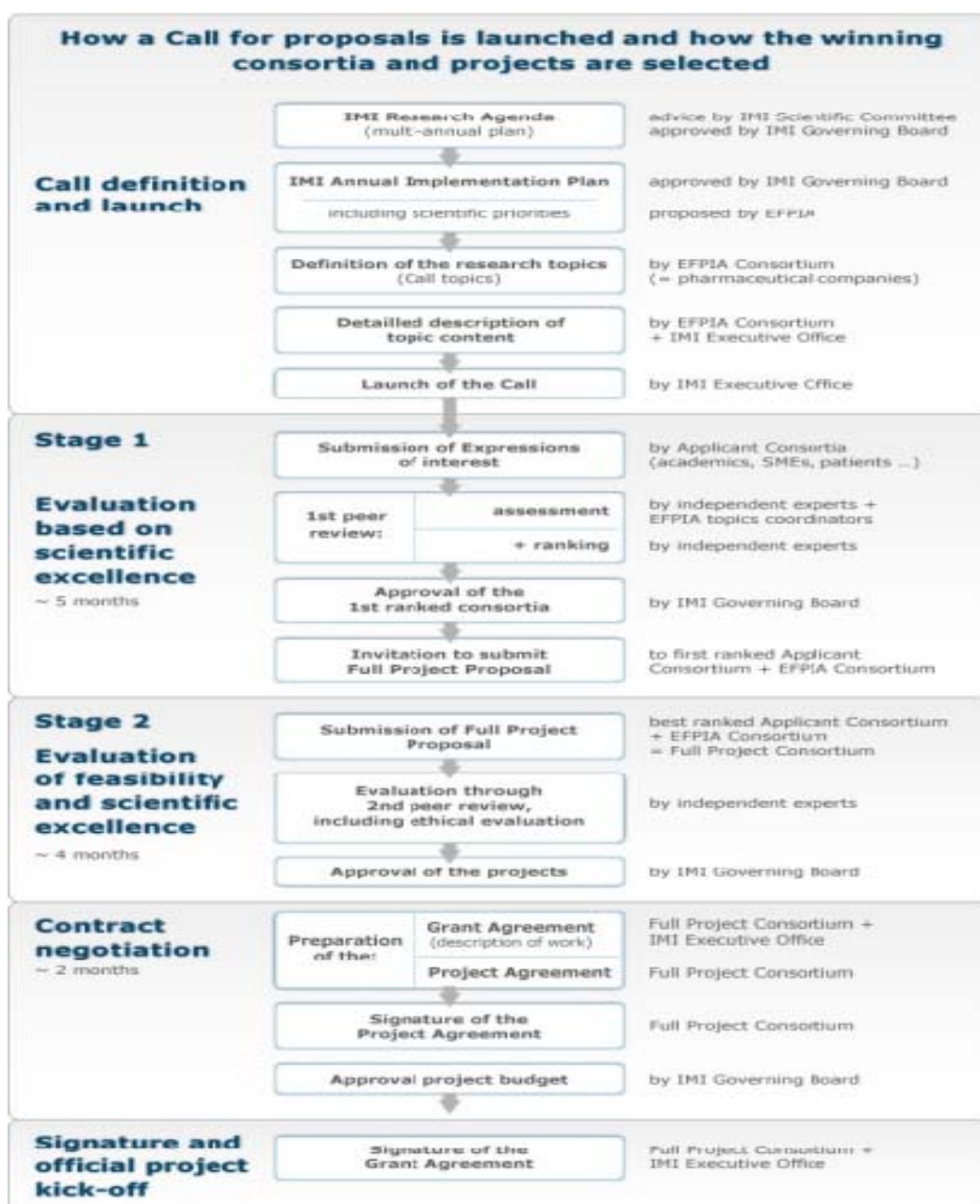
4.5.2. Evaluation and selection procedures

Project participants are selected by IMI through open and competitive calls for proposals following a two-stage submission and evaluation process.

During the first stage (referred to also as "Stage 1") the call for proposals is announced. The interested parties from academia, SMEs, patient organisations, regulatory agencies and large non-EFPIA companies are invited to form applicant consortia and to submit their Expressions of Interest (EoIs) in response to the call. A first peer review is then performed, resulting in a shortlist of top-ranked consortia. The applicant consortia of the best ranked EoIs and the EFPIA consortium already associated to the topic are invited to form a full project consortium. They prepare a Full Project Proposal (FPP) containing a draft project agreement, which shall be concluded by the members of the consortium governing their relationship.

In the second stage of the call (referred to as "Stage 2"), the FPPs are evaluated during a second peer review based on the consistency with the original EoI, scientific excellence, quality of the implementation plan and potential impact. Ethical issues are also considered at this stage. Only FPPs that have been favourably reviewed in Stage 2 of the call can be selected for funding. The selected full project consortia are

invited then to conclude a grant agreement governing their relationship with the IMI JU. The chart below shows the overall selection procedure:



The evaluation criteria as listed in the table below are applied. Thresholds are set for some or all of the criteria, such that any expressions of interest or full project proposal failing to achieve the threshold scores will be rejected. A weight is also applied to some criteria. The fourth criterion at this stage was only assessing the existence of potential ethical issues to be reviewed in the next stage of the call.

Nº	Evaluation criterion	Score	Weight	Threshold
1.	Scientific and/or technological excellence	0 to 5	4	15/20
2.	Excellence of partnership	0 to 5	3	10/15
3.	Work plan outline	0 to 5	---	---

4.	Ethical issues	Yes/No	---	---
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With respect to experts involved in the review of proposals submitted in response to Call 4, 5 and 6 the majority originated from Europe (56 from EU 15; 9 from EU-12) and 23 from outside Europe.

4.5.3. Aggregated information 2012

Calls 5, 6 and 7 have been analysed by aggregating information.

The table below the **number Expressions of Interest submitted for each call and the respective evaluation results** (e.g. the number of eligible Full Project Proposals retained for funding):

Table 3: Evaluation results

Call Reference	Submitted Expression of Interest			Evaluation results			Reserve list, if any % of retained
	Submitted Expression of Interest	Eligible EoIs	% of retained	Above threshold	Submitted Full Project Proposals	Success rate%	
Call 5 - 2012	14	12	85,7%	2	1	7,1%	
Call 6 - 2012	14	13	92,9%	3	2	14,3%	
Call 7 - 2012	9	8	88,9%	2	2	22,2%	
Total	37	33	89,2%	7	5	13,5%	

Note: In Calls 5 and 6, two proposals merged into one.

In terms of the **participation by typology of beneficiaries in Calls 5, 6 and 7** there were a total of 418 Expressions of Interest, 62 of which submitted Full Project proposals and 62 were selected for funding. The table below gives an account of the total participants by type in the different stages and respective success rate.

Table 4: participants by type and success rate

Type participant	Nr of participants in EoI	Nr of participants in the FPP	FPPs % of retained	Nr of participants in Funded Projects	Participants success rate
Research organisations	178	18	10,11%	18	10,11%
Higher or secondary education	131	25	19,08%	25	19,08%
Private for profit (excl. education)	0	0			
SMEs	104	16	15,38%	16	15,38%
Others	5	3	60,00%	3	60,00%
Total	418	62	14,83%	62	14,83%

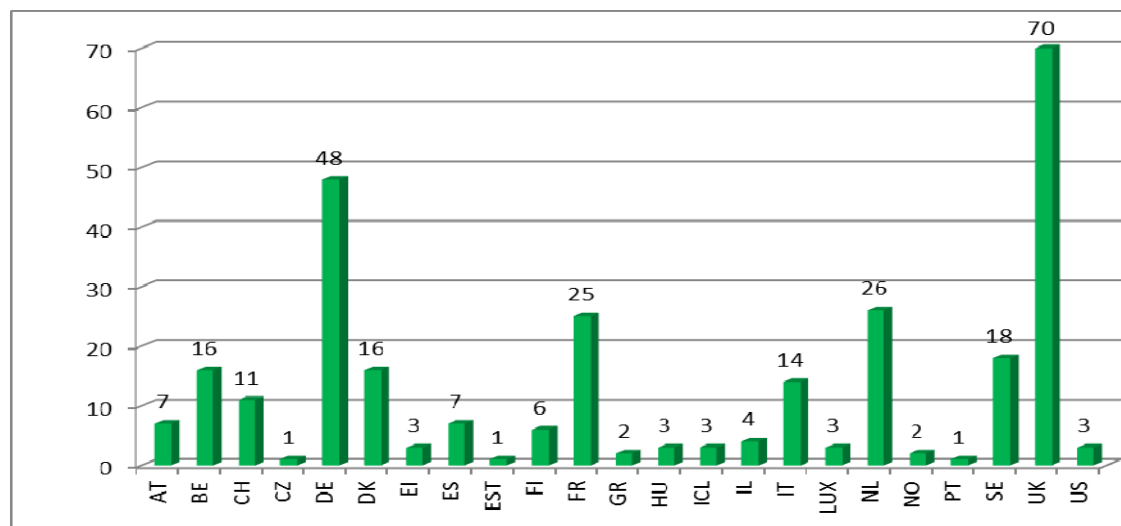
Furthermore, the **participation of SMEs** has been also carefully analysed in 2012.

The involvement of Small and Medium Enterprises (SMEs) in IMI projects has become one of the top priorities. Therefore efforts are being made to enhance their participation. The table and figures below summarise SME involvement in IMI projects for which grant agreements were signed up to the end of 2012.

Total committed funding	€496,022,446
Total SME funding	€93,711,345
% SME	18.9%
Total SME participation	112
% SME	16.1%
Unique SMEs	98
% unique SME	14.1%

Even though Calls 3 and 4 were launched in 2011 it was not possible to provide the countries participation figures however these figures are now available and therefore included in the graphic below which gives a precise breakdown of participations by Country in Calls 3 to 7.

Figure 4: participation by Country in calls 3 to 7 (FPP selected for funding)



Out of the 290 participations overall, the UK, Germany, Netherlands and France performed best counting for 58% of the total. Globally, Hungary, Czech Republic and Estonia represented the EU-13 Countries with 5 participations, 3 Hungary and 2 each Czech Republic and Estonia. IMI also attracted organisations from the Associated Countries, which with Switzerland, Iceland, Israel, and Norway accounted for 20 participations overall (about 7%).

4.5.4. IMI – 3rd Call – 2010 – Implementation of final stages

Call 3 resulted in the signature of 7 Grant Agreements in total.

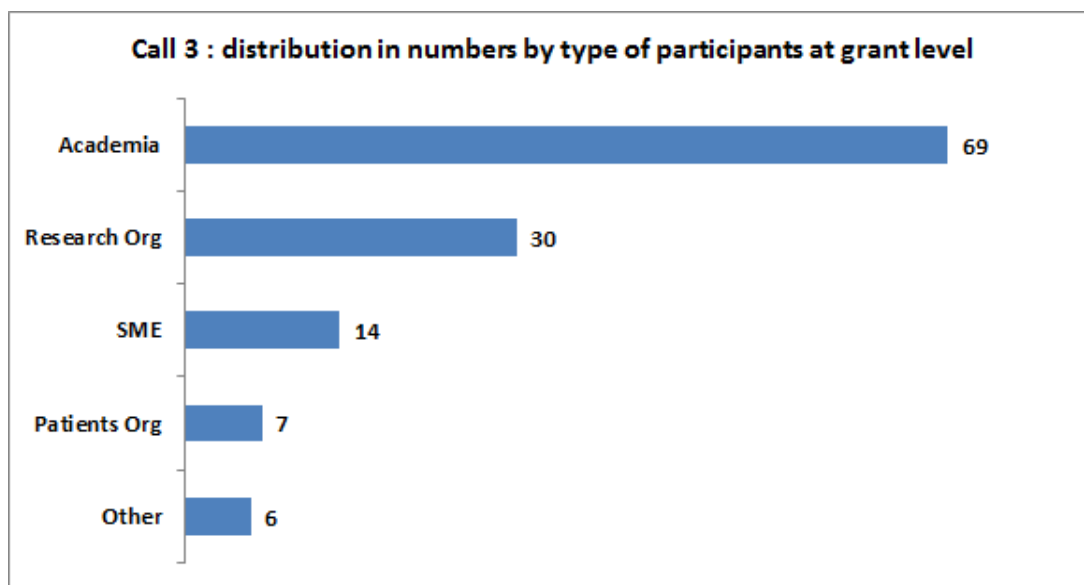
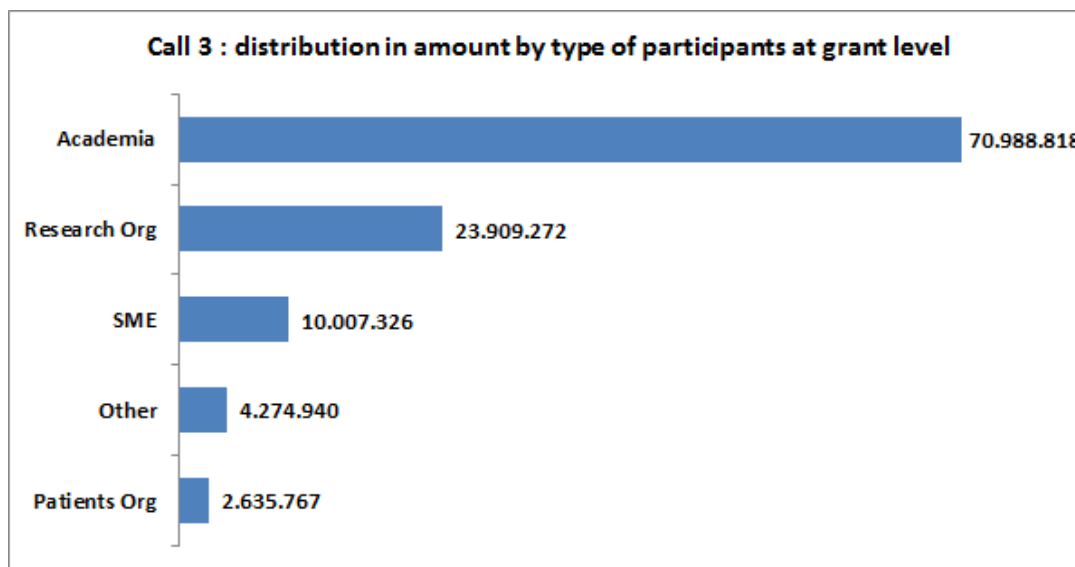
The final two Grant Agreements (ABIRISK and PreDICT-TB) were signed in early 2012. This enabled the IMI to proceed with pre-financing payments of EUR 10.5 million.

GA №	Project acronym	A	B
		JU contribution	In-kind contribution
115336	MIP-DILI	€ 15.335.538	€ 12.558.465
115303	ABIRISK	€ 18.170.217	€ 9.358.093
115308	BioVacSafe	€ 17.425.666	€ 7.579.933
115337	PreDICT-TB	€ 14.778.855	€ 9.296.156
115300	EU-AIMS	€ 19.467.204	€ 9.538.635
115317	DIRECT	€ 21.388.643	€ 16.472.745
115334	EUPATI	€ 5.250.000	€ 4.756.112
Total		€ 111.816.123	€ 69.560.139

The highest percentage (63.5%) of the total JU contribution (€111.816.123) was distributed among 69 Academia participants, 21.4% was distributed among 30 Research organisations, 9% among 14 SMEs, 2.4% among Patients Organisations and the remaining among Other Partners.

The two graphics below illustrate the exact amounts distributed by type of participants and the distribution in numbers also by type of participants, both at grant level.

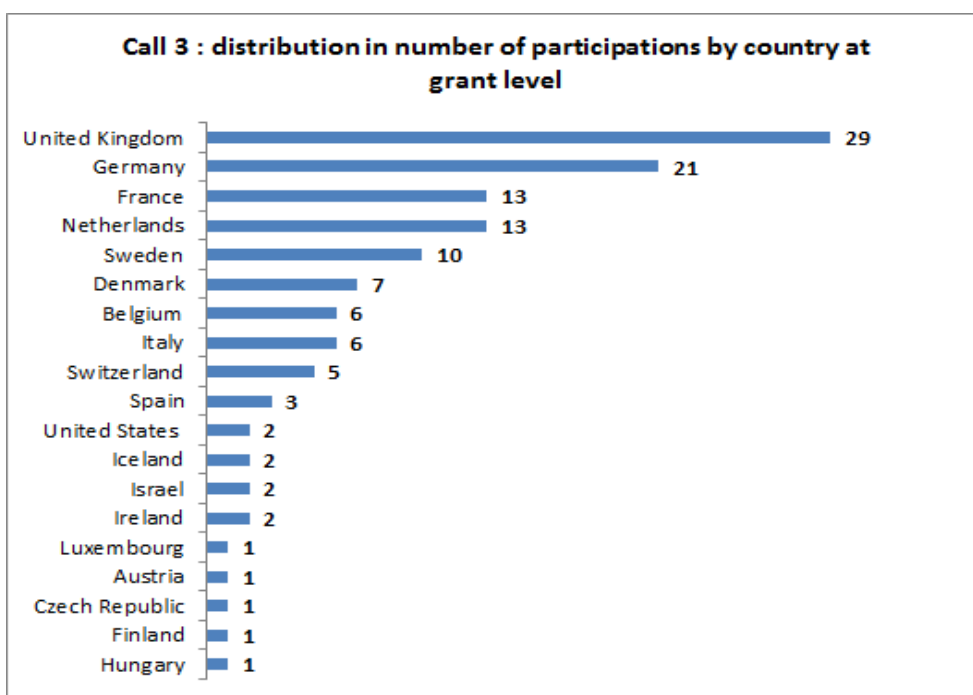
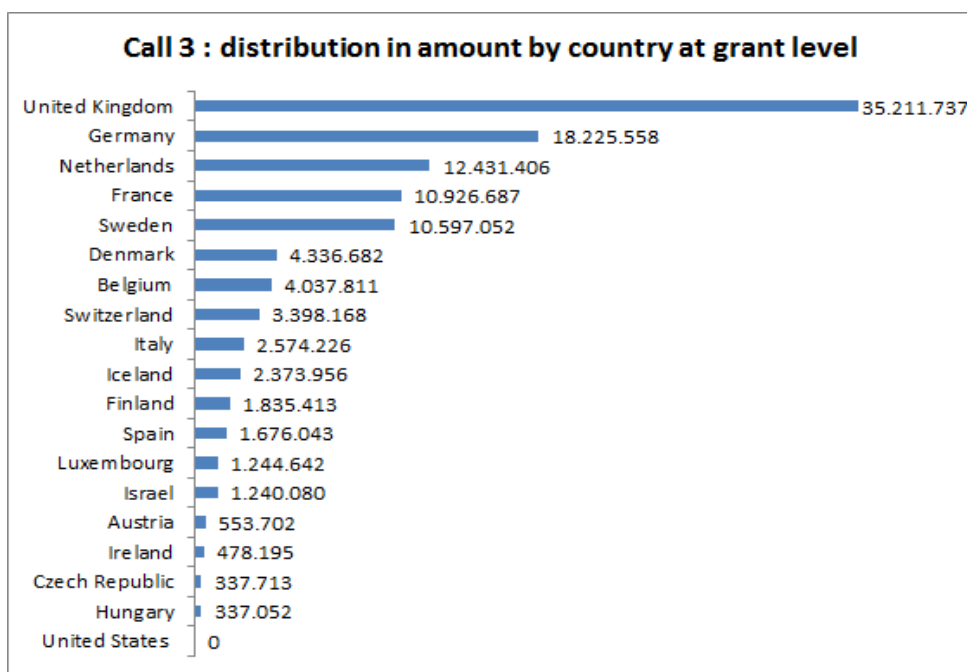
Figure 5: participation by type and budget distribution (FPP selected for funding)



In terms of the geographical distribution of the amounts above as well as the geographic distribution in number of participations at grant level, of the **19 Countries involved**, the United Kingdom comes on top with the highest amount (31.5% of the total JU contribution) and with the highest number of participations (29), followed by Germany with 21 participations among which 16.3% of the total JU contribution was distributed.

The graphics below show the amount distributed and the number of participations by country at grant level.

Figure 6: Participation by country and budget allocated (FPP selected for funding)



4.5.5. IMI - 4th Call – 2011

4.5.5.1. Summary information

Call Identifier	IMI -4rth Call - 2011
Publication date	18 July 2011
Deadline for submission of EoIs	18 October 2011
Evaluation of EoIs	October – December 2011

Results of 1st stage approved by GB	14 December 2011
Deadline for submission of FPPs	13 March 2012
Indicative Total budget (in €)	EUR 105 million
EU contribution after evaluation	EUR 97.943.541
In-kind contribution after evaluation	EUR 111.829.483
Number of topics	7
Reference to call topics	http://www.imi.europa.eu/content/4th-call-2011

The 4th Call for proposals, published on 18 July 2011, consisted of the following 7 topics:

- (1) Knowledge management
- (2) Building a European Medical Information Framework (EMIF) of patient-level data to support a wide range of medical research. This Call theme consisted of 3 “sub-topics” to be merged into one final project.
 - (a) Information Framework / Knowledge Management Service Layer.
 - (b) Metabolic complications of obesity
 - (c) Protective and precipitating markers for the development of Alzheimer’s disease (AD) and other dementias.
- (3) European Translational Research Infrastructure & Knowledge Management Services (eTRIKS).
 - (a) Chemistry, Manufacturing and Control
- (4) Delivery and targeting mechanisms for biological macromolecules.
- (5) In vivo predictive biopharmaceutics tools for oral drug delivery.
- (6) Sustainable chemistry – delivering medicines for the 21st century.
 - (a) Technology and Molecular Disease Understanding
- (7) Human induced pluripotent stem (hiPS) cells for drug discovery and safety assessment.
 - (a) Understanding and optimising binding kinetics in drug discovery.

Following the approval of the recommendations of the consensus panels by the Governing Board in 2011, the first-ranked EoIs were invited to prepare a Full Project Proposal with the pre-established EFPIA consortia. For EMIF the first-ranked EoIs of the three subtopics were invited to merge and prepare with a single FPP the pre-established EFPIA consortium.

The evaluation of the resulting FPPs was conducted by the external experts; initially working remotely and then at a consensus panel meeting. All 7 Full Project

Proposals were recommended for funding by IMI and approved by the Governing Board. Grant agreements were signed during 2012 for all 7 projects.

4.5.5.2. Analysis of proposals submitted

See Annual Progress Report 2011

4.5.5.3. Evaluation results

(a) Stage 1, see Annual Progress Report 2011.

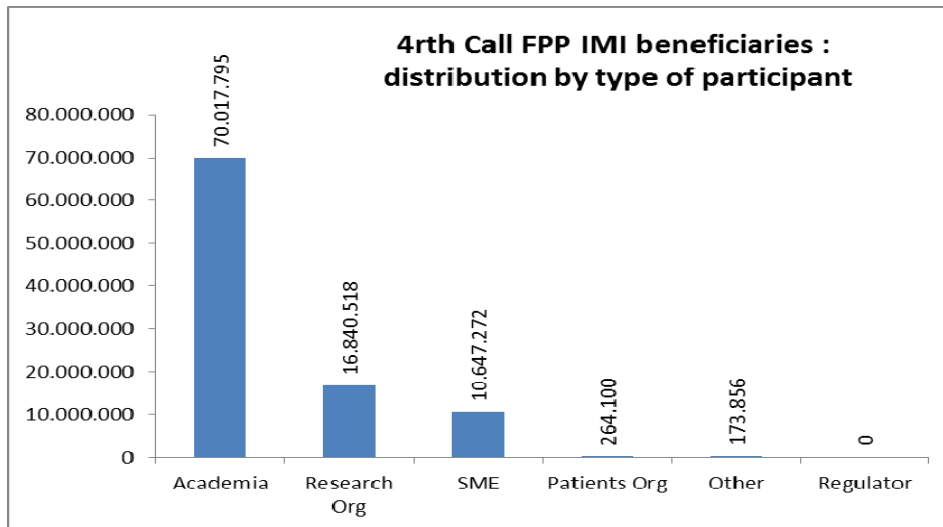
(b) Stage 2:

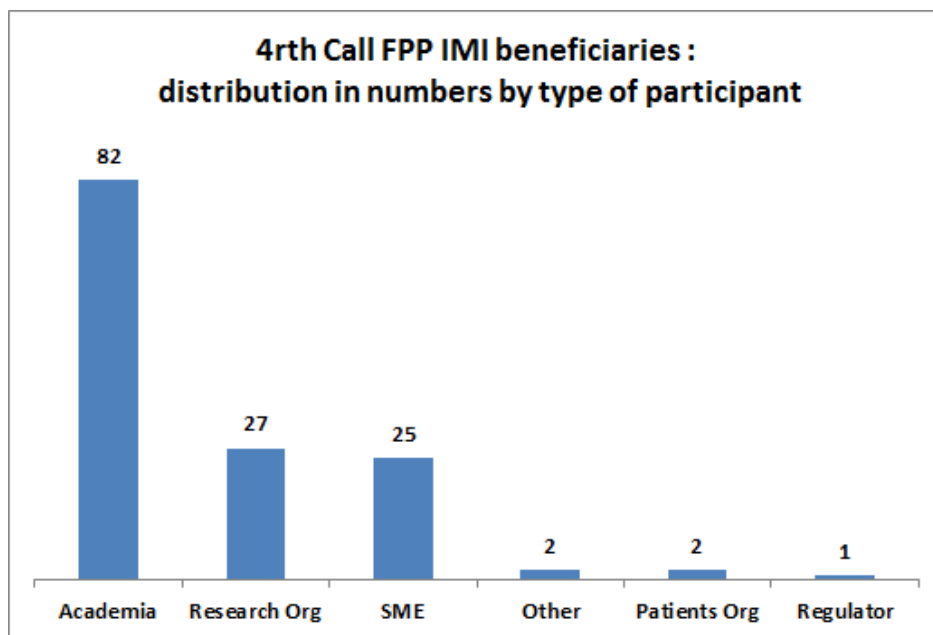
Following the approval of the recommendations of the consensus panels by the Governing Board in 2011, the first-ranked EoIs were invited to prepare a Full Project Proposal with the pre-established EFPIA consortia. For EMIF the first-ranked EoIs of the three subtopics were invited to merge and prepare with a single FPP the pre-established EFPIA consortium.

The evaluation of the resulting FPPs was conducted by the external experts; initially working remotely and then at a consensus panel meeting. All 7 Full Project Proposals were recommended for funding by IMI and approved by the Governing Board. Grant agreements were signed during 2012 for all 7 projects for a total amount of € 97.943.541.

Concerning the amounts distribution and the distribution in numbers by participants typology 71.5% of the total was distributed among 82 Academia participants, 17.2% among 27 Research Organisations, 11% among SMEs and the remaining among Patient Organisations and Other Partners.

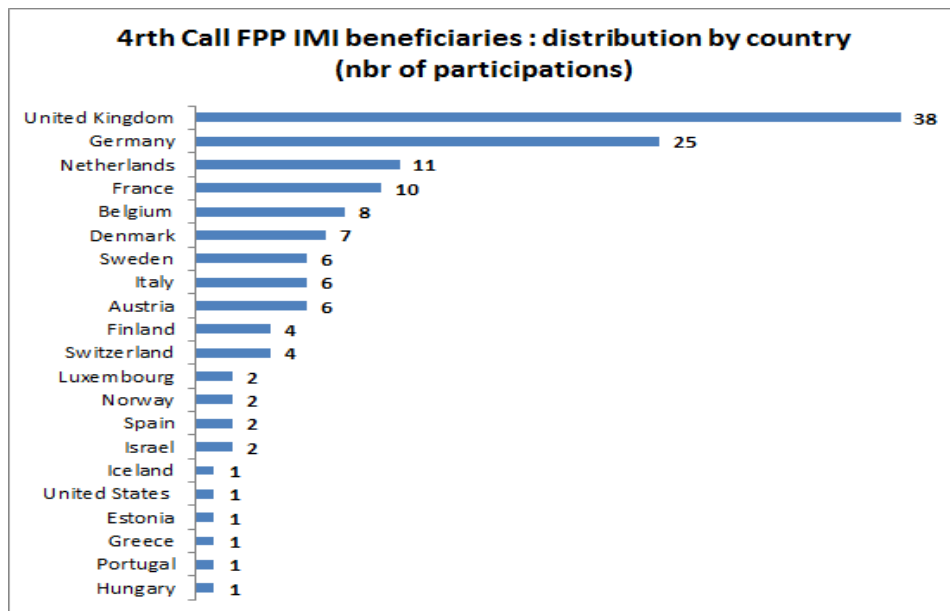
Figure 7: participation by type and budget distribution (FPP selected for funding)

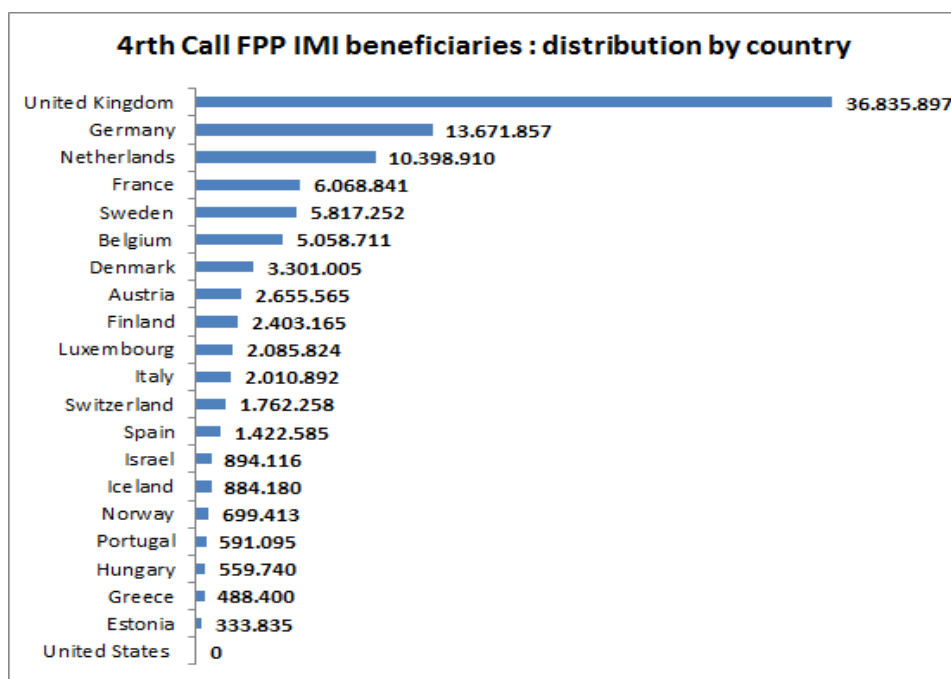




Concerning the geographic distribution in Call 4 out of **21 countries** the United Kingdom comes on top with the highest number of participations (38) that in terms of distribution of the amounts represents 37.6% of the total JU contribution. The UK is then followed by Germany, Netherlands and France. The following 2 graphs illustrate the geographic distribution of participations and geographic distribution of amounts, respectively.

Figure 8: Participation by Country and budget allocated (FPP selected for funding)





All 7 projects **pre-financing** were paid in 2012:

Project ID	Project Acronym	Project JU contribution	Project in contribution	EFPIA kind	Project Prefinancing
115366	K4DD	8.286.932	9.831.318		2.651.817
115439	StemBANCC	26.000.000	21.023.330		8.320.000
115360	CHEM21	9.829.638	13.888.017		3.931.855
115369	ORBITO	8.975.392	11.486.863		2.872.125
115363	COMPACT	10.184.913	18.217.735		3.259.172
115446	ETRIKS	10.309.818	10.838.978		3.299.141
115372	EMIF	24.356.849	26.543.242		9.742.739
Total		97.943.542	111.829.483		34.076.849

4.5.6. IMI – 5th Call – 2012

4.5.6.1. Summary information

Call Identifier	IMI -5th Call – 2012
Publication date	06 March 2012

Deadline for submission of EoIs	16 May 2012
Results of 1st stage approved by GB	3 July 2012
Deadline for submission of FPPs	13 September 2012
Indicative Total budget (in €)	EUR 80 million
EU contribution after evaluation	EUR 79.999.157
In-kind contribution after evaluation	EUR 91.337.070
Number of topics	1
Reference to call topics	http://www.imi.europa.eu/content/5th-call-2012

IMI's 5th Call theme, the creation of a European Lead Factory for drug discovery, comprised 2 topics:

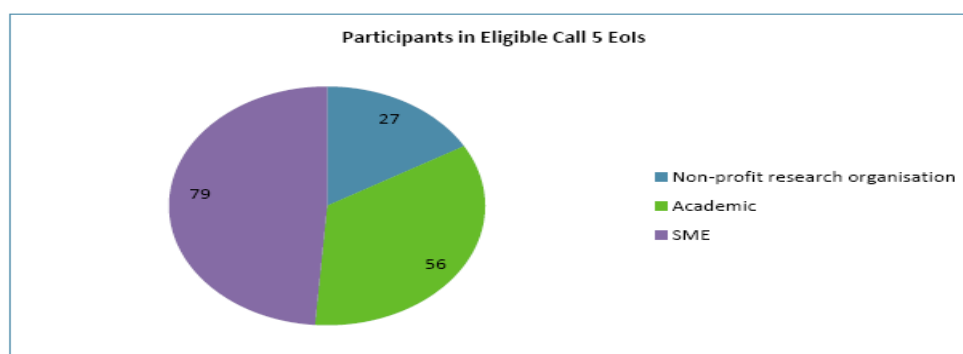
1. European Lead Factory - Screening Centre.
2. European Lead Factory - Compound Collection.

4.5.6.2. Analysis of proposals submitted

14 expressions of Interest (EoIs) had been received by the submission deadline of which 12 were eligible, as follows.

Analysis of the applicants revealed that 162 legal entities took part; 83 (51%) were academic and non-profit organisations and 79 (49%) were small and medium-sized enterprises (SMEs). On average, there were 13.5 entities per EoI (range 5-32). Key figures regarding **submitted EoIs** are presented below.

Figure 9: Participants by type in Expression of Interest (EoI)



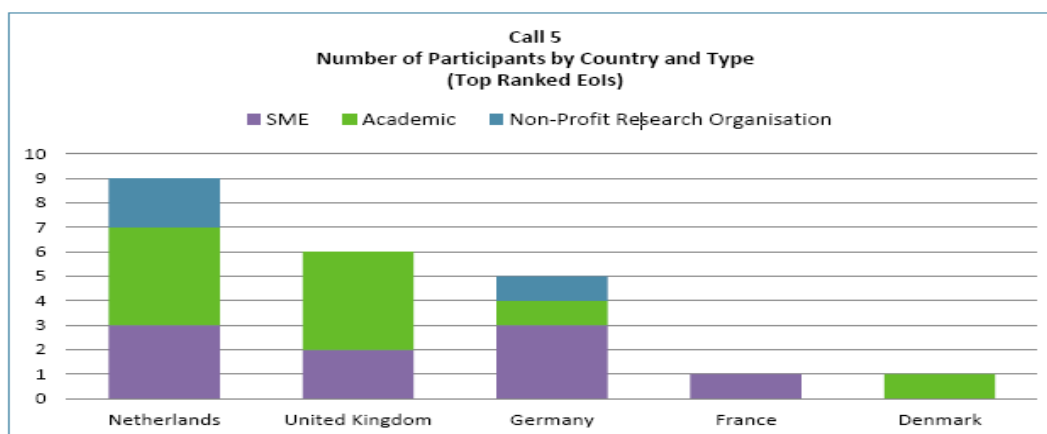
4.5.6.3. Evaluation results

The in-house evaluation - Stage 1 of the EoIs was conducted by a single panel of six independent experts mainly from Europe. The ELEGENCE consortium was ranked first for the Screening Centre Topic, while the SYNTARA consortium was ranked first for the Compound Collection topic. The first-ranked applications were found to comprise 22 legal entities of which 9 (41%) were SMEs. Key figures of the first-ranked EoIs are presented below.

Table 5: Evaluation results

Call Reference	Submitted Expression of Interest			Evaluation results			
	Submitted	Eligible EoIs	% of retained	Above threshold	Full Project Proposals	Selected for funding	success rate
Call 5 - 2012	21	12	57,14%	2	1	1	5%

Figure 10: Participants by type and Country



The two subtopics were combined at the second stage, therefore the two successful applicant consortia and the EFPIA consortium merged to form a single consortium to produce and submit their Full Project Proposal (FPP).

Evaluation of the FPP at Stage 2 (project name: European Lead Factory; acronym EUC2LID: European Centre for Chemistry and Lead Identification) was successfully completed with the Expert Panel recommending to the Board that the EUC2LID consortium progress to the negotiation stage.

Despite the project involving complex legal and Intellectual Property issues, the negotiation of the Call 5 proposal European Centre for Chemistry and Lead Identification (EUC2LID) was concluded on 3 December 2012. The negotiation involved several changes and one major one was the change of Managing Entity. The Grant Agreement signature took place on the 19th December 2012 with pre-financing released on the 21 December 2012. The project could then start on 1 January 2013.

IMI Project	EFPIA + IMI Funding	EFPIA Funding	IMI Funding	SME	Academic	Research
EUC ² LID	171,336,227	91,337,070	79,999,157	55,422,940	18,946,178	5,630,039

4.5.7. IMI – 6th Call – 2012

4.5.7.1. Summary information

Call Identifier	IMI -6th Call – 2012
Publication date	24 May 2012
Deadline for submission of EoIs	09 July 2012
Results of 1st stage approved by GB	09 August 2012
Deadline for submission of FPPs	10 October 2012
Indicative Total budget (in €)	EUR 109 million
EU contribution after evaluation	99.017.213
In-kind contribution after evaluation	112.534.022
Number of topics	2
Reference to call topics	http://www.imi.europa.eu/content/6th-call-2012

The 6th Call consisted of 2 topics:

- Topic 1:
 - Innovative Trial Design & Clinical Drug Development:
 - Subtopic 1A: Workpackage 1-4
 - Subtopic 1B: Workpackage 5
- Topic 2:
 - Learning from success and failure & Getting Drugs into Bad Bugs

Topic 1 focused on building and training networks of researchers, facilitating and increasing the exchange of research data, improving the efficiency of clinical trials on new antibiotics through better laboratory tests and better trial design, and conducting clinical trials to test a new antibiotic targeting infections caused by methicillin-resistant *Staphylococcus aureus* (MRSA).

Topic 2 focused on exploring new methods to improve antibiotic uptake in Gram-negative resistant bacterial pathogens.

The Topic text was finalized during the first months of 2012 and was sent for consultation with the States Representatives Group and the Scientific Committee in April and May 2012.

Upon Governing Board approval, the 6th Call for Proposals was launched on 24th May 2012, initiating an ambitious programme (NewDrug4BadBugs, ND4BB) which addresses the major public health issue of antimicrobial resistance. The programme aims at creating a new research environment in Europe which will favour speeding up the delivery of much-needed new antibiotics to patients, in particular targeting Gram-negative and multiresistant bacteria.

The EFPIA in-kind contribution committed to the 6th Call projects was EUR 111.6 million, while the committed IMI JU contribution was EUR 99.0 million.

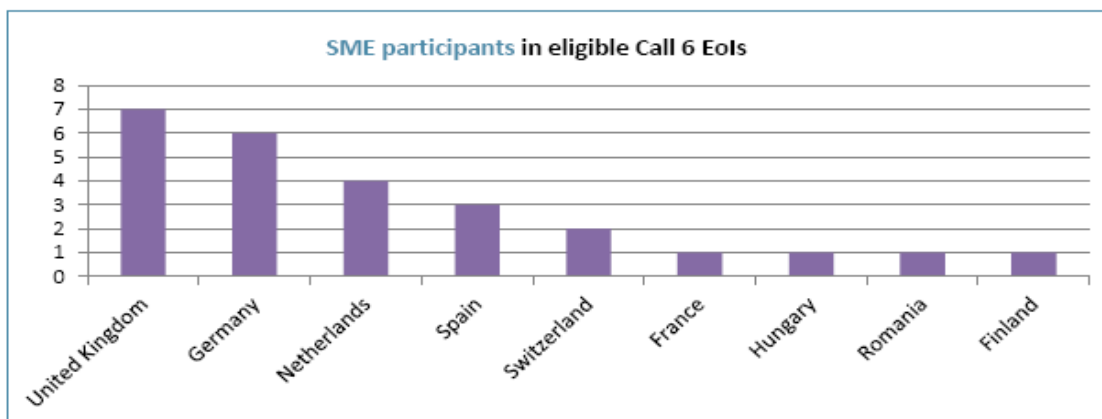
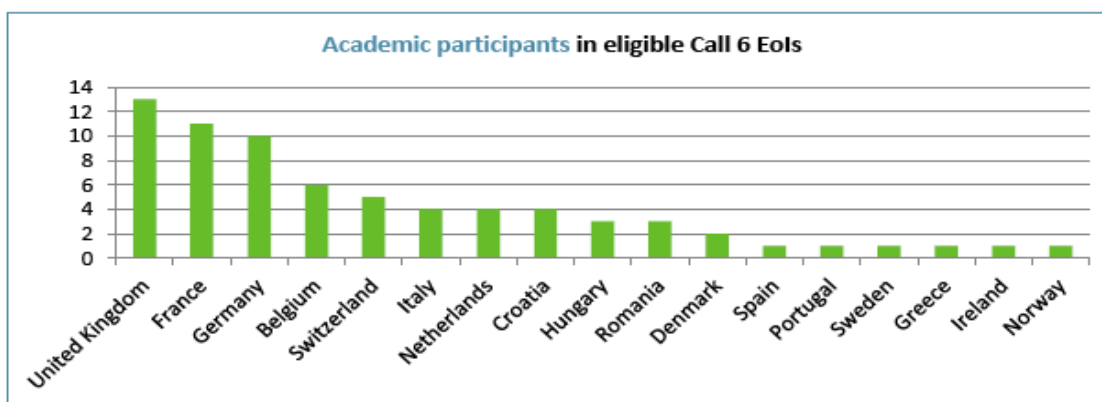
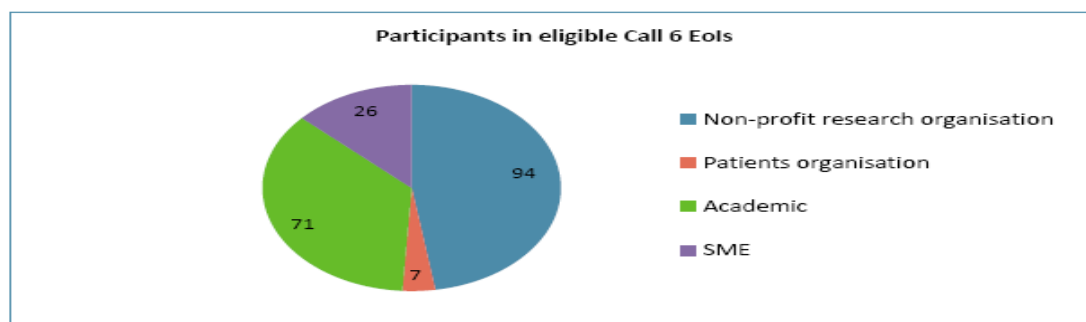
4.5.7.2. Analysis of proposals submit

14 Expressions of Interests (EoIs) were submitted for the 6th Call for Proposals, among which 13 were found eligible.

Key figures regarding submitted EoIs are presented here below.

Call 6 Topic	Nr of Eligible EoIs Call 6
Innovative Trial Design & Clinical Drug Development Subtopic A	4
Innovative Trial Design & Clinical Drug Development Subtopic B	4
Learning from success and failure & Getting Drugs into Bad Bugs	5
Total	13

Figure 11: Participants by type in EoI – Details on Academia and SMEs participation



4.5.7.3. Evaluation results

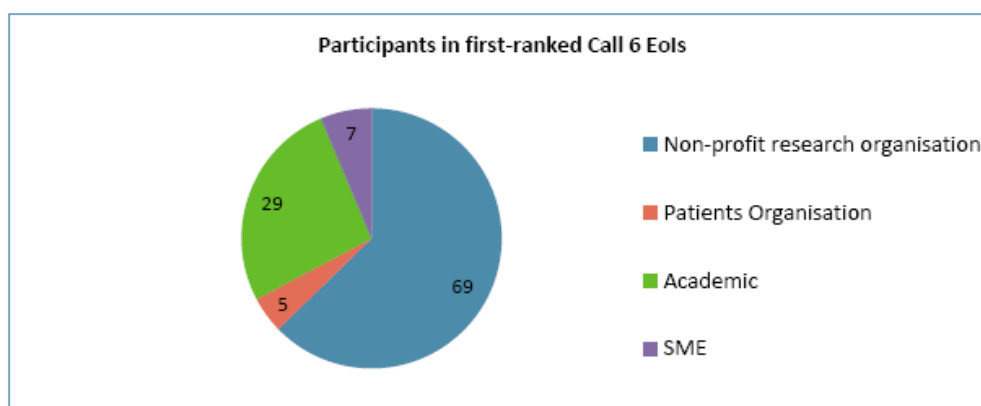
The evaluation of the EoIs was conducted by panels of independent experts from Europe, (including EU 12), Canada, and the USA working initially remotely and then at a consensus meeting. Thirteen external experts worked in 2 panels (1 panel per topic) moderated by IMI’s Scientific Officers, in accordance with the IMI Rules for submission, evaluation and selection of Expressions of Interests and proposals’.

Table 6: Evaluation results

Call Reference	Submitted Expression of Interest			Evaluation results			
	Submitted	Eligible EoIs	% of retained	Above threshold	Full Project Proposals	Selected for funding	success rate
Call 6 - 2012	28	13	46,43%	3	2	2	7%

Key figures of **the first-ranked EoIs** are presented as follows.

Figure 12: Participants by type



Following the approval of the recommendations of the evaluation panels by the Governing Board, the two first-ranked EoIs for Topic 1 were invited to merge, and prepare a Full Project Proposal (FPP) together with the pre-established EFPIA consortium.

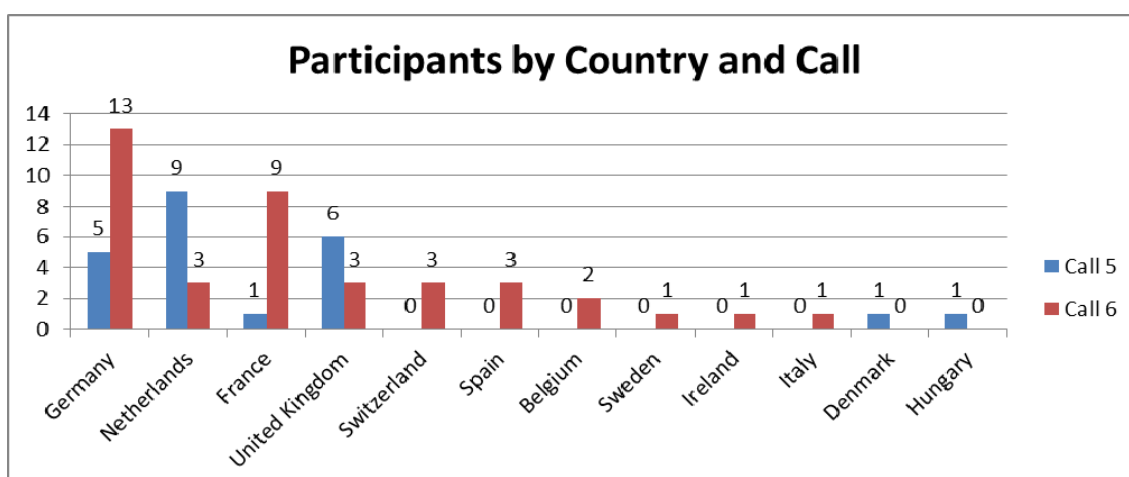
The first-ranked EoI for Topic 2 was also invited to prepare an FPP with the pre-established EFPIA consortium. The evaluation of the resulting two FPPs was conducted by the external experts working initially remotely and then at a consensus panel meeting. Full Project Proposals, COMBACTE and Translocation were recommended for funding by IMI and approved by the Governing Board.

In light of the urgency in the implementation of the topics the timelines of the 6th Call were kept very short with the 2-stages evaluation process and the negotiation finalized within 2012.

The Grant Agreement was signed in December 2012 for Translocation. The IMI proceeded with pre-financing payments of EUR 5.1 million for Translocation. The remaining project, COMBACTE will receive pre-financing in early 2013.

GA №	Project acronym	A JU contribution	B In-kind contribution
115523	COMBACTE	83.033.010,00 €	104.398.189,00 €
115525	Translocation	15.984.203,00 €	8.135.833,00 €
Total		99.017.213,00 €	112.534.022,00 €

Figure 13: Participations by Countries in successful proposals in Calls 5 and 6



4.5.8. IMI – 7th Call – 2012

4.5.8.1. Summary information

Call Identifier	IMI -7th Call – 2012
Publication date	17 July 2012
Deadline for submission of EoIs	9 October 2012
Results of 1st stage approved by GB	30 November 2012
Deadline for submission of FPPs	07 March 2013
Indicative Total IMI JU budget (in €) Indicative Total in kind contribution (in €)	EUR 13 million

EU contribution after evaluation	Not yet available
In-kind contribution after evaluation	Not yet available
Number of topics	1
Reference to call topics	http://www.imi.europa.eu/content/7th-call-2012

The 7th Call for proposals included 2 topics.

- Topic 1:
 - Developing a framework for rapid assessment of vaccination benefit/risk in Europe
- Topic 2:
 - Incorporating real-life clinical data into drug development

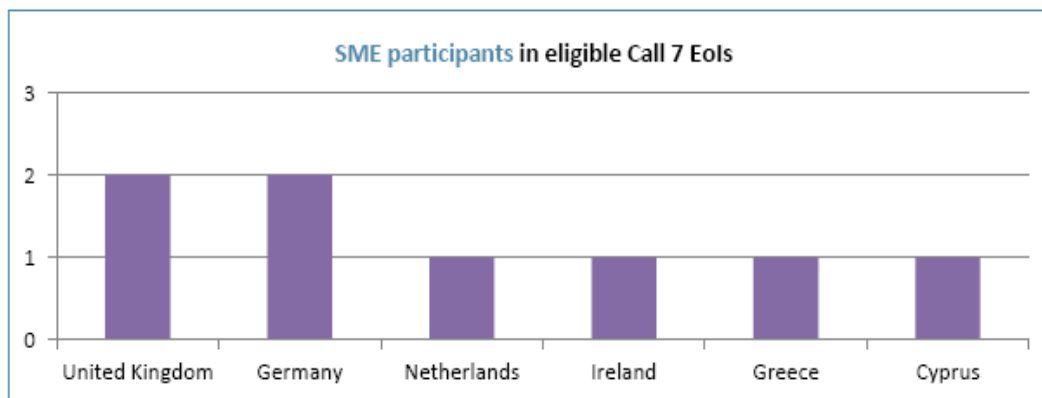
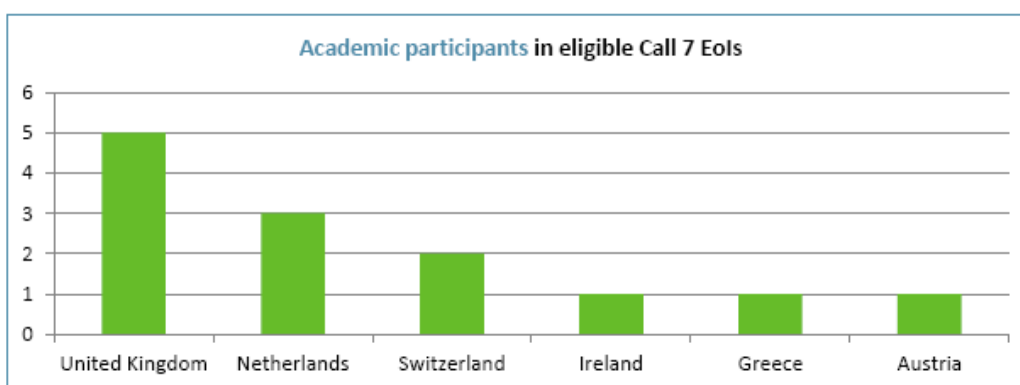
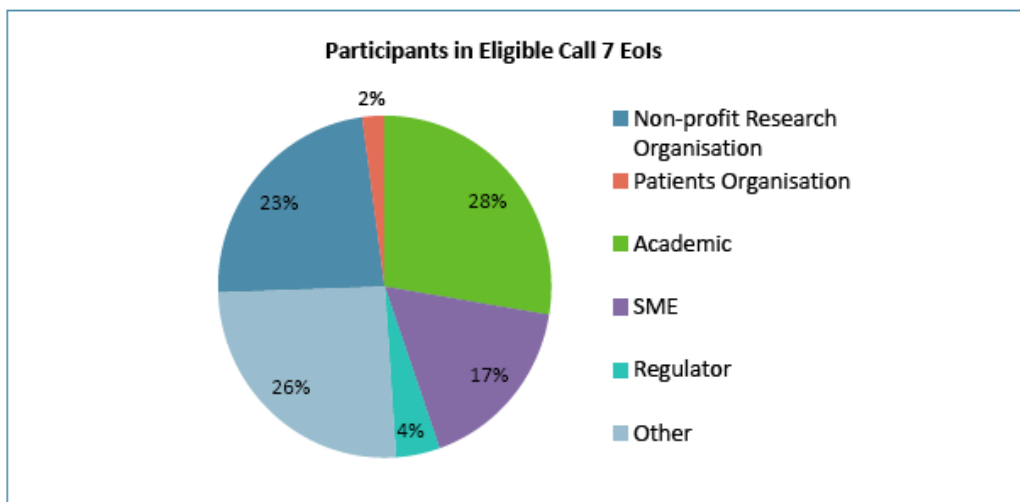
As a first consultation of the Scientific Community, a workshop on effectiveness research and the impact of vaccines was held on 24 April 2012. The EFPIA coordinator for each topic presented the topic followed by a discussion with a panel of invited experts. Experts were selected based on recommendations from Scientific Committee members, members of the SRG, and also the EFPIA project teams. This workshop, moderated by the Scientific Committee Chair and co-Chair, resulted in a series of recommendations that were used for the preparation of draft topic texts to be submitted for a final consultation of the SRG and Scientific Committee during early June 2012.

4.5.8.2. Analysis of proposals submit

The high degree of specialization of these Call topics resulted in 9 Expressions of Interests (EoIs) among which 8 were eligible. Key figures regarding **submitted EoIs** are presented here below.

Call 7 Topic	Nr of Eligible EoIs Call 7
Developing a framework for rapid assessment of vaccination benefit/risk in Europe	5
Incorporating real-life clinical data into drug development	3
Total	8

Figure 14: Participation by type in EoI – Detail on Academia and SMEs participation



4.5.8.3. Evaluation results

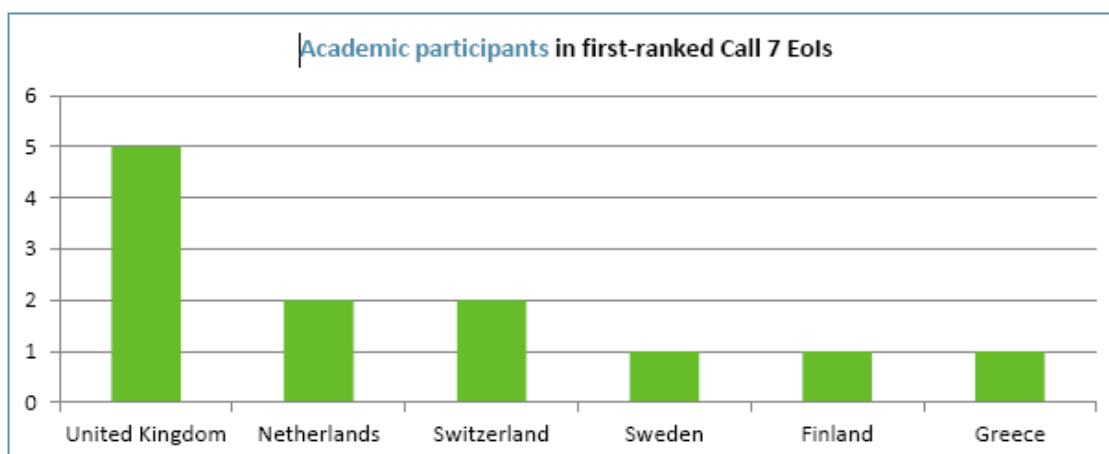
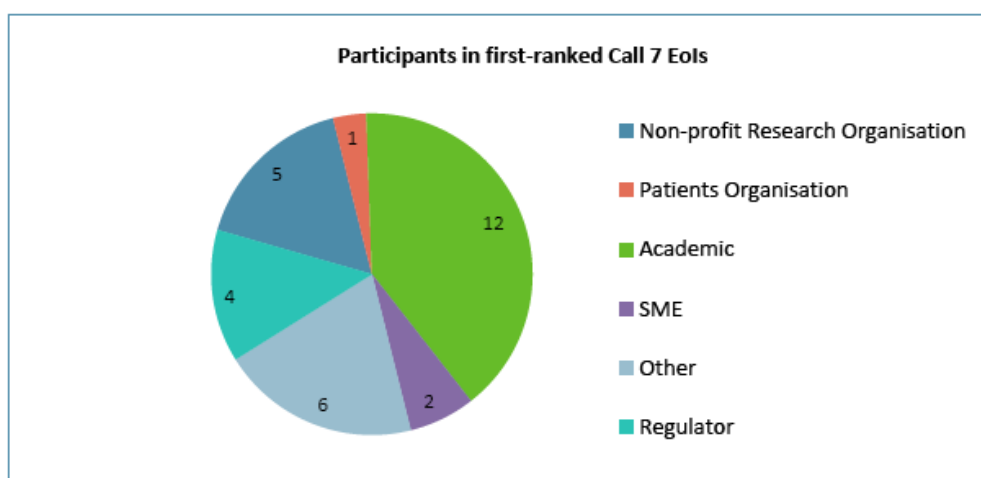
The evaluation of the EoIs was conducted by panels of independent experts from Europe and the USA working initially remotely and then at a consensus meeting. 14 external experts worked in 2 panels (1 panel per topic) moderated by IMI’s Scientific Officers.

Table 7: Evaluation results

Call Reference	Submitted Expression of Interest			Evaluation results			
	Submitted	Eligible EoIs	% of retained	Above threshold	Full Project Proposals	Selected for funding	success rate
Call 7 - 2012	19	8	42,11%	2	2	2	11%

Key figures of the **first-ranked EoIs** are presented here below.

Figure 15: Participations by type – Details on Academia participation



The two SME partners in the first ranked consortium were from Belgium and Spain.

Following the approval of the recommendations of the evaluation panels by the Governing Board, the two first-ranked EoIs were invited to prepare a Full Project Proposal (FPP) together with the pre-established EFPIA consortium. The deadline for submission of the FPP is 7 March 2013. The evaluation of the resulting two FPPs will be conducted in 2013.

4.6. Grant agreements/project portfolio

4.6.1. Grant agreements signed during the year 2012

A total of 11 Grant Agreements were signed in the year of 2012 corresponding to a total contribution of €529.858.981 in which the JU contributions equate to 42.8%, the In-kind contributions equate to 43.4% and 13.8% equate to Own resources other than In-kind contributions. The table below gives a detailed breakdown of the relevant Grant Agreements signed in 2012 as well as the breakdown and totals of the contributions.

GA №	Project acronym	Call Identifier	A	B	C	D
			JU contribution	In-kind contribution	Own resources (Other than B)	Total contribution A+B+C
115303	ABIRISK	Call 3 - 2010	18.170.217	9.358.093	5.471.311	32.999.621
115337	PreDICT-TB	Call 3 - 2010	14.778.855	9.296.156	4.484.125	28.559.136
115372	EMIF	Call 4 - 2011	24.356.849	26.543.242	7.835.649	58.735.740
115446	eTRIKS	Call 4 - 2011	10.309.818	10.838.978	3.139.745	24.288.541
115363	COMPACT	Call 4 - 2011	10.184.913	18.217.735	3.238.349	31.640.997
115369	ORBITO	Call 4 - 2011	8.975.392	11.486.863	3.962.626	24.424.881
115360	CHEM 21	Call 4 - 2011	9.829.638	13.888.017	3.035.536	26.753.191
115439	StemBanCC	Call 4 - 2011	26.000.000	21.023.330	8.579.463	55.602.793
115366	K4DD	Call 4 - 2011	8.286.931	9.831.318	2.868.767	20.987.016
115489	EU2CLID	Call 5 - 2012	79.999.157	91.337.070	25.202.832	196.539.059
115525	Translocation	Call 6 - 2012	15.984.203	8.135.833	5.207.970	29.328.006
Total			226.875.973	229.956.635	73.026.373	529.858.981

4.6.2. Aggregate GA signed

Since the establishment up to 2012 IMI JU has signed a total of 39 Grant Agreements (15 in Call 1; 8 in Call 2; 7 in Call 3; 7 in Call 4; 1 in Call 5 and 1 in Call 6) for which the total contribution is €1.143.033.742 (43.5% in JU contributions; 42.6% in In-kind contributions and 14% Own resources other than In-kind contributions).

№	GA №	Project acronym	Call Identifier	A	B	C	D
				JU contribution	In-kind contribution	Own resources (Other than B)	Total contribution A+B+C
1	115001	MARCAR	Call 1 - 2008	6.049.576	5.155.604	1.867.556	13.072.736
2	115002	E-TOX	Call 1 - 2008	4.737.991	7.984.119	1.238.361	13.960.471
3	115003	SAFE-T	Call 1 - 2008	13.901.969	17.983.604	3.918.225	35.803.798
4	115004	PROTECT	Call 1 - 2008	11.009.715	9.700.789	5.190.077	25.900.581
5	115005	IMIDIA	Call 1 - 2008	7.074.760	15.081.800	1.616.920	23.773.480
6	115006	SUMMIT	Call 1 - 2008	13.999.979	14.567.466	4.456.921	33.024.366
7	115007	EUROPAI N	Call 1 - 2008	5.999.413	10.929.803	2.098.483	19.027.699
8	115008	NEWMED S	Call 1 - 2008	8.986.216	13.442.771	2.636.388	25.065.375
9	115009	PHARMA- COG	Call 1 - 2008	9.658.388	11.487.333	8.890.366	30.036.087
10	115010	U- BIOPRED	Call 1 - 2008	8.976.473	10.836.687	2.476.742	22.289.902
11	115011	PROactive	Call 1 - 2008	6.767.597	8.225.388	1.743.484	16.736.469
12	115012	SafeSciME T	Call 1 - 2008	2.216.405	3.449.040	786.041	6.451.486
13	115013	Pharma Train	Call 1 - 2008	3.510.291	3.149.288	555.708	7.215.287
14	115014	EU2P	Call 1 - 2008	3.479.725	3.789.361	0	7.269.086
15	115015	EMTRAIN	Call 1 - 2008	4.000.000	3.528.060	0	7.528.060
16	115188	PREDECT	Call 2 - 2009	8.100.509	7.970.224	3.098.024	19.168.757
17	115234	OncoTrack	Call 2 - 2009	16.050.282	10.544.557	4.883.080	31.477.919
18	115151	Quic- Concept	Call 2 - 2009	7.000.000	6.788.606	3.084.056	16.872.662
1	11515	RAPP-ID	Call 2 -	6.828.438	5.848.470	1.882.687	14.559.595

№	GA №	Project acronym	Call Identifier	A	B	C	D
				JU contribution	In-kind contribution	Own resources (Other than B)	Total contribution A+B+C
9	3		2009				
20	115142	BT-CURE	Call 2 - 2009	16.137.872	14.767.531	6.421.670	37.327.073
21	115156	DDmore	Call 2 - 2009	9.615.058	10.218.672	1.893.267	21.726.997
22	115191	Open PHACTS	Call 2 - 2009	9.988.866	4.596.565	2.760.868	17.346.299
23	115189	EHR4CR	Call 2 - 2009	7.019.046	7.042.616	2.142.470	16.204.132
24	115336	MIP-DILI	Call 3 - 2010	15.335.538	12.558.465	4.409.043	32.303.046
25	115303	ABIRISK	Call 3 - 2010	18.170.217	9.358.093	5.471.311	32.999.621
26	115308	BioVacSafe	Call 3 - 2010	17.425.666	7.579.933	5.216.484	30.222.083
27	115337	PreDICT-TB	Call 3 - 2010	14.778.855	9.296.156	4.484.125	28.559.136
28	115300	EU-AIMS	Call 3 - 2010	19.467.204	9.538.635	6.782.527	35.788.366
29	115317	DIRECT	Call 3 - 2010	21.388.643	16.472.745	5.155.446	43.016.834
30	115334	EUPATI	Call 3 - 2010	5.250.000	4.756.112	3	10.006.115
31	115372	EMIF	Call 4 - 2011	24.356.849	26.543.242	7.835.649	58.735.740
32	115446	eTRIKS	Call 4 - 2011	10.309.818	10.838.978	3.139.745	24.288.541
33	115363	COMPACT	Call 4 - 2011	10.184.913	18.217.735	3.238.349	31.640.997
34	115369	ORBITO	Call 4 - 2011	8.975.392	11.486.863	3.962.626	24.424.881
35	115360	CHEM 21	Call 4 - 2011	9.829.638	13.888.017	3.035.536	26.753.191
36	115439	StemBanC C	Call 4 - 2011	26.000.000	21.023.330	8.579.463	55.602.793
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№	GA №	Project acronym	Call Identifier	A	B	C	D
				JU contribution	In-kind contribution	Own resources (Other than B)	Total contribution A+B+C
38	115489	EU2CLID	Call 5 - 2012	79.999.157	91.337.070	25.202.832	196.539.059
39	115525	Translocation	Call 6 - 2012	15.984.203	8.135.833	5.207.970	29.328.006
TOTALS				496.851.593	487.950.879	158.231.270	1.143.033.742

4.6.3. *Grant agreements for which activities have ended and/or final results are available*

No grant agreements closed yet.

GLOSSARY AND ABBREVIATIONS

GENERAL

AAR – Annual Activity Report

ABAC – Accrual Based ACcounting is a transversal, transactional information system allowing for the execution and monitoring of all budgetary and accounting operations by the Commission, an Agency or EU Institution

ABP – Annual Budget Plan

AIP – Annual Implementation Plan

APR - Annual Progress Report

AWP – Annual Work Program

CDT – Translation Centre for the Bodies of the European Union

CFP - Calls For Proposal

CORDA - COmmon Research DAta warehouse application (IT Tool) is a module used to create statistics and report tables for FP6/7 project

CPM – Contract and Project Management (IT Tool)

CSWD – Commission Staff Working Document

DG BUDG – European Commission Directorate-General for Budget

DG CNECT – European Commission Directorate General for Communications Networks, Content and Technology

DG HR – European Commission Directorate-General Human Resources and Security

DG RTD - European Commission Directorate-General for Research and Innovation

ECA - European Court of Auditors

EPSS - Electronic Proposal Submission System (IT Tool)

ESS – Evaluation Service Support (IT Tool)

EC – European Commission

ED – Executive Director

ERA – European Research Area

ESR – Evaluation Summary Reports

EU – European Union

FP7 - Seventh Framework Programme of the European Community for research, technological development and demonstration activities (2007-2013)

FPP - Full Project Proposal

GA – Grant Agreements

GB – Governing Board

Horizon 2020 - Horizon 2020 is the financial instrument implementing, in the period from 2014 to 2020, the Innovation Union, a Europe 2020 flagship initiative aimed at securing Europe's global competitiveness.

HR – Human Resources

IE – Interim Evaluation

IT – Information Technology

JTIs - Joint Technology Initiative are European Union instruments for addressing technological challenges that are of key importance for the future competitiveness of the EU industry involved, challenges that industry and markets would fail to address without a sizeable public intervention extended over a multi-annual timescale

JU - Joint Undertaking refers to the administrative structure of the JT

MASP - Multi-Annual Strategic Plans

MSPP - Multi-Annual Staff Policy

NEF – Negotiation Module, Back Office (IT Tool) used to manage data entry for Negotiations, Amendments, and Periodic Reports

PDM – Participant Data Management (IT Tool)

PO – Project Outline

REA - Research Executive Agency (REA)

R&D – Research and Development

SEP – Submission and Evaluation of Proposals (IT Tool)

SESAR (JU) - Single European Sky ATM Research programme is the technological and operational dimension of the Single European Sky (SES) initiative

SME – Small and Medium Enterprises

SRA - Strategic Research Agenda

SRIA - Strategic Research & Innovation Agenda

CLEAN SKY

ACARE – Advisory Council for Aeronautical Research in Europe

ATM - Air Traffic Management

DLR - German Aerospace Research Center

DNW – German-Dutch Wind Tunnels

ED - Eco-Design

ETW - European Transonic Wind Tunnel

GAM – Grant Agreement for Members

GAP – Grant Agreement for Partners

GMT – (IT tool)

GRA - Green Regional Aircraft

GRC - Green Rotorcraft

ICT – Information and Communications Technology

ITD - Integrated Technology Demonstrator

NLF - Natural Laminar Flow

NSRG - National States Representative Group

SAGE - Sustainable and Green Engines

SFWA - Smart Fixed Wing Aircraft

SGO - Systems for Green Operations

STAB - Scientific and Technological Advisory Board

TE - Technology Evaluator

TRL – Technology Readiness Level, measure to assess the maturity of evolving technologies

IMI

AMR - AntiMicrobial Resistance is the resistance of microorganism(s) to treatment to which they were previously sensitive.

Biomarkers (see also diagnostic makers) - distinct biochemical, genetic or molecular characteristics or substances that are indicators of a particular biological condition or process (for example a blood test to measure protein biomarkers for cancer).

ICD - International Classification of Diseases is a standard diagnostic tool used to classify diseases and other health problems recorded on many types of health and vital records including death certificates and health records

Clinical Trial - any research study that prospectively assigns human participants or groups of humans to one or more health-related interventions to evaluate the effects on health outcomes

COCIR - the 'Comité Européen de Coordination des Industries Radiologiques, Electromédicales et d'information de santé'

Diagnostic markers (see also Biomarkers) - substances or groups of substances in the body or in a bodily fluid that can be tested for, and which indicate the presence of a particular illness or condition (for example a type of cancer)

EFPIA - European Federation of Pharmaceutical Industries and Associations

EMA - European Medicines Agency

EMTRAIN - European Medicines Training Network

EoI – Expression of Interest

EUPATI - European Patients Academy on Therapeutic Innovation

FDA - US Food and Drug Administration

FPP – Full Project Proposal

Me-too drugs - drugs that are structurally very similar to already known drugs, with only minor differences

One health - efforts to work collaboratively across a variety of disciplines and locales to obtain optimal health for people, animals and the environment, given the evident links between each of these

Patent cliff - colloquialism to denote the potential sharp decline in revenues upon patent expiry of one or more leading products of a firm. A patent cliff is when a firm's revenues could "fall off a cliff" when one or more established products go off-patent, since these products can be replicated and sold at much cheaper prices by competitors

SRG - States Representatives Group

Zoonoses - diseases which can be transmitted between different species (e.g. rabies)