



EUROPEAN COMMISSION

Brussels, 30.11.2011
SEC(2011) 1427 final

Volume 2 - part 1/2

COMMISSION STAFF WORKING PAPER

IMPACT ASSESSMENT

Accompanying the

COMMUNICATION FROM THE COMMISSION

'Horizon 2020 - The Framework Programme for Research and Innovation'

**PROPOSAL FOR A REGULATION OF THE EUROPEAN PARLIAMENT AND THE
COUNCIL**

**laying down the rules for the participation and dissemination in Horizon 2020 – the
Framework Programme for Research and Innovation (2014-2020)**

PROPOSAL FOR A COUNCIL REGULATION

**on the Research and Training Programme of the European Atomic Energy Community
(2014-2018) complementing the Horizon 2020 – The Framework Programme for
Research and Innovation**

{COM(2011) 808 final}

{SEC(2011) 1428 final}

TABLE OF CONTENTS

| | |
|---|----|
| INTRODUCTION..... | 3 |
| 1. PROCEDURAL ISSUES AND CONSULTATION OF INTERESTED PARTIES... | 4 |
| 1.1. Organisation and timing..... | 4 |
| 1.2. Policy Background..... | 4 |
| 1.3. External consultation and expertise..... | 7 |
| 1.3.1. Consultation on the Green Paper - Stakeholders' opinions..... | 8 |
| 1.3.2. Consultation of beneficiaries..... | 10 |
| 1.3.3. Summary of the stakeholders' opinions..... | 11 |
| 1.4. Opinion of the Impact Assessment Board..... | 12 |
| 2. PROBLEM DEFINITION AND SUBSIDIARITY..... | 13 |
| 2.1. Background of the FP7 rules and lessons learned from its evaluation..... | 13 |
| 2.2. Description of the problem..... | 14 |
| 2.3. Baseline scenario for adopting Horizon 2020 while maintaining current policy for its rules..... | 21 |
| 2.4. Subsidiarity and European added value..... | 22 |
| 3. OBJECTIVES..... | 22 |
| 3.1. General policy objectives..... | 22 |
| 3.2. Specific objectives:..... | 23 |
| 3.3. Operational objectives:..... | 23 |
| 4. PRESENTATION OF THE OPTIONS..... | 25 |
| 4.1. Policy issue: Scope of the rules..... | 25 |
| 4.1. Policy option A1 – "Business-as-usual" option (keeping the same scope in the Rules for participation and dissemination - respectively for EU and Euratom - for the future Framework Programmes)..... | 25 |
| 4.2. Policy option A2 – Adopting a single set of rules for participation and dissemination implementing the Horizon 2020 Framework Programmes and setting basic common principles while allowing flexibility..... | 26 |
| 4.3. Policy issue: Content of the rules..... | 27 |
| 4.1. Policy option B1 – "Business-as-usual" option (keeping the same content in the Rules for participation and dissemination for future Framework Programmes)..... | 27 |
| 4.2. Policy option B2 – Modifying the rules for participation and dissemination for the future Framework Programmes..... | 27 |

| | | |
|--------|--|----|
| 5. | ASSESSMENT OF THE IMPACTS OF THE OPTIONS | 29 |
| 5.1. | Scope of the rules | 29 |
| 5.1.1. | Policy implications of harmonisation..... | 29 |
| 5.1.2. | Level of stakeholder support for policy options | 31 |
| 5.1.3. | Administrative costs and simplification effect for participants | 32 |
| 5.2. | Content of the rules | 34 |
| 5.2.1. | Implications of modifications of the legal framework defined by the rules for participation and dissemination..... | 34 |
| 5.2.2. | Level of stakeholder support for policy options | 35 |
| 5.2.3. | Administrative costs and simplification effect for participants | 36 |
| 5.2.4. | Costs of implementation for the Commission..... | 38 |
| 5.3. | Comparing the options | 40 |
| 5.4. | The preferred option and its advantage | 40 |
| 5.5. | Proportionality of the preferred option | 42 |
| 6. | MONITORING AND EVALUATION | 42 |
| 6.1. | Purpose..... | 42 |
| 6.2. | Key principles of the Horizon 2020 monitoring and evaluation system..... | 42 |
| 6.3. | Dissemination and reporting | 45 |
| | GLOSSARY | 46 |

INTRODUCTION

This impact assessment report is accompanying two Commission legislative proposals concerning the adoption of the rules for participation and dissemination in actions under respectively two multi-annual research and innovation programmes: the Horizon 2020 Framework Programme for Research and Innovation in the European Union (2014-2020), which has its legal basis in the Treaty on the Functioning of the European Union, and the European Atomic Energy Community Programme (2014-2018) complementing Horizon 2020, which has its legal basis in the Euratom Treaty, as well as the Commission Communication providing the overall political narrative and background to these legislative proposals.

The analysis of the impact of the two legislative proposals will be performed in the same report, for the reason that the content of the rules for participation and dissemination is very similar in both multi-annual framework programmes and inspired by the same rationale. Nevertheless, the specificities of each of them will be duly taken into account where appropriate, particularly with regard to the Euratom research activities on Fusion. The Staff Working Document consists of a full report, and detailed Annexes and is accompanied by a 10-page executive summary.

The purpose of the rules is to define the rights and obligations of legal entities intending to take part in the actions envisaged by the respective framework programme and to establish the principles for the exploitation and dissemination of the results of these actions.

Therefore, the rules are complementary to the above-mentioned framework programmes, as the objectives of the Research and Innovation policies and the resources for their funding are provided for in the latter. For this reason the societal, economic and environmental impacts of the future frameworks and its European added value are thoroughly analysed and presented in the respective Impact Assessment accompanying the Horizon 2020 Framework Programmes.

Also, financial instruments envisaged under the Horizon2020 will apply the rules developed under the legislative proposal for 'Debt and equity platforms'. The Rules will not derogate from provisions that are currently being developed by the Commission. For that reason they do not fall in the scope of the Rules and subsequently of this Impact Assessment report which is limited to grants, public procurement and similar instruments.

Conversely, the bulk of the administrative costs for the applicants and participants and consequently important part of the simplification potential can be allotted mostly to the application of the provisions of the Financial Regulation and the Rules for Participation. Therefore, these issues will form the core of the analysis in this Impact Assessment. These issues and in particular simplification of future EU actions are considered of utmost political importance and their analysis should be proportional in depth and scope.

In addition to the fact that the Rules for Participation form a separate legislative proposal based on their specific legal basis distinct from Horizon2020 itself and keeping in mind that assessing their impact in the Impact Assessment for Horizon2020 could lead to the marginalisation of the aforementioned issues it was decided that they should be the object of a dedicated Impact Assessment.

Although two separate reports are prepared, it needs to be noted that the strong link with the main Horizon2020 Impact Assessment has been ensured during the work and is mirrored in the text of this report. The latter complements and develops more in detail certain general principles envisaged in the former.

As the Rules for Participation are not a basis for the Union expenditure, and are therefore not accompanied by the financial statement, this impact assessment is not intended to serve as an ex-ante evaluation.

1. PROCEDURAL ISSUES AND CONSULTATION OF INTERESTED PARTIES

1.1. Organisation and timing

Consultation with other Directorate-Generals was carried out through an Inter-service Steering Group composed of DG Information Society and Media, DG Enterprise and Industry, DG Education and Culture, DG Energy, DG Mobility and Transport, Joint Research Centre, DG Human Resources and Security, DG Budget, Legal Service and the Secretariat-General of the Commission. Set up in December 2010, the group met six times and provided contributions during the preparation of the impact assessment.

Consistency between this report and the one for the Horizon2020 was of utmost importance and has been ensured by close cooperation between services involved in their preparation.

The specific reports were prepared for and are annexed to this Impact Assessment by the Commission services examining 1) results of the survey on administrative costs of participants in the Seventh Framework Programme (hereinafter FP7); 2) human resources costs of the Commission; 3) scope of potential harmonisation of the rules governing funding research by the Joint Technology Initiatives and by common initiatives of EU and Member States; 4) prolongation and potential expansion of the Guarantee Fund.

Moreover, the results of a study by Deloitte on “Assessing the Effectiveness of Simplification Measures under FP7” were widely used in preparation of this report, particularly to verify findings of the survey concerning the relative time spent on administrative tasks within FP7 and are annexed to this report.

1.2. Policy Background

The overall political context of the legislative proposals is defined by Commission initiative "Europe 2020 – a strategy for smart, sustainable and inclusive growth" for the coming decade aiming at making EU a smart, sustainable and inclusive economy, where research and innovation are among the key issues¹. The strategy was endorsed by the European Council in the conclusions of 17 June 2010², which agreed as one of the headline targets for the strategy "improving the conditions for research and development, in particular with the aim of raising combined public and private investment levels in this sector to 3% of GDP". Subsequently seven Europe 2020 flagship initiatives were shaped, among them “Innovation Union Flagship”³ being an integrated strategy of crucial importance to meet the agreed Europe 2020 Strategy objectives, since it puts forward a strategic approach, bringing together all relevant decision-making levels and policies, in order to support the transition of the EU economy towards an energy and resource efficient and competitive knowledge economy that ensures high levels of smart, sustainable and inclusive growth and jobs, is able to face increasing global competition, and addresses societal challenges (Box 1). It aims to improve conditions and access to finance for research and innovation, to ensure that innovative ideas can be turned into products and services that create growth and jobs.

Box 1: The Communication on “Innovation Union Flagship”

The Communication on “Innovation Union Flagship” identified ten conditions necessary to achieve Innovation Union, among them declaring that “Access to EU programmes must be simplified and their leverage effect on private sector investment enhanced, with the support of the European Investment Bank. The role of the European Research Council should be reinforced. The framework programme’s contribution to nurturing fast-growing SMEs must be boosted. The European Regional Development Fund should be fully exploited to develop research and innovation capacities across Europe, based on smart regional specialization strategies.” The emphasis was also put on the “need to work better with our international partners. That means opening access to our R&D programmes, while ensuring comparable conditions abroad. That also means adopting a common EU front where needed to protect our interests.” The following commitments were undertaken

¹ <http://eur-lex.europa.eu/LexUriServ/LexUriServ.do?uri=COM:2010:2020:FIN:EN:PDF>

² http://ec.europa.eu/eu2020/pdf/council_conclusion_17_june_en.pdf

³ Commission Communication "Europe 2020 Flagship Initiative Innovation Union" of 6 October 2010 (COM(2010) 546 final)

- Future EU research and innovation programmes will focus on Europe 2020 objectives and particularly the Innovation Union. In 2011, looking ahead to the next financial perspectives, the Commission will set out ways for future programmes to focus more on societal challenges, streamline funding instruments and radically simplify access through a better balance between a control-based and a trust-based system.
- The Commission will design future EU research and innovation programmes to ensure simple access and stronger involvement of SMEs, in particular those with a high growth potential. Further use should be made of partnerships with Member State agencies, building in particular on the experience of the Eureka Eurostars initiative.
- The Commission will promote open access to the results of publicly funded research. It will aim to make open access to publications the general principle for projects funded by the EU research Framework Programmes. The Commission will also support the development of smart research information services that are fully searchable and allow results from research projects to be easily accessed.
- The Commission will facilitate effective collaborative research and knowledge transfer within the research Framework Programmes and beyond. It will work with stakeholders to develop a set of model consortium agreements with options ranging from traditional approaches to protect IP through to more open ones. Mechanisms are also needed to further strengthen knowledge transfer offices in public research organisations, in particular through trans-national collaboration.

The **Council Conclusions** of 26 November 2010 on **“Innovation Union for Europe: To succeed in turning Europe into an Innovation Union and securing long-term competitiveness and growth”**⁴, emphasized the necessity of taking a strategic and integrated approach to innovation in Europe, creating the right conditions for a globally competitive innovation environment in Europe, maximizing the impact and efficiency of resources and improving governance and monitoring progress. The need to ensure coherence and coordination between different EU policies in order to provide more efficient EU action was also stressed.

As clearly observable above, the political context Europe 2020 regarding the implementation of the EU research Framework Programmes is principally perceived by the need of its simplification, that is a key thread throughout the conclusions. As such the issue of simplification of the implementation of the Framework Programmes was a subject of numerous high-level scrutinies and was reflected in a number of papers and documents (Box 2)

Box 2: Papers and documents on simplification

Reports of experts groups

The report of the expert group on the “Evaluation of the effectiveness of the New Instruments of Framework Programme VI”⁵ recommended a significant simplification of administrative procedures and financial rules to ensure *“more efficiency and flexibility in implementing participation instruments”* More generally, the report stressed the importance of finding the right balance between changing the rules and the stability of the instruments whereas in the past *“flexibility and simplification (had) either not (been) delivered or are (had been) the source of new challenges”*. Also the assessment of the impact of the new instruments introduced in FP6, published in 2009⁶, largely repeated the same recommendations, which remain valid for FP7 so far. Another important Expert Group Report on ‘Ex-post Evaluation of the Sixth Framework Programmes (2002-2006)’ (‘the Rietschel Report’ followed by the Commission Communication (COM(2009)0210)) stated that “administration of the FP needs radical overhaul” and that radical simplification must be given the highest political priority if the Framework Programmes are to realise their true potential, while the Council and the European Parliament must recognise that there is a

Council Conclusions

Council Conclusions of 3 December 2009 on Guidance on future priorities for European research and research-based innovation in post 2010 Lisbon strategy underlined inter alia the necessity to make further progress on simplification and more efficient management in order for the EU Framework Programmes to fully contribute to the implementation of a post-2010 EU strategy, and which invited the Commission, together with Member States where relevant, to pursue vigorously further reduction of the administrative burden, continuing to implement the recommendations of the Evaluation of the Sixth Framework Programme.

The Council replied to Commission Communications concerning simplification in its conclusions of 26 May 2010 on “Simplified and more efficient Programmes supporting European Research and Innovation”¹⁰, and

⁴ http://www.consilium.europa.eu/uedocs/cms_data/docs/pressdata/en/intm/118028.pdf

⁵ Evaluation of the effectiveness of the New Instruments of Framework Programme VI - Report of a High-level Expert Panel chaired by Professor Ramon Marimon of 21 June 2004; <http://cordis.europa.eu/documents/documentlibrary/66674081EN6.pdf>

⁶ Assessment of the impact of the new instruments introduced in FP6 - EPEC study for DG Research, Final Report of 28 September 2009; http://ec.europa.eu/research/evaluations/pdf/archive/fp6-evidence-base/evaluation_studies_and_reports/evaluation_studies_and_reports_2009/assessment_of_the_impact_of_the_new_instruments_introduced_in_fp6.pdf

collective responsibility towards the issue.

Communications of the Commission

The most recent and comprehensive approach to simplification was given in the Communication of the Commission on "Simplifying the implementation of the Research Framework Programmes" of 29 April 2010 (COM(2010) 187)⁷, that followed up the adoption of the Europe 2020 strategy, presenting both concrete simplification measures for immediate implementation paired with more radical simplification under the current cost-based system. Also more far-reaching changes were envisaged, moving towards a result-based funding approach that would entail a major shift of the control efforts from the financial to the scientific-technical side. Also a number of simplification measures were to be gradually introduced in FP7. For the future Framework Programmes a twofold approach (that is assessed in this report) was proposed:

- keeping the current cost-based system with the following simplification measures: 1) broader acceptance of usual accounting practices of beneficiaries; 2) acceptance of average personnel costs; 3) return to a common set of basic principles instead of a "tailor-made" approach; 4) removal of the obligation to deposit pre-financing on interest-bearing bank accounts; 5) more lump sum elements, 6) removal of the legal requirement to consult lists of selected proposals with committees of Member States representatives
- moving towards a result-based funding in the form of 1) project-specific lump sums as a contribution to project costs estimated during grant evaluation/negotiation, and paid against agreed output/results; 2) selection of the proposals promising the highest scientific output for the specified lump sum; 3) distributing pre-defined lump sums per project without further control by the Commission to the awardees selected in a highly competitive process.

Another Communication of the Commission of 26/05/2010⁸ proposed to raise the tolerable risk of error currently applied by the Court of Auditors (a standard 2% materiality level for the legality and regularity of transactions underlying payments) while attaining this error rate⁹ in the field of Research may lead to costs of control exceeding the benefit from recovered amounts and putting the additional burden on beneficiaries.

In reaction to these and pursuing its commitment to simplification, the Commission has adopted three specific measures¹³:

- ✓ Revised criteria for the acceptance of average personnel costs as being eligible in FP7;
- ✓ Flat-rate financing for SME owners and other natural persons not receiving a salary;
- ✓ A Research Clearing Committee to ensure uniform interpretation and application of the FP7 rules and procedures.

of 12 October 2010 on "Making EU research and innovation programmes more attractive: the simplification challenge"¹¹. The Council identified simplification as a key issue for the forthcoming research and innovation programmes and recognized the need for a critical review of the current set of programmes and instruments and the coherence of their rules. It also supported a more trust-based approach consisting of limiting EU monitoring and control to the minimum necessary to safeguard public funds. In this respect it suggested combining a tolerable level of error and risks with accountability and sound financial management.

Resolution of the European Parliament

Similar conclusions of the European Parliament were expressed in the resolution on simplifying the implementation of the Research Framework Programmes adopted on 11 November 2010 (P7_TA(2010)0401)¹² finding the management of FP7, despite the improvements made in relation to FP6, still characterised by excessive bureaucracy, low risk tolerance, poor efficiency and undue delays and acknowledging stakeholders call for further simplification and harmonisation of rules and procedures. It recommended a reduced set of rules for funding, called for coherence and harmonisation, recommended further internationalisation, called for flexible EU rules to align better, where possible, with existing different national regulations and recognised accounting practices, and suggested the incorporation of the rules for participation into the body of the Financial Regulation. It expressed view that the management of European research funding should be more trust-based and risk-tolerant, finding the current system and the practice of FP7 management excessively control-oriented and rather avoiding than managing risks. It called for aiming EU monitoring and financial control primarily at safeguarding public funds and combating fraud, whilst distinguishing clearly between fraud and errors.

Following the FP7 Interim Evaluation¹⁴, published in November 2010, the Hungarian EU Presidency organised on 24-25 February 2011 a conference on the Interim Evaluation of FP7¹⁵, and the Council

⁷ http://ec.europa.eu/research/fp7/pdf/communication_on_simplification_2010_en.pdf

⁸ http://ec.europa.eu/budget/library/biblio/documents/control/com_2010_0261_risk_error_balance_en.pdf

⁹ Error rate refers to the expected level of error remaining in the auditable population after the corrections resulting from the audit findings

¹⁰ http://www.consilium.europa.eu/uedocs/cms_data/docs/pressdata/en/intm/114640.pdf

¹¹ <http://register.consilium.europa.eu/pdf/en/10/st14/st14980.en10.pdf>

¹² <http://www.europarl.europa.eu/sides/getDoc.do?type=TA&reference=P7-TA-2010-0401&language=EN>

¹³ Commission Decision of 24 January 2011 "on three measures for simplifying the implementation of Decision No 1982/2006/EC of the European Parliament and of the Council and Council Decision No 970/2006/Euratom and amending Decisions C(2007) 1509 and C(2007) 1625 (C(2011) 174 final)

¹⁴ Interim Evaluation of the Seventh Framework Programme – Report of the Expert Group, Final Report of 12 November 2010

(http://ec.europa.eu/research/evaluations/pdf/archive/other_reports_studies_and_documents/fp7_interim_evaluation_expert_group_report.pdf).

adopted its conclusions¹⁶ of 9 March 2011, both drawing attention to how reducing complexity and simplifying participation are important in FP7 and in the wider context of the future Common Strategic Framework for EU Research and Innovation funding.

The above list of declarations and actions demonstrates the clear and long-standing political support for the simplification of access to EU research programmes as a measure of contributing to achievement of “Innovation Union Flagship” objectives. As will be shown in the next sections, there is also a strong and sustained stakeholder support for initiatives in this direction. The legislators and the vast majority of received opinions call for **simplicity, stability, transparency, legal certainty and consistency** in the rules and procedures implementing the research and innovation programmes. Need of flexibility suitable to characteristics of distinct initiatives was also their major concern.

1.3. External consultation and expertise

A review of multitude of consultative activities for preparing the rules for participation is given in Box 3

Box 3: Consultative activities for preparing the rules for participation:

- ✓ The Green Paper open consultation, which included a number of questions addressing the implementing aspects of the research programmes. This consultation had an unprecedented success with 775 position papers received (including 106 from government bodies) and more than 1300 online responses¹⁷.
- ✓ An online survey of FP7 beneficiaries (covering Euratom beneficiaries participating in the Fission indirect actions¹⁸) on possible options and scenarios for the future funding rules. Around 3900 participants in the Seventh Framework Programme, covering all sectors and types of beneficiaries, replied to the online questionnaire.¹⁹
- ✓ A survey addressed to the 27 Euratom Fusion Associations to collect information on their administrative costs (mainly on the management of the contract of association and EFDA tasks, in particular the Euratom financial contribution) and their views on simplification;
- ✓ Dedicated workshops gathering the National Contact Points for Legal and Financial matters²⁰ and key European stakeholders in EU research and innovation;²¹
- ✓ A comprehensive study carried out by Deloitte on the assessment of the effectiveness of simplification measures under FP7, which also included interviews and round table meetings with a sample of FP7 beneficiaries;
- ✓ Sector studies, as the analysis on Administrative Costs of Participants in Entrepreneurship and Innovation Programme – EIP (DG ENTR), Evaluation of the Executive Agency for Competitiveness and Innovation (DG ENV), etc.;
- ✓ Expert group reports on the implementation of the research programmes: Expert Group on the “Evaluation of the effectiveness of the New Instruments of Framework Programme VI”, Expert Group Report on ‘Ex-post Evaluation of the Sixth Framework Programmes (2002-2006)’, Expert Group in charge of the Interim Evaluation of the Seventh Framework Programme, etc.;
- ✓ Views expressed in other public consultations, bi-lateral and multi-lateral meetings with stakeholders and opinion surveys relating to science and technology and research policy issues. This includes the numerous contributions to the simplification debate triggered by the 2010 Communication on simplification;
- ✓ The public consultation on a possible successor to the Competitiveness and Innovation Framework Programme (CIP)²²;
- ✓ An external evaluation of the EIT²³ and an open public consultation on the EIT²⁴.

¹⁵ See <http://www.tetalap.hu/fp7interim/>

¹⁶ 3074th Competitiveness Council of 09.03.2011 on “Conclusions on the evaluation of the Seventh Framework Programme for Research (FP7), including the risk-sharing finance facility”.

¹⁷ COM(2011)48 of 9 February 2011 - Green Paper - From Challenges to Opportunities: Towards a Common Strategic Framework for EU Research and Innovation funding, with deadline for contributions on 20 May 2011

¹⁸ Indirect actions as opposed to direct actions carried out solely by the Commission itself, namely Joint Research Centre. As activities of the JRC are defined in other legal acts, direct actions are not subject to this Impact Assessment

¹⁹ Open from 11 February till 4 March 2011

²⁰ On 4 April 2011

²¹ On 28 April 2011 – List of participants in Annex I

²² The Competitiveness and Innovation Framework Programme (CIP) is organised around three specific programmes: the Entrepreneurship and Innovation Programme (EIP); the Information and Communication Technologies Policy Support Programme (ICT PSP); and the Intelligent Energy-Europe Programme (IEEP).

1.3.1. Consultation on the Green Paper - Stakeholders' opinions

The Green paper open consultation included questions on the attractiveness and accessibility of EU research and innovation funding, the required level of harmonisation in the rules, as well as the intellectual property provisions that will appropriately support competitiveness while allowing access to and dissemination of scientific results.

The consultation gave stakeholders the possibility to respond in two ways - via an on-line questionnaire and via more detailed position papers (for messages from the latter see table 1).

²³ External Evaluation of the European Institute of Innovation and Technology, published on 31 May 2011 by ECORYS. The external evaluation focussed on the achievements and lessons learnt from the setting-up phase of the EIT.

²⁴ DG EAC has launched an open public consultation (OPC) on the EIT on 14 April 2011. The consultation ran until 30 June 2011 and has received 134 responses through the online questionnaire and 46 position papers (number is still increasing).

Table 1: Stakeholders' views expressed in the position papers

| Questions | Member States | Funding agencies | Higher Education Institutions and other public sector R&D performers | Business organisations |
|--|--|--|---|--|
| How to make EU research and innovation funding more attractive for participants? | <ul style="list-style-type: none"> • Reduce the number of instruments, removing overlapping. Continuity of successful instruments • Improve communication of the programmes and calls • Reduce paperwork, simplify and harmonise rules, procedures and requirements • Apply a more trust-based / risk tolerant approach • Continuity of the cost-reimbursement logic is preferred to a radical change toward output-based grants. In such context, accept where possible the usual practices of the beneficiaries and/or national procedures | | | |
| | <ul style="list-style-type: none"> • Smaller consortia and/or small size projects should be more easily allowed • Consider higher Tolerable Risk of Error (TRE) for a right balance between trust and control • More use of lump-sums/flat rates • Improve coordination and synergies between EU instruments • Cover the full innovation cycle from ideas to market | <ul style="list-style-type: none"> • Apply a single audit approach to reduce the number of audits • Less reporting requirements during project execution • More autonomous agencies | <ul style="list-style-type: none"> • Have excellence as the main selection criteria. • Researcher-driven schemes should be promoted • Smaller consortia and/or small size projects should be more easily allowed • Increased use of two-stage calls • Involve the scientific community in the preparation of the work programmes | <ul style="list-style-type: none"> • Smaller consortia and/or small size projects should be more easily allowed • Involve business in the preparation of the work programmes |
| How to ensure the balance between a unique set of rules and the need for flexibility to achieve the objectives of different instruments, and respond to the needs of different beneficiaries, in particular SMEs? | <ul style="list-style-type: none"> • A unique and simpler common set of rules is necessary, but these rules should be flexible and, where needed, include targeted provisions for specific groups of beneficiaries • Participation of SMEs should be further promoted via dedicated instruments and streamlined procedures • Requirements and constraints fixed in the rules should be reduced and simplified; project implementation should be, thus, more flexible | | | |
| | <ul style="list-style-type: none"> • Tailor-made solutions could be needed for specific actors • More flexible work programmes and implementing rules • Flexible rules allowing for usual accounting practices of participants | <ul style="list-style-type: none"> • Tailor-made solutions could be needed for specific actors | <ul style="list-style-type: none"> • Tailor-made solutions could be needed for specific actors • Flexibility during project execution • Align where possible with national practices | <ul style="list-style-type: none"> • Uniform interpretation of rules is more important than a unique set of rules |
| Should new approaches to supporting research and innovation be introduced (e.g. through public procurement, pre-commercial procurement, and/or inducement prizes)? | <ul style="list-style-type: none"> • Public procurement receives a wider support than the introduction of inducement prizes and awards as alternative new approaches. Inducement prizes can however be regarded as an effective way to stimulate research and innovation, provided that they are highly visible, attractive and well marketed as an Europe-wide acknowledgement of achievements | | | |
| | | | <ul style="list-style-type: none"> • Stress the need to clarify legal issues related to these new approaches, especially on intellectual property rights | <ul style="list-style-type: none"> • Generally in favour of introducing public procurement approaches to drive innovation • Prizes for innovation may not be attractive because the chances of success are too small |
| How should international cooperation with non-EU countries be supported? | <ul style="list-style-type: none"> • Use international cooperation to support EU interests (competitiveness, economic development) • EU international cooperation should follow a strategic approach and pursue reciprocity (i.e. participation and funding) • Global problems and common strategic interests should be the key drivers of international cooperation | | | |
| How should intellectual property rules governing EU funding strike the right balance between competitiveness aspects and the need for access to and dissemination of scientific results? | <ul style="list-style-type: none"> • For publicly funded research, the free dissemination of its results (at least after a delay) should be the rule. • A specific case by case-approach depending on the subject matter (e.g., software, medication, scientific articles, etc.) as well as on the kind of research concerned (basic, pre-market) seems suitable. • The design and the practice of the current FP7 System appears to be balanced and adequate, in particular the approach of solving problems mainly at the individual level (GA, CA) while having a State institution as a safeguard; though, also MCA should be adopted. In any event, a future system should remain flexible. • Open access, open source and patenting (probably with a deadline for a registration) seem to be adequate instruments for the dissemination of results and their promotion, but there should generally be more awareness-raising and more assistance as to IPR. • An at least partial harmonisation of the legislation should take place (above all through an EU Patent). Furthermore, IPR Rules should be more consistent throughout all EU Programmes. | | | |

Source: Green Paper open consultation position papers.

The responses to the online questionnaire confirmed the opinions provided through the position papers. The overwhelming majority of respondents were in favour of **considering simplification as a key priority in the future Framework Programmes** and expressed strong support for more coherence in the rules and procedures, while at the same time stressing the need to maintain flexibility and to tailor rules to specific groups of beneficiaries, such as SMEs and the Knowledge and Innovation Communities (KICs). On the latter, respondents have advocated the need to preserve or further strengthen their flexibility, which has been instrumental to their early success²⁵.

1.3.2. Consultation of beneficiaries

For gathering quantitative evidence on the administrative costs of participation, an **online survey among FP7 beneficiaries** (covering Euratom beneficiaries participating in the Fission indirect actions) was carried out. Substantial information was collected (3900 responses) on the administrative costs associated with participation, as well as views on possible options and scenarios for the future funding rules. Data on the administrative efforts required by participants in FP7 projects provide the appropriate evidence to substantiate the baseline scenario for the future funding rules, as discussed later in this document. The survey respondents also expressed their opinion on three proposed funding scenarios, consisting of: i) funding based on reimbursement of actual costs with simplified rules, ii) output/results based funding with project-specific lump sums granted to entire projects or iii) the extended use of lump sums, flat rates and scales of unit cost elements in a cost reimbursement system. Finally, respondents had the opportunity to provide comments in each part of the survey, as well as to give their views on potential simplification measures for the future Framework Programme.

The results of the online survey on administrative costs for participation were discussed in two workshops, gathering respectively the National Contact Points for Legal and Financial matters and key stakeholders in EU research and innovation funding. Clear preferences with regard to the proposed scenarios became apparent during the discussions. In general terms, the **scenario offering simplified actual costs gathers the most positive views, if combined with a harmonised application of the rules and improved communication and assistance to the participants**. The other two scenarios (output-based funding with project-specific lump sums for entire projects and extended use of flat rates, lump sums and scales of units) are perceived only as viable alternatives, if restricted to specific areas/projects/partners or if proposed as options alongside the first scenario.

Finally in the context of the external study on 'Assessing the Effectiveness of Simplification Measures under FP7' a round table meeting with FP7 stakeholders was organised to assess the relevance and feasibility of several simplification recommendations and trust-based options for future research and innovation activities. The conclusions of this meeting are broadly consistent with the outcome of the survey and the two workshops above.

For gathering quantitative evidence on the administrative costs of Euratom participants in research actions on Fusion, a survey among the 27 existing Euratom Fusion Associations was carried out. Substantial information was collected (19 responses out of 27) on the administrative costs associated with participation, as well as views on possible options and scenarios for the future funding rules.

²⁵ "A balance will have to be found for the European Institute of Innovation and Technology (EIT) between much needed flexibility and freedom on the one hand and its alignment within a common framework on the other hand."

League of European Research Universities – LERU

"The UK is pleased that the European Institute for Innovation and Technology (EIT) is included within the broad remit of the Common Strategic Framework but considers that greater autonomy could be beneficial (...) We consider that EIT should have the autonomy and flexibility to organise itself in the most appropriate way, but within the broad framework of the future Common Strategic Framework".

UK: Department for Business Innovation and Skills

1.3.3. Summary of the stakeholders' opinions

7 key messages emerge from the opinions expressed by stakeholders and experts, which can be summarised as follows:

1. The future programme is seen as an ideal opportunity to simplify the EU funding landscape by reducing the number of instruments, removing overlap and improving the coordination with other sources of EU and national funds.
2. More simplification is a top priority in order for the future programme to make EU research and innovation funding generate more impact and be more attractive to participants.
3. In this context, more coherence in the rules and procedures receives strong support, while at the same time stakeholders stress the need to maintain flexibility and to tailor rules to specific groups of beneficiaries, such as SMEs and the KICs.
4. Continuity and legal certainty remain core issues for all stakeholders²⁶, together with the principles of trust and excellence.
5. The discussions in the workshops confirmed that the conclusions on administrative costs for participants drawn from the online survey of FP7 beneficiaries appear reasonable and allow defining the baseline scenario for the impact assessment of the future Rules for participation.
6. In terms of potential funding scenarios, the scenario offering simplified actual costs gathers the most positive views, if combined with a harmonised application of the rules and improved communication and assistance to the participants. The other two scenarios (output-based funding with project-specific lump sums for entire projects and extended use of flat rates, lump sums and scales of units) are perceived as viable alternatives, if restricted to specific areas/projects/partners or if proposed as options alongside the first scenario.
7. With regard to the future Horizon 2020 rules on exploitation and dissemination, broad support was expressed for continuing the existing FP7 framework which is viewed as constituting a good balance between the interests of the different stakeholders while leaving enough flexibility for participants to determine specific rules fit for their own project. There was a general caution against making any radical changes. Common exploitation and dissemination provisions for comparable funding schemes are favoured but some flexibility must remain for justified cases. Open access to research publications was accepted in principle.

²⁶ Also the Euratom Fusion Associations, except Hungary, indicate that they would prefer stability, maintaining the current system of Contracts of Associations under the future Euratom Framework Programme. However, the Associations considered it necessary to introduce some improvements (increase the use of Implementing Agreements and of project-specific lump sums) and simplification measures (the top priority simplification measures being the increase of projects and the participation to the EFDA priority support, and putting the financial support given under EFDA outside the Baseline support). They also considered necessary to guarantee at least the 20% of Baseline support from the Community to the fusion activities.

Box 4: Consultation on other programmes

The public consultation on a possible successor to the CIP

The public consultation process consisted of:

- an online survey (including specific survey on financial instruments), it was open from 8 November to 11 February 2011. A total of 676 answers and 76 written contributions were registered;
- a public conference that was organised on 25 January 2011 and was attended by more than 550 participants, representing a wide variety of stakeholders (associations of financial intermediaries, business organisations, companies, innovation agencies, universities, etc);
- meetings with the representatives of the Members States in the different CIP management committees (meeting of the CIP Joint Management Committee meeting on 25 January 2011, meeting of the Entrepreneurship and Innovation Programme Management Committee on 16 and 17 March 2011);
- a meeting with the members of the CIP Strategic Advisory Board on 2 February 2011.

On the programme management there was a general desire to simplify the structure of the programme and to have experts on innovation on the management of the programme. The need for a robust development of monitoring and evaluation, as well as increased co-ordination and exchange of best practices was also broadly supported.

As far as the relations with other EU programmes are concerned, respondents underlined the need to increase coordination and coherence with other EU instruments, in particular the Structural Funds and the Framework Programme for research and technological development (FP), to create synergies and avoid duplication.

EIT evaluation and EIT open consultation

The first external evaluation of the EIT has found development of the EIT effective, efficient, and relevant, as well as demonstrating EU added value. The main conclusions as regards autonomy and simplification are the following:

- The ability of the EIT to act autonomously of the European Commission is widely welcomed.
- The EIT should continue to develop its own practices in key areas, particularly around the simplification agenda.
- The EIT should seek to develop best practice and become a role model for other Commission activities, in particular around the question of simplification.

A preliminary analysis of the results of the open public consultation shows widespread consensus that flexibility is essential for the KICs to attract participation from the business sector. The response of the business community, business associations, chambers of commerce and individual companies is to be highlighted. Many stakeholders have expressed concern that the objective of excessive harmonisation is given priority over simplification and flexibility. It is argued that "*The EIT/KICs might lose their richness for having a homogeneous process.*", that "*There should be a fair degree of flexibility left, as policy objectives require a variety of instruments.*" "*Imposing the same regulatory straightjacket on all activities could even lead to an increase of red tape.*"

1.4. Opinion of the Impact Assessment Board

The draft version of the impact assessment report has been submitted to the Impact Assessment Board on 27 July 2011. The comments of the Board, discussed during its meeting and received subsequently in writing, have been carefully analysed and resulted in number of the changes to the report. In its opinion following the meeting, the Board requested some additional work and indicated five recommendations for improvements of certain technical aspects. These comments have been taken on board in the final draft of the IA as follows:

- 1) The scope of the report has been clarified,
- 2) The baseline scenario has been strengthened (particularly in relation to SMEs and international cooperation),
- 3) A better defined objective on international cooperation and a set of indicators have been added in order to clarify the intervention logic,
- 4) Intertwining between policy issues that were taken into account in the presentation of the options in two sets, have been highlighted and more details provided on the reasons for discarding certain options, improving the description and presentation of the report.
- 5) Additional information has been provided on simplification as well as on monitoring and evaluation.

2. PROBLEM DEFINITION AND SUBSIDIARITY

2.1. Background of the FP7 rules and lessons learned from its evaluation

In the history of EU research, funding changed gradually from an *ad hoc* approach without an explicit legal base, through an integrated vision for research started with the first Research Framework Programme in 1984 to including in the Single European Act a separate chapter on research and technology development. Six successive framework programmes followed with an annual budget steadily increasing and arriving in FP7 to an average of 7217 million euro per year, becoming the world's largest research program (see exemplary comparison with NSF (US), DFG (DE) and ANR (FR) programmes in Deloitte report – Annex II), open to participation from any country.

In light of the increased number of involved Member States and associated countries, the ever-growing international cooperation and the evolution of objectives inducing diversity in types of actions and of actors, the following explanation of the roots of the problem taken from the Commission Staff Working Document “Simplification in the 7th Framework Programme (COM(2005)119 final)” is as true as it was at the time of its publication. *“Over the past 20 years the Community’s research Framework Programme has expanded significantly in terms of budget, scale, scope and ambition. In line with this expansion, a range of different types of support have been developed to target an increasingly broad range of beneficiaries across an enlarging geographical area. This evolution has brought with it increased complexity in terms of a multiplication of types of instrument, forms of contribution, requirements for submission and reporting, and rules of implementation. As well as the greater breadth, increased financial support, and growing number of participants associated with the projects being funded, this complexity has been accentuated by the need for internal and external controls to ensure that Community funds are spent wisely and correctly.”*

This of course does not mean that nothing was done to simplify implementation of the consecutive Framework Programmes. Significant efforts were undertaken for FP6 and a series of measures linked to ten simplification objectives were announced when FP7 was launched. The most successful proved to be the development of the Unique Registration Facility; the introduction of a threshold of EUR 375 000 contribution for the requirement for an audit certificate, and the introduction of the guarantee fund which exempts participants with less than EUR 500 000 contribution from ex ante financial viability controls and removes joint liability of the consortium participants towards the EU. However, other measures considered as potentially important for stakeholders, namely 1) the introduction of the possibility of ex-ante certification of the accounting methodology for recurring participants; 2) a clearer definition of eligible costs, and improvements to the services and guidance documents for applicants; 3) a simpler cost reporting system; and 4) a simplified support rate per type of activity; are not perceived by beneficiaries as having been successfully implemented²⁷.

Conclusion drawn from the above is that *“while overall, FP7 simplification measures have been partially successful, measures have not been perceived as helpful to increase participation of less represented target groups such as SMEs, newcomers and small players in general. As a consequence, FP7 is still perceived as a ‘closed shop’ for experienced participants”*.

The practical implication of the three simplification measures adopted by the Commission Decision of 24 January 2011 still remains to be seen. An initial assessment of these measures in Deloitte report is the following: *“the measure on “average personnel costs” is a very important measure while the “Research Clearing Committee” has potential but cannot be assessed at this moment. The measure on eligible costs for SME owners will only affect a limited number of beneficiaries but should have a significant impact on them.”*

²⁷ For complete overview of implementation measures introduced when FP7 was launched and their impact so far see Deloitte report on simplification, p.14 (Annex II)

The final report of the Expert Group in charge of the Interim Evaluation of the Seventh Framework Programme, was published on 12 November 2010. It comprised a thorough analysis of participation patterns and simplification in FP7. It identified a number of central problems for the rules for participation and dissemination and made the following recommendations:

“Simplification needs a quantum leap, and the Expert Group calls for all Directorates- General and agencies rapidly to implement the short-term simplification measures recently put forward in a Communication by the Commission and to ensure that they are applied rigorously from 2011-2013. Coherence of procedures and approaches between Commission Directorates General and the Executive Agencies responsible for administering FP7 is of crucial importance. The Expert Group proposes that the Commission consider the upcoming revision of the Financial Regulations as an opportunity to create more flexible conditions for research in subsequent FPs. In addition the Group pleads for the Commission to switch from its present low-risk/low-trust attitude to a more trust-based and risk-tolerant approach.”

The Expert Group also recognized the vast and impressive reach of the Framework Programme, the fact that calls have been developed and processed effectively at a procedural level and that the procedures have ensured that funds are allocated in a reasonably timely manner and with the highest standards of integrity. It noted however wide-spread criticism of the complexity of rules and regulations adopted as well as inconsistency in the legal structures and procedures that discourage industry, universities and research organizations from participating in the Joint Technology Initiatives (JTIs). It also highlighted the importance of retaining stability in the FP and of avoiding disruptive changes to procedures, now familiar for the research community unless good reasons for change are proven. It emphasized the role of industry as the bridge between research and ‘commercialisation’ in fostering innovation and reminded that SMEs are consumers as well as performers of research and that for them access to research findings is frequently most valuable. In view of fully achieving innovation of RTD projects it called for improvement for average amount of ‘time-to-grant’. In view of future Framework Programmes it suggested a one-to-one-principle by which a new measure can be launched only if an equivalent one is removed from the portfolio.

As an element of learning from past experience the considerations and conclusions of the report, together with opinions of beneficiaries and legislators were used in the process of identifying the problems that are to be answered by the future rules for participation and dissemination of results.

2.2. Description of the problem

The purpose of the rules for participation is to implement the EU multi-annual framework programmes by defining the conditions of participation to the Framework Programmes’ indirect actions, the procedures to be followed for introducing proposals as well as principles for the evaluation, selection and award. The rules determine the form, rates, and conditions of the Union financial contribution. They set out exceptions and complementary provisions to the provisions of the Financial Regulation and its Implementing Rules, and for matters not covered by the rules the two latter acts apply directly. In addition, these rules also lay down the rules regarding exploitation and dissemination of the results which are generated by the indirect actions.

It is of utmost importance for realization of the objectives of the programmes to ensure attractiveness and accessibility for the entities wishing to participate in it. The numerous documents cited above identified a number of issues that currently hinder that access as well as their underlying causes. They also indicate prerequisites for attaining expected level of attractiveness and accessibility, namely clarity of rules and instruments; an overall participant-centred orientation of the initiatives and their implementation; consistency and stability; and lightness and speed of administrative procedures and processes, from application, over reporting, to auditing. The problems met in implementing the rules and the reasons for which the current conditions of participation are regarded as unsatisfactory are identified below.

➤ Simplifying administrative procedures

All documents and opinions of the stakeholders point to **complexity of administrative procedures** together with related **excessive administrative burden** as the most important obstacles to effectiveness of participation in the research framework programme. Therefore the need for simplification of administrative procedures was given utmost attention in the comments from stakeholders and in the documents of the institutions involved in the legislative process. Although recognizing the progress made, the European Parliament found the current management of FP7 still characterised by excessive bureaucracy, low risk tolerance, poor efficiency and undue delays. It also acknowledged stakeholders calls for further simplification and harmonisation of rules and procedures. The Council identified simplification as a key issue for the forthcoming research and innovation programmes and as a crucial and urgent necessity to overcome the current complexity of funding leading to excessive administrative burden and discouraging potential beneficiaries. In the same line, the opinion of the expert group evaluating FP7 also referred to the issue that warranted most attention. The group found that ‘complication’ *“continues to deter (and exasperate) researchers and, especially, can be a daunting obstacle to effective industry participation”* and classified existing shortcomings in simplification in three distinctive categories:

- 1) The constraints imposed by the EU’s Financial Regulation and the resulting limitations on flexibility. Some of the unresolved issues may find solution following the adoption of a modified Financial Regulation proposed by the Commission;
- 2) Those that derive from the design of the Framework Programme, and are presented below;
- 3) Choices made by, or management guidelines issued to, operational staff by the Directorates in the Commission (and agencies) responsible for day-to-day administration. These result on lack of consistency in the management of the Framework Programme as regards interpretation, communication, performance, late publication of Work Programmes, lack of information prior to publication of calls; long time to contract/ grant; stronger focus on financial issues than on exploitation of research results; too high level of detail required for audit certificates, uncoordinated audit management; and heavy reporting procedures, etc.

Provided that the above remarks will be duly taken into account when formulating the objectives of the proposed legislative initiatives, **they will be balanced with the preference clearly expressed and strongly supported by participants not to have a "revolution" in the rules for participation.** When presenting the options for introducing changes in the current provisions, one of the major sources of concern of stakeholders is the resulting **lack of stability of the rules** that could lead to disruptions in the implementation process and would require additional learning effort from participants. Stability of existing rules is perceived as very important for all the users of the FP, therefore any simplification must outweigh the costs of its implementation. As Deloitte study states: *“Ever-changing rules are often a cause of additional administrative burden and irritation rather than a lever for removing the negative effects of red tape”*. **The advantages of stability in procedures mean that they should, at most, be adjusted rather than radically altered.** Otherwise, there is a risk of further disruption from the need for all sides to ‘learn-by-doing’. A lesson learned from FP7 is that many of the problems that occur in the first two years of a Framework Programme are caused by the procedures not being ready and sufficiently tested in due time. Envisaged changes should be agreed early and incorporated in any administrative arrangements before calls are issued. These arrangements should apply not only to the rules of participation, but also to Model Grant Agreements, reporting/auditing guidelines and the submission system, as well as the associated IT systems. The clear implication is that a degree of continuity should be encouraged; and such is also the message passed by stakeholders during the consultation on the possible scenarios for the future rules. It needs to be noted that a simplification involves a number of actors, participants themselves not being excluded. Findings of Deloitte study on the responsibilities of the key players were summarized in the following way:

Figure 1: The role of the key players in achieving further simplification (Source: Deloitte)



➤ **Consistency of rules between instruments**

The stakeholders' and beneficiaries' consultations carried out in view of this IA exercise have pointed out that participants find very burdensome to apply different sets of rules depending on which EU research and innovation funding programme they participate in. Therefore, they have asked for a higher degree of harmonisation between the implementing rules stipulating participation and dissemination across the different research and innovation actions.

It is important to note that FP7 has an inherent complexity which is, nevertheless, necessary to achieve its constellation of political objectives and to foster transnational research collaboration, while taking into account the diversity of national legal systems, accounting practices and management cultures. FP7 houses a multitude of intervention mechanisms with specific rules, a diversity of reimbursement rates and special conditions for certain types of organisations. Collectively this diversified approach signifies complexity²⁸. This aspect has also been pointed out in the FP7 interim evaluation report, where it is noted that “A programme as vast and complex as FP7 inevitably has to contend with a variety of challenges, whether affecting different goals or purely administrative in nature”.

Moreover, under FP7, the number of intervention mechanism has increased with the participation of the EU in programmes undertaken jointly by several Member States (Article 185 Initiatives)²⁹ and the creation of Joint Technology Initiatives (JTIs)³⁰. As the FP7 rules for participation do not apply to these intervention mechanisms, each of them has its own distinct rules and creates its own legal and administrative framework, taking into account the specific operating systems. Given the criticism on this, the Commission

²⁸ Communication on simplification

²⁹ Article 185 TFEU Initiatives are set up at European level for integration of national research and development programmes by the participation of the European Union in joint programmes undertaken by several Member States. The four Article 185 initiatives are currently EUROSTARS, addressing research and development performing SMEs; the Ambient Assisted Living (AAL) Joint Programme; the European Metrology Joint Research Programme (EMRP); and BONUS, a Joint Research Programme on Baltic Sea research.

³⁰ A JTI is a legally established body (a Joint Undertaking), set up on the basis of Article 187 of the Treaty on the Functioning of the EU. JTI members are jointly responsible for monitoring progress, guiding the evolution of the initiatives and adapting the work programmes in response to changing needs. In this respect, each JTI is accountable to its founding members as well as to the Council and the European Parliament. The five JTIs are 1) Innovative Medicines (IMI); 2) Embedded Computing Systems (ARTEMIS); 3) Clean Sky (innovative, greener technologies in the field of aeronautics); 4) ENIAC (key technologies for nanoelectronics); 5) Fuel Cells & Hydrogen (FCH) (hydrogen supply and fuel cell technologies).

has been encouraged to take radical steps to streamline and harmonise procedures where possible and opportune.

Also regarding the Competitiveness and Innovation Framework Programme (CIP), it must be noted that it groups a number of actions with the single overarching objective of promoting innovation. It is achieved by various instruments which follow different implementing rules than FP7, yet derogating less from the Financial Regulation and globally perceived as simpler than the FP7 rules.

Therefore, all the above instruments have their own complexity that is intrinsic and functional to the achievement of their different objectives. Said that, it seems clear that the definition of a common set of basic principles applicable across the different research and innovation actions rather than the current diversified approach would undoubtedly lead to a considerable trimming and lightening of rules, processes and IT systems.

Considering that the Commission has proposed on 29th June 2011 to bring together all EU research and innovation funding in a coherent, from-research-to-innovation overarching framework, in order to make participation easier, increase scientific and economic impact and maximise value for money³¹, the combination of these actions will clearly lead to a even more complex landscape: therefore, a significant harmonisation of implementing rules and procedures is essential to counterbalance the amplified complexity of the subject.

Keeping that in mind it cannot be forgotten that the innovation value chain is rich and diverse in terms of players (individuals, academia, research, industry), in terms of lifecycle (medium term research, proof of concept; demonstrators, small series), in terms of risk, in terms of outputs (enabling technology, prototype, product,). Such diversity may require diversified solutions and a balance between strengthened focus on results and more homogeneous processes needs to be established.

➤ **Sound financial management and safeguarding of the EU financial interest**

The Treaty on the Functioning of the European Union provides that "the Commission shall implement the budget (...) having regard to the principles of sound financial management". This general principle means that budget appropriations must be used in accordance with the principles of economy, efficiency and effectiveness.

Provisions governing the scope of grants laying inter alia principles of no profit for beneficiary (with certain exceptions e.g. for research scholarship paid to natural persons and prizes following contests) and obligation of co-financing paired with criteria defining eligibility of cost set the general framework that the Commission is obliged to follow for its direct and indirect actions. For instance, certain provisions in the current Financial Regulation, such as the obligation to recover the interest generated by the pre-financing, often result in procedures perceived by the beneficiaries as burdensome.

Given the above legal framework from which the Commission cannot deviate, despite the burden for participants, the current legislation has already foreseen for FP7 an easy instrument of safeguard of the EU financial interest which is the guarantee fund. According to the result of its interim evaluation, it has proved to be very effective and highly supported by participants vis-à-vis other instruments such as bank guarantees. Therefore, this part of the problem has to be seen as already properly addressed in the current legislation, and in view of an eventual policy of extension of the scope of the guarantee fund, to make it applicable to other research and innovation actions currently not covered by the FP7 rules.

³¹ Impact Assessment of Horizon 2020 Framework Programme

➤ **Strategically targeted approach for international cooperation**

The crosscutting issue for implementation of the Framework Programmes identified in virtually all related documents is the necessity to provide a more strategic approach for international cooperation.

The significance of this aspect is illustrated by the fact that during the first four years of FP7 it has funded projects with participant organisations from as many as 169 countries. In 2010 candidate and associated countries accounted for about 9% of total applicants in retained proposals and requested Union financial contribution (with Switzerland undoubtedly being a leader). Also in 2010 alone there were 1.160 applicants from as many as 87 Third Countries (countries outside the Member States and associated countries) representing 8,5% of the total number of applicants and 3% of the total amount of requested EU contribution in retained proposals.

The legislative proposal for the Horizon 2020 Framework Programme defines the broad policy for international cooperation. Building on the experience of FP7 and in line with the need to engage more and more strategically in international cooperation, international cooperation needs to be firmly embedded throughout the whole of Horizon 2020.

The following problems have been identified with regard to the cooperation with third countries:

i) the large proportion of the EU funding for third countries is going to emerging economies (currently approximately 45%) who are strongly investing their own funds in STI and with whom the EU wishes to have a more strategic and equal relationship;

ii) the general inadequate scale and scope in EU international cooperation activities (as demonstrated by the evident fragmentation of European international cooperation and the complex funding procedures relative to the size of the funding budgets concerned) in particular with key industrialised countries and emerging economies and which limits the potential impact.

➤ **Need to boost innovation**

Following the adoption of the “Innovation Union” Flagship Initiative consistent support to all stages of the innovation processes from basic research, through applied research to market relevant demonstrators has become a major objective of the research framework programme. Therefore apart from dealing with complexity of procedures, future rules must also **contribute to achievement of “Innovation Union” Flagship Initiative objectives**. The Council, in its conclusions, stated that scientific excellence and basic and applied research, supported by world-class infrastructures, life-long learning, training and higher education, in particular in science and engineering, as well as incentives for commercialization of results, are preconditions for an efficient innovation system. Also more synergies between the research and innovation dimensions in the programmes should be considered. The following components were identified by the experts and in the documents of EU Institutions as having the highest impact on innovation in implementation of research framework programme:

– **Increasing participation of innovative enterprises (and in particular SMEs)**

During the first four years of FP7 implementation SMEs represented 16,6% of all participants in signed grant agreements, and their share of total project costs and requested EU contribution was 13,3% (€ 3,3 billion) and 13,2% (€ 2,4 billion) respectively³². As more targeted for their needs the CIP has been successful in reaching SMEs (100,000 SMEs received loan guarantees, 70% of beneficiaries of eco-innovation market replication projects are SMEs).

³² Fourth Monitoring Report, op. cit.

Although the level of SME participation can be considered satisfactory, the percentage of 'one time only' participants (77,8% for SMEs compared to 66% FP7 average) indicate that SMEs still are not fully realising their potential participation levels due to the complexity of procedures. Also the average EU funding (249,607 EUR for SME and 326,443 for non-SME participants) is significantly smaller but that fact is rather due to the type of projects SMEs usually participate in.

The importance of SMEs in rapidly developing science-based industries for innovation has been demonstrated in many publications. Experts evaluating FP7 remarked that "*research is necessary, but not always sufficient for achieving economically significant innovations. (...) More effort should be devoted to achieving greater impact regarding innovation, in stimulating the participation of industry and SMEs, and in focusing on the whole innovation process. Without addressing these challenges rapidly, futures Framework Programmes are unlikely to fulfil expectations of their contribution to innovation in Europe*".

– **Mechanisms for funding innovation in area of public procurement**

Public procurement for innovation aims at promoting new forms of public procurement capable of stimulating innovation, with beneficial effects on both sides of the market. Currently in the area of innovative public procurement at EU-level, there exists no SBIR-like³³ or pre-commercial procurement scheme that would help to meet societal challenges with innovative solutions. As this issue is addressed only by a few Members States at relatively restricted level, potential of this solution that proved to have significant impacts on innovation in the US is still not addressed at European level.

➤ **Management of the Framework Programme and implementation of the rules**

A very important part of the problem linked to the need of simplification and reduction of administrative burden for participants was reported by the experts and in the Deloitte report as related not to the content itself of the rules for participation and dissemination, but to the **management** of the Framework Programme and their **implementation** by the services of the Commission and the Executive Agencies. The main remarks that were made are indicated in Box 5

Box 5: Other issues related to implementation of the programmes

Length of time to grant

Innovation requires reacting quickly to market opportunities and developments. Thus too lengthy procedures and long time to payment are having a deterring effect on participation of industry. Burdensome and expensive processes for participation, complex instruments, post-project auditing practices which result in unexpected financial penalties, and financial rules that are too often hard to understand were identified as major obstacles in that respect in the experts report. It appears, that industry is deterred to a greater degree than other research performers by the weight of bureaucratic burdens and, on occasion, by a perception of insufficient flexibility in Work Programmes (although results of the survey indicate that SMEs are slightly more effective in preparation and management of their proposals than other types of applicants).

The time to grant is defined as the time elapsed from the deadline of the call for submission of proposals until the signature of the grant agreement. The average time to grant for the FP7 projects is 348 days (median 334), a minor improvement compared to 2009. As a comparable example, for CIP ICT PCP part the average time to grant is assessed to be 346 days (period 2007-2009). Such average figures are perceived as a significant deterrent for participation of SMEs and

Consistency of implementation, use of IT tools, access to information

Evidence of differences of approach between Commission Directorates involved in FP7 and many examples of inconsistencies in the application of rules, both within and between specific programmes, have been recorded in reports of experts and Deloitte together with anecdotal evidence of scientific and financial officers interpreting rules differently and giving conflicting advice to participants. Even if exaggerated by word-of-mouth these discrepancies heavily impact on perceived complexity of administrative procedures.

There are still too many problems with IT tools, and poorly harmonised application, negotiation and reporting tools among the DGs and Executive Agencies involved in the Framework Programme. The current use of different systems is found by participants confusing and complex.

Communication to potential applicants is done through the Participant Portal and CORDIS portals. The

³³ Small Business Innovation Research is a programme that allows small, high-tech, innovative businesses to access the federal government's research and development funding.

³⁴ On the basis of data extracted at the moment of preparation of Fourth Monitoring Report.

³⁵ Fourth Monitoring Report, op. cit.

industry, especially when considering innovation projects, where time to market plays a significant role in determining the success in terms of take-up and use of results. There is a clear potential for improvement, as certain parts of the programme have already now - under the current FP7 rules- significantly lower average TTG figures, which could further be facilitated by simplifications in the Horizon 2020 programme.

Success rate for applicants

For the first four years of implementation of Seventh Framework Programme the rate of success for applicants varies between 12,9% and 56.8% depending on the specific programme reaching an overall success rate of 22,2% (and 21,1% in terms of proposals). Notwithstanding the increase in funds allocated to the FP during its lifetime, after firm growth in 2009, in 2010 the success rate has slightly fallen to 23,4% (and 23,9% in terms of proposals)³⁴. After the evaluation and selection stage the total project cost of the retained proposals for 2010 is €5,2 billion, and the aggregate project cost of the retained proposals for the period 2007-2010 is €27,8 billion with the corresponding EU financial contribution of €20,4 billion.

The success rate varies also depending on the Member State of origin of participants. It was also noticed by Deloitte that the success rate of the project increases proportionately to the degree of involvement and dedication of the project coordinator.

Because of the intensity of the competition for funding, not all applications from excellent researchers are funded, an outcome that will risk discouraging future proposals. **The main source of the problem is clearly the level of the funding envisaged in the EU budget**, but certain measures to alleviate this issue could be also envisaged in the rules and during its implementation.

The most promising measure to *“reduce the current massive waste of effort in writing good-quality but nevertheless fruitless proposals”*, could be a more extensive use of two-stage submission process, especially for calls with a broad thematic approach. In 2010 only 1063 out of total 13.547 applications for funding (7,85%) were submitted in reply to two stage calls (only 6 out of 63 calls were two-stage)³⁵. Establishing appropriate thresholds for passing the first stage (average cost of preparation of first stage proposal counts for approx. 40% of the cost of preparing the complete proposal) would allow to participants proceeding into the second stage to have a 30-50% chance of acceptance (in line with the recommendation of experts evaluating FP7) and to the other applicants to spare on average 60% of the cost of preparation of proposals. On the basis of the survey to FP7 participants (Annex I) the average cost for preparing the proposal was estimated to be around 8000 EUR per participant and during the first four years of FP7 out of more than 312.000 applicant organisations and individuals whose proposals were included in the evaluation procedure 234.000 were not funded. It should be noted in this context that a 2 stage submission by its very nature increases the time needed from idea to contract, so that it might not be useful in areas where the success of projects in terms of innovation is linked to a short window of opportunity.

Although the issues listed above are of utmost concern to the Commission and a constant work is currently being performed by the services in order to improve their performance, they will not be addressed in principle in the content of the legislative proposal that this Impact Assessment is accompanying. This is because these problems do not arise from the legal content of the rules itself, but from its implementation modalities which remain the competence of the Commission on the basis of its delegated powers, and therefore cannot be adequately addressed in a legislative act of the Parliament and Council. Nevertheless the Commission is confident that following elements of the proposal would have a strong positive impact on the above points:

- Transparent and coherent rules with clear guidelines would limit the level of errors and streamline internal procedures;
- Simpler rules allowing for flexibility would, by definition, strongly impact their implementation and the management of the FPs;
- Coherent interpretation would lead to consistent implementation which would produce additional benefits in all above areas in particular limiting discrepancies in the time to grant between different services, thus leading to its considerable reduction (for the best performing ICT theme of Cooperation Specific Programme average time to grant is 264 days). It would have a beneficial impact on number of error due to lack of clarity in Commissions guidelines

CORDIS site should be improved to make it easier for first-time users, with no prior knowledge of the FP7 structure, to find what they are looking for. The Participant Portal was created in 2009 and is integrating a series of pre-existing applications like the unique registration facility. While these are valuable means of communication, it is advised to combine them in a single tool providing a unique access point for participants. The diversity of online sources for information about FP7 calls creates unnecessary confusion for applicants and participants (more detailed analysis can be found in Deloitte report).

Risk management strategy

The Commission relies on a comprehensive control strategy including a very high number of on-the-spot auditing of projects and recovery of any amounts paid in excess in order to obtain reasonable assurance that payments are in compliance with the rules. The Commission can achieve such a positive assurance statement from the European Court of Auditors only when the level of errors is below 2%. The implementation of this control strategy has exacerbated the perceived complexity of EU research grant requirements and may discourage researchers and industry from participating in the EU research funding programmes. The magnitude of controls (audit coverage and subsequent adjustments) could be reduced with a view to lower the control burden. As a result augmenting the tolerable risk would also support a climate of trust and risk-taking which is favourable to innovation and creativity. Such a revised control strategy could focus in a more pronounced manner on targeted risk based audits and fraud prevention controls, taking into account the operational experience of the Commission anti-fraud services.

This issue was indicated in several documents as an example of **the need to introduce the risk/trust balance**: too many of the procedures appear to be designed to ensure a very low risk of delinquent behaviour by grant-holders and thus not to trust them in any way. The effect has been to introduce rigidities and excessive control mechanisms. However, as indicated in the Deloitte report, the question of trust (vs. control) for funding research projects has several meanings ranging from the lack of trust between the researchers and the Commission, leading to requests for obsolete information, to achieving a better balance between cost and trust by reducing the administrative burden or, in the extreme, to the high-trust “award” approach consisting in distributing pre-defined lump sums per project without further control by the Commission.

2.3. Baseline scenario for adopting Horizon 2020 while maintaining current policy for its rules

As the purpose of the Rules for Participation is the implementation of the Horizon2020 Framework Programme, the underlying assumption of this impact assessment is the adoption of the preferred option identified in its Impact Assessment namely the full integration of FP7, CIP and EIT into a single framework. As such assumption is already a significant change of the policy it would affect the issues of coherence, simplification and administrative burden that are at the core of the Rules even if the content of the relevant rules for each particular instrument would remain unchanged.

Under such scenario, there would be a number of different acts established by different actors governing rights and obligations of participants in different types of actions, as well as various guidelines. Therefore at least 12 sets of rules would apply³⁶ with different levels of coherence between these as well as with internal differences for various funding schemes and types of participants. In addition a number of other initiatives would be adopted in a near and more distant future.

Such patchwork of the acts and provisions would continue to create difficulties, confusion and uncertainty for participants and stakeholders. Stability of the rules would be kept yet as an additional layer of complications would arise from new architecture of Horizon 2020 providing under each of its specific programmes different sets of rules. This fact would lead to the application of different provisions to actions envisaged under the same budget and legal basis.

Current level of administrative burden would be kept for all participants and no additional simplification measures would be envisaged. Differences would be kept regarding the treatment of SMEs, research organisations, non-profit bodies and secondary and higher education establishments. Also different reimbursement rates would apply under the same grant depending on the type of activity.

Regarding participation of SMEs during the first four years of FP7, their aggregated participation³⁷ has remained at a reasonably high level as presented in the table below.

| As % of total | 2007 | 2008 | 2009 | 2010 |
|---------------------------|------|------|------|------|
| SME participants | 16.4 | 15.5 | 14.5 | 16.6 |
| Requested EU contribution | 14.0 | 12.6 | 11.3 | 13.2 |

As the level of SMEs participation appears to be connected to the overall amount of funding for the year, among other factors, the increase in funding envisaged for Horizon 2020 linked with the introduction of a specific mechanism for funding SMEs envisaged under CIP would probably lead to a further increase in these numbers. However the full potential of SMEs participation would be reduced, as no comprehensive mechanism for inclusion of innovation aspect in research projects is introduced.

For international cooperation, the adoption of Horizon 2020 with no changes to the Rules of Participation would be expected to result in a significant reduction in the ability to strategically target international partners (no expansion in the use of joint calls), a reduced European participation in research programmes sponsored by international organisations, and an effective decline of EU involvement in international

³⁶ FP7 rules for participation, CIP rules, EIT rules, separate rules for each Joint Undertaking (IMI - Innovative Medicines Initiative, ARTEMIS - Embedded Computing Systems, CLEAN SKY - Aeronautics and Air Transport, ENIAC - Nanoelectronics Technologies 2020 and FCH - European Hydrogen and Fuel Cell Technology Platform) and for each Article 185 Initiative (Ambient Assisted Living - AAL, Research performing SMEs – EUROSTARS, European Metrology Research Programme - EMRP, Baltic Sea Research Programme - BONUS)

³⁷ Numbers in the table are presented for the aggregated period from 2007 to the year indicated.

research programmes against rapidly increasing levels of international cooperation by Europe's strategic competitors.

2.4. Subsidiarity and European added value

It is important to establish a clear basis and rationale for the Union action in the areas of research and innovation. The right for the Union to act is set out in several articles of the Treaties, namely Articles Article 4 (3), 173, 183, the second paragraph of Article 188 and Article 189 of the TFEU. For the implementation of the multiannual framework programme Article 183 sets out a specific obligation to adopt the rules for the participation of undertakings, research centres and universities, and to lay down the rules governing the dissemination of research results.

Such specific obligation to determine rules for participation is not defined explicitly in the Euratom Treaty. However incorporating them in a legislative initiative adopted at the EU level (a Council Regulation) will ensure the most effective and transparent way to implement the European Atomic Energy Community research and training programmes. These rules of participation will define the rights and obligations of the legal entities wishing to take part in the Euratom framework programme and will establish, at the same time, the principles for the exploitation and dissemination of their work resulting from that participation. As it has been proved in the past, the adoption of the rules for participation at the level of a Council Regulation is the most appropriate action to guarantee in advance to stakeholders wherever they come from (Member States, associated countries or other third countries) that their participation in the Euratom research programmes is done in a transparent manner under common legal conditions applicable to everyone.

The issue of subsidiary is extensively analysed in the impact assessment concerning the Horizon 2020 Framework Programme for Research and Innovation in of the European Union, because the principle of subsidiary is relevant and must be therefore evaluated when deciding if the objectives of the Horizon 2020 as framework programme could or could not be sufficiently achieved by the Member States, and could rather be better achieved at Union level (art. 5 TFEU). Therefore, if the European added value is recognised and accepted for the EU actions under the Horizon 2020 Framework Programme, it comes directly from the Treaty on the Functioning of the EU that it needs implementing rules, i.e. the rules for participation (see Article 183 TFEU). In other words, according to the Treaty, the obligation for the Union to adopt the Rules for Participation for the Framework Programme is not the competence shared with the Member States, therefore the principle of subsidiarity does not apply to the Rules.

3. OBJECTIVES

3.1. General policy objectives

The general policy objectives of the initiative are to:

- To ensure implementation of the Horizon 2020 multiannual framework programme according to Article 183 of the TFEU, determining the rules for the participation of undertakings, research centres and universities and laying down the rules governing the dissemination of research results. The aim of the Commission proposal is to provide a coherent, comprehensive, transparent and effective set of rules taking into account participants' need for easy access and project management through simplified and harmonised procedures;
- To help achieve the objectives set out in the Commission's initiative "Europe 2020 – a strategy for smart, sustainable and inclusive growth", at the core of which are research and innovation and in particular of the "Innovation Union" flagship aiming *"to improve framework conditions and access to finance for research and innovation so as to ensure that innovative ideas can be turned into products and services that create growth and jobs"*.

3.2. Specific objectives:

In order to achieve these general policy objectives and positively respond to the above described problems, it will be necessary:

1. To increase attractiveness and accessibility of EU research and innovation funding programmes for the participants through an improved lightness and speed of administrative procedures and processes, while preserving a general stability of the rules ("no revolution" in the implementation);
2. To find a good balance between the need for harmonisation of the rules for participation and dissemination across the different EU research and innovation programmes and the need for flexibility for their effective implementation, particularly where industry is involved;
3. To ensure appropriate and harmonised protection of the EU against risks of participants' errors and insolvency;
4. To achieve strategically targeted international cooperation which will contribute to achieving the Horizon 2020 objectives to strengthen competitiveness, effectively contribute to tackling global societal challenges and support EU external policies through the adoption of a more focused and differentiated approach towards third country cooperation;
5. To boost innovation.

3.3. Operational objectives:

The specific objectives above are further broken down into the following operational objectives:

1. *To increase attractiveness and accessibility for participants*
 - Simplify the funding provisions related to grants by adopting a simplified cost reimbursement approach;
 - Reduce the administrative burden for applicants and participants.
2. *To find a good balance between the need for harmonisation and the need for flexibility*
 - Enlarge the scope of the rules for participation and dissemination, in order to set up a common set of basic principles applicable to legal entities participating in actions under the Horizon 2020 Framework Programme, when these actions receive an EU contribution from the Horizon 2020 Framework Programme.
 - Allow for necessary flexibility to address specific needs of the Horizon 2020 initiatives, e.g. EIT.
3. *To ensure appropriate and harmonised protection of the EU against risks of participants' errors and insolvency.*
 - Find the right balance between an effective implementation of the EU control strategy and a lower control burden for beneficiaries, leading to a reduced amount of participants' errors³⁸.
 - Extend the scope of the provisions on the guarantee fund to all actions financed under the Horizon 2020 Framework Programme (thus including also CIP, JTIs and Article 185 initiatives, the risk of which is not currently covered by the FP7 guarantee fund).

³⁸ In line with the Commission guidelines, impact of legislative proposals for Horizon 2020 and its rules on this objective in view of chosen preferred option will be thoroughly analysed in the Financial Statement accompanying the Framework Programmes and therefore is not referred to in this report.

4. *To achieve strategically targeted international cooperation which will contribute to achieving Horizon 2020 objectives*

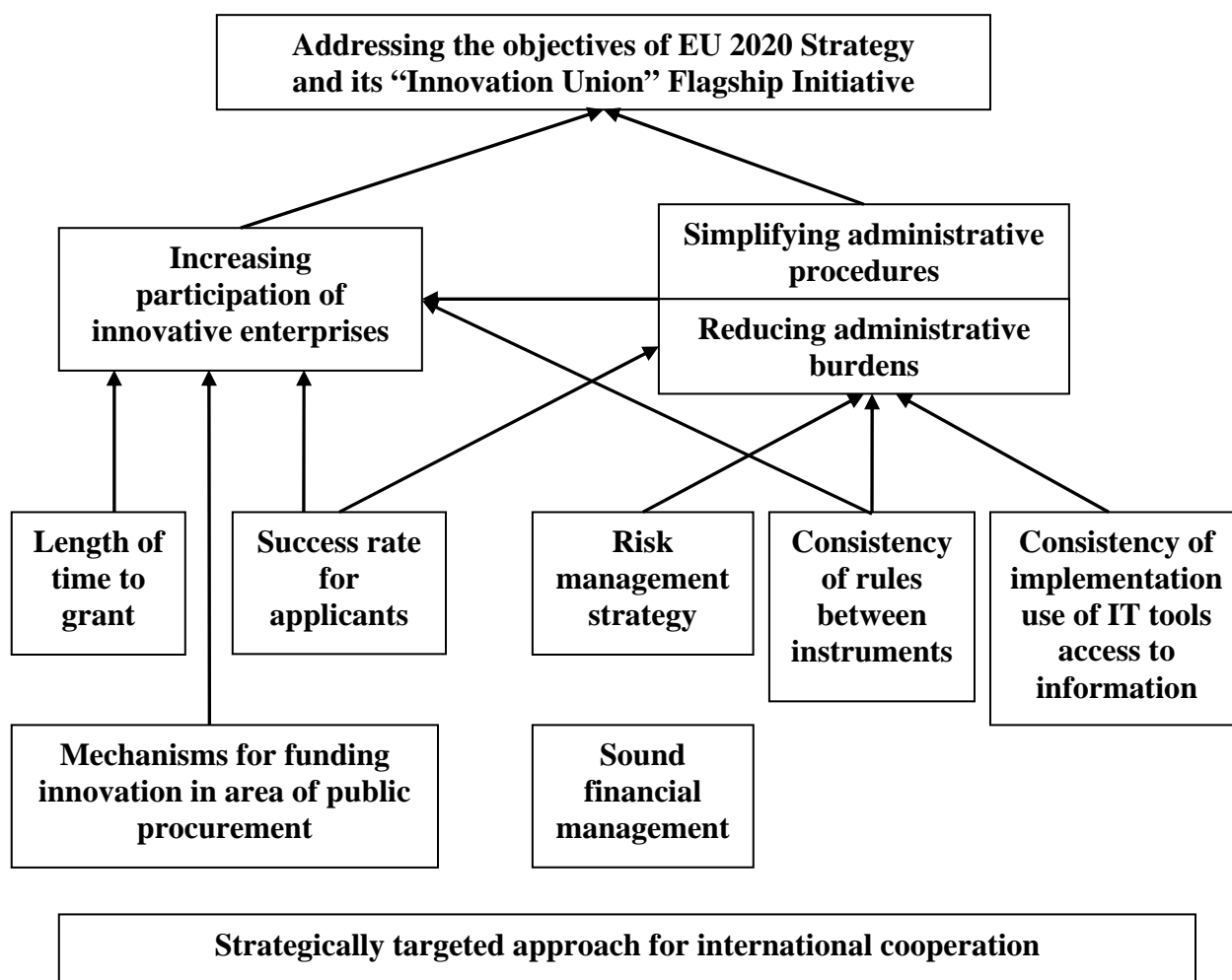
- Greater targeting of research funding (revision of the current provisions on funding of entities from certain third countries and replacement of the former International Partner and Cooperation Countries (ICPC) list);
- Facilitate European participation in international research actions (funding of International Organisations and of entities from third countries);
- Enhance instruments for strategic focusing (joint calls for proposals).

5. *To boost innovation*

- Increase the participation of industry and SMEs;
- Provide adapted instruments for promoting innovation;
- Stipulate a fit-for-purpose legal framework for exploitation and dissemination of research results.

The intervention logic is illustrated in the following graph (Figure 2).

Figure 2: Intervention logic for rules implementing the Framework Programme



4. PRESENTATION OF THE OPTIONS

As the TFEU in Article 183 provides for a specific obligation of the Union to determine the rules for participation of undertakings, research centres and universities, and to lay down the rules governing dissemination of research results, the option of 'no EU action' cannot be considered as a viable option. Moreover the type of legislative action is restricted solely to the adoption of a Regulation.

The Euratom Treaty does not provide for a specific obligation to provide for the Rules for participation and dissemination. However, Article 4 of the Euratom Treaty states that the Commission shall be responsible for promoting and facilitating nuclear research in the Member States and for complementing it by carrying out a Euratom research and training programme. In order to provide a coherent and transparent framework for the participation of researchers in the implementation of this programme established in accordance with Article 7 of the Euratom Treaty, it should be complemented by the specific rules for participation and dissemination. The option of 'no EU action' cannot therefore be considered here either.

In order to achieve the objectives mentioned above, two independent sets of options have been developed, tackling the two main policy issues which the implementation of the EU research and innovation action needs to address.

The first one concerns the scope of the rules for participation and dissemination. As the future EU initiatives for promoting research and innovation are intended to be merged into a single Common Strategic Framework, the question to be answered is whether it would be convenient to keep the current state of affairs and have separate sets of rules for the different actions, or to have – where possible – a single set of rules stipulating the participation in actions under the Common Strategic Framework. The issue of "harmonisation" of the rules has been raised by beneficiaries and stakeholders on numerous occasions, reporting the existence of separate sets of rules as one of the key obstacles to participation (in particular, activities undertaken by the Union together with industry (JTIs), joint programmes of the Member States in which the Union participates on the basis of Article 185 TFEU, CIP and EIT, each have its own set of rules and do not apply the FP7 rules for participation and dissemination).

The second policy issue relates to the content of the future rules, and namely to whether or not it would be convenient to modify the current provisions in order to meet the objectives specified above.

These two policy issues are interrelated in certain aspects, as the differences in the character of the actions envisaged under current programmes will surely necessitate appropriate adjustment of the final Rules when united under Horizon 2020. Moreover, depending on the envisaged modification and simplification of the content of Rules varying level of adjustment will be necessary depending on the instrument. It will have a clear impact on feasibility of ensuring coherence as well as the choice of options analysed, resulting in discarding the extreme options which could not be reconciled with the idea of single set of basic common principles. For that reason the analysis may intertwine. Nonetheless as the main impacts of the respective issues are to large extent independent, and in order to present the data gathered in the most comprehensive manner, the result of each analysis will have its own autonomy, at the same time being complementary to build up the preferred approach

4.1. Policy issue: Scope of the rules

4.1. **Policy option A1 – "Business-as-usual" option (keeping the same scope in the Rules for participation and dissemination - respectively for EU and Euratom - for the future Framework Programmes).**

As already indicated under baseline scenario under this option, the current approach of having different sets of rules governing participation in different research and innovation actions and dissemination of their results will be kept: each set of rules will be set out in a 'tailor-made' regulation, taking into account the specificities of each initiative.

For Joint Technology Initiatives (JTIs) and Article 185 TFEU initiatives, this option implies that their potential future actions under the new Framework Programmes would be exempted from the scope of the rules for participation, as it is the case for FP7.

For CIP and EIT, their current specific rules will still apply.

4.2. Policy option A2 – Adopting a single set of rules for participation and dissemination implementing the Horizon 2020 Framework Programmes and setting basic common principles while allowing flexibility.

Under this option, a single coherent set of common rules for participation and dissemination would regulate the key common aspects of all actions of the future Framework Programmes, such as excellence, funding rates and eligibility of costs. This set of rules would be set up in two different legislative acts, one for the EU and one in the Euratom Framework Programmes.

For **JTIs** and **Article 185 TFEU initiatives** this option implies that the rules for participation under the future Framework Programme would apply to their future actions. This option would allow for a flexible approach, while harmonizing a number of issues by the definition of rules and/or principles³⁹ that would apply throughout the future Framework Programme including actions of these initiatives. These rules and/or principles would relate, in particular to:

- proposal evaluation and award criteria;
- redress procedure for applicants;
- rules on the appointment of independent experts;
- eligibility criteria for participation of legal entities;
- eligibility for funding for legal entities;
- eligibility of costs;
- upper funding limits;
- guarantee fund;
- dissemination;
- exploitation and IP rights.

The degree of feasibility of this option increases substantially if the overall rules for participation under the new Framework Programme would be limited to a basic set of rules, i.e. less prescriptive than those in the FP7 rules for participation, as it would be easier to achieve coherence within a simplified set of rules or principles. Ideally, specific rules should be flexible, permitting room for manoeuvre to cover objective underlying situations. Alternatively, derogations to the common rules could be envisaged on the basis of specific operating needs.

Extending further the scope of the rules for participation and dissemination to **CIP and EIT actions** implies having a common set of rules, set up in the same legislative act, also for instruments provided in the Horizon 2020 Framework Programme for supporting innovation and training. This would provide a unique harmonized approach for participants that would apply the same provisions for receiving the EU funding, independently of the content of their proposal. These rules would be aligned to the proposed triennial revision of the Financial Regulation, allowing for derogation only in duly justified cases, but would be kept on a more general level to allow for the necessary flexibility, describing only minimal common conditions to be met by participants.

It needs to be underlined that this scenario does not mean a total harmonisation which would imply adopting identical rules for each aspect of each action for every type of participants and abolishing all differences between their situations which, by their nature, are very diverse and cannot be reduce to single common denominator. The option of applying a set of identical strict Rules for all components of the Horizon2020 was taken into consideration and discarded as a result of the strong opposition of virtually

³⁹ Principles could also be included in the future Horizon 2020 Framework Programme Decision.

every stakeholder involved in these bodies who consider this option as overly restrictive and simply not feasible in practice.

With a view to facilitate the participation of programme beneficiaries, it was one of the basic policy orientations to provide for a coherent set of rules for all EU actions in the area of research and innovation. Therefore, this option is an intermediate solution since it does not foresee a one-size-fits all straight jacket for all actions: Providing as many common rules as possible for all actions in a single piece of legislation does not exclude to foresee at the same time adequate specific rules and derogations when required by the specific nature of the action. Thus, specific rules and derogations are provided for example for different types of actions in respect of the minimum conditions, the evaluation criteria, the treatment of IPR and the exploitation of research results. Moreover, it has to be noted that the numerous different pieces of legislation which currently govern the actions (FP, CIP, EIT, JTIs, Article 185 Initiatives) which will be brought under one umbrella in Horizon2020 contain a significant degree of homogeneity. It is the objective of the Rules for Participation to bring together these homogenous rules in one legislative text.

4.3. Policy issue: Content of the rules

4.1. Policy option B1 – "Business-as-usual" option (keeping the same content in the Rules for participation and dissemination for future Framework Programmes).

This option envisages continuation of the already well-established practice; no changes would be introduced to the conditions and procedures for participation (including selection, rules governing the financial contribution, dissemination, exploitation including intellectual property, etc). Under this option, the Union and the Euratom financial contribution would continue mainly to be based on the reimbursement of eligible costs in whole or in part. The other forms of financing (flat rates, scales of unit, lump sums) would continue to be considered as exceptions. No changes would be made regarding the current reimbursement rates (different maximal rates for different activities and types of participants).

Concerning Euratom rules for participation and dissemination, they would still consist of two parts, one for Fission indirect actions, and one for Fusion activities. As regards Fission, the rules would be modelled on the Horizon 2020 EU rules for participation, as it is currently the case. The rules stipulating participation in Fusion activities would keep their specificities (i.e. that actions are not implemented through calls for proposals).

4.2. Policy option B2 – Modifying the rules for participation and dissemination for the future Framework Programmes

Under this option a number of changes would be implemented in the legal framework defined by the rules for participation. These changes would include:

- **Implementing provisions for pre-commercial public procurement and public procurement of innovative solutions as well as 2 types of prizes:** ex-post "reward" (as envisaged in the financial regulation) and inducement prizes (for the achievement of a pre-specified target);
- **Implementation of international STI cooperation** under Horizon 2020 will be based on strategic targeting where cooperation on specific objectives of mutual interest and with specific partners will be pursued. Increased focus will be placed on bilateral cooperative activities with strategic international partner countries (industrialised countries and BRIC countries) and on cooperation at regional level for other countries. In addition the principle of general opening of cooperation activities to the participation of entities from any third country (bottom-up approach) will be maintained to encourage the reciprocal opening of third country STI cooperation programmes. The options for implementing cooperation relating to a change in the

Rules for Participation include the issues of the arrangements for joint calls with third country funding partners, are addressed below⁴⁰:

- Revise the current provisions on participation of entities from certain third countries featuring in a list⁴¹ to replace the former International Partner and Cooperation Countries (ICPC) list;
 - Revise the current provisions on the treatment of Associated countries;
 - Facilitate the funding of International Organizations and of entities from third countries;
 - Introduce a provision on joint calls with third countries.
- **Modifying the rules regarding exploitation and dissemination**, e.g. envisaging open access to research publications;
- **Extending the Participant Guarantee Fund** to participants in actions of the CIP EIT and JTIs, in order to provide a wide-ranging protection of the EU financial interest while at the same time restricting the range of financial viability checks to coordinators requesting the EU contribution higher than 500.000 EUR.
- As regards the **main funding model**, three potential sub-options were identified and analysed:
- (1) *Option B2a – Keeping the cost-based funding with simplification of the cost eligibility criteria*

This sub-option would offer a continuation of the FP7 approach based on reporting and reimbursement of actual costs (with a limited use of flat rates and lump sums) but with **simplified cost eligibility criteria**. These simplified criteria would allow for a broad acceptance of the usual accounting and management practices of the beneficiaries and a much more harmonised interpretation and application of the rules. A definition of personnel costs would be provided in order to increase the legal certainty for the beneficiaries on the eligibility of the costs charged to the projects. A single reimbursement rate per project (for all beneficiaries and activities) applied in typical collaborative research projects would bring further simplification and higher flexibility in project implementation. This sub-option would mean the continuation of ex-ante checking of cost statements before payment and the possibility of ex-post financial auditing.

- (2) *Option B2b – Output/results based funding (specific lump sum for the whole research project)*

This sub-option would imply a radical change from the FP7 cost reimbursement system towards a system **granting project-specific lump sums for entire projects**⁴². In this scenario, the project-specific lump sums would be global amounts duly agreed during the negotiation phase based on the estimate of the beneficiaries' expected inputs (costs) for the project. **Payment of the EU financial contribution would be made against the delivery of the agreed output/results**. This sub-option would mean removing the need for detailed cost reporting and financial auditing but

⁴⁰ Specific definitions such as which countries would be eligible for 'automatic' funding, would be defined in a Commission decision rather than in detail in the legislative proposal. Whilst it is proposed that 'automatic' funding will still continue to be available for most developing countries, this will no longer be offered to the BRIC countries.

⁴¹ This list would be adopted subject to the same rules as those for adoption of the Work Programmes but would not form part of the Horizon 2020 package.

⁴² As defined in Point 3.3 of the Communication of the Commission: "Simplifying the implementation of the Research Framework Programmes" of 29 April 2010 (COM(2010) 187)

would require a closer scientific/technical assessment of the projects and their output/ results before payment.

(3) ***Option B2c – Combination of sub-option 1 with a unique flat rate for indirect costs calculated on basis of direct costs as a general rule***

This sub-option would build on sub-option 2a but would add as a general rule a flat rate element to the approach. **Indirect costs would be reimbursed as a single flat rate calculated on the direct costs.** In this approach, the possibility of reporting real indirect costs would be limited solely to non-profit participants with a full cost accounting system whose methodology for calculating indirect costs would have been approved ex-ante by the Commission. Thus, in addition to the simplification value of option 2a, it would reduce the frequent errors due to the indirect costs calculation since this calculation would be based either on a certified methodology or on the flat rate. For the same reason, it would also simplify and increase assurance of the certificates on the financial statements and would allow for lighter ex-post financial audits.

- impact of this option on the reduction of the rate of error will be thoroughly analysed in the Financial Statement accompanying the Framework Programmes and therefore is not included in the report.

Concerning Euratom the above changes would be relevant for the rules stipulating participation in the Fission actions, but not for the Fusion activities, due to their specificities already explained.

5. ASSESSMENT OF THE IMPACTS OF THE OPTIONS

5.1. Scope of the rules

5.1.1. Policy implications of harmonisation

JTIs and Article 185 TFEU initiatives: Policy option A1 for JTIs would follow the approach of "no one-size-fits-all", which was considered appropriate for the FP7 JTIs⁴³. A separate setting would be foreseen also for potential future JTIs, with the aim of integrating industrial research using tailor-made rules mirroring the working practices of the industrial research areas to be integrated. The option implies that the applicable rules for participation would be defined for the initiatives in question through Council Regulations, and complemented by the subsequent decisions of the JTI JU Governing Boards. An important effort, with uncertain results⁴⁴, would be needed if coherence of rules is to be attained in this scenario. This option is likely to satisfy the main industrial beneficiaries of the JTIs funds, in combination with the successful completion of other preparatory work on the precise architecture for future EU-level PPPs in research⁴⁵. At the same time other beneficiaries would be discontented with persisting discrepancy in content and interpretation of rules for participation depending on the instrument.

Concerning Article 185 TFEU initiatives, policy option A1 would also confirm the approach considered appropriate for the current Article 185 initiatives and that was based on the topping up of national programmes with EU funds, in agreement with the Member States concerned, whereby the Article 185 initiatives could abide, to a certain extent, by the rules applicable to the jointly implemented national

⁴³ See SEC(2007)692 of 15.05.2007: "a "one-size-fits all" approach is not appropriate due the specific characteristics of each JTI in terms of nature of the technological challenges addressed, the stakeholders involved and the financial engineering needs."

⁴⁴ It is indeed difficult to guarantee coherence among legislative acts which are the outcome of different procedures, one for each Council Regulation, each taking place in its own context. However it should not be excluded that a certain degree of coherence of rules can be achieved through a pronounced coordination effort outside the rules of participation.

⁴⁵ See e.g. EC proposal on a new Financial Regulation, COM(2010)815.

programmes. The option implies that it would be the decisions of the European Parliament and the Council setting up the Article 185 initiatives, as complemented by the subsequent agreements between the Commission and the Dedicated Implementation Structures, which would define the rules for participation for the initiatives in question⁴⁶. This option would allow a great deal of flexibility in shaping the detailed rules of these essentially national initiatives.

Policy option A2 would reduce the complexity of the rules applicable, thus delivering simplification to the stakeholders. However, an extensive harmonization of the rules applicable to such potential future initiatives might lead to lack of flexibility. Additionally for the JTIs, it could discourage industry buy-in and ultimately participation. This effect would be largely mitigated by applying various other measures provided for under option B2. Concerning Article 185 TFEU initiatives, an extensive harmonization of the rules applicable to them might also lead to lack of flexibility and could discourage Member States from agreeing to EU participation. Therefore, the possibility for JTI JUs and for Article 185 TFEU initiatives to apply additional rules or duly justified derogations has to be envisaged also under this option.

A certain disadvantage of this approach would be that it does not address the problem of having different regulations, which create difficulties, confusion and uncertainty for participants and stakeholders with regard to the applicable law and procedures.

Competitiveness and Innovation Framework Programme (CIP): Policy option A1 for the CIP would mean applying the revised Financial Regulation with its Implementing Rules along with specific provisions on participation and dissemination as stipulated in the legislative act setting up its actions.

Policy option A2 introducing a harmonised approach would on the other hand represent a simplification for beneficiaries, particularly those who currently participate in both CIP and FP7 actions. It would also reduce unnecessary duplication of efforts for customisation of IT tools, documents, etc on the side of the Commission. Another advantage would be that Horizon 2020 rules would be more widely known because applied by a higher number of beneficiaries and the expert support on their interpretation would be widely available.

The main concern is that too detailed rules might limit the flexibility currently enjoyed by CIP. This could affect the implementation of innovation actions due to their difference from research projects, e.g. with regard to their size, duration and target audience. The solution of this problem could be to set up more general and flexible rules as proposed under option A2 regarding the scope of the future rules for participations and eventually specific derogations where truly needed

In line with CIP objectives, the rules should also be SME-friendly. This could be better achieved under option A2 if the standard co-funding rate currently applied to SME participation for research activities would be kept. Different funding rates in the same project, depending on the status of each partner (SME, big company, etc.) as envisaged in option A1, could be avoided.

European Institute of Innovation and Technology (EIT): Under option A1 the EIT would retain its specific operating rules and flexibility as defined in its Regulation. Because, by its very nature, composition and objectives, the EIT must remain flexible, option A1 would appear to be fit for the purpose of the EIT. According to the legislative act setting up the EIT, each Knowledge and Innovation Community (KIC) must have its own legal structure to reflect its specific objectives, range of partners and potential markets, while remaining open to new partners. The EIT KICs cannot fit into a "single entry point" for funding, toolkits and IT resources as defined in the current rules for participation of the Framework Programme. The current EIT regulation foresees three KICs and under the next MFF, an absolute maximum of 8-10 KICs could be envisaged. With a limited number of additional KICs, an added value of streamlining and harmonization of

⁴⁶ This option does not preclude the Commission and Member States from achieving a certain degree of coherence of rules though a pronounced coordination effort outside the rules of participation.

EIT rules and operational structures would appear limited and excessive harmonisation might even be perceived as a barrier to effectiveness and efficiency.

Simplification and flexibility in operations and disbursement of funds have been a defining characteristic of the initial success of the EIT, fully endorsed by the education, research and business stakeholders who participated in the open public consultation on the EIT and those who currently participate in the KICs.

Option A2 would also be acceptable provided it foresees for the necessary flexibility.

As previously indicated, simplification and flexibility in operations and disbursement of funds have been a defining characteristic of the initial success of the EIT. KICs need freedom to experiment new approaches with a view to delivering innovation and education breakthroughs. The current flexible and minimal rules concerning participation, submission and evaluation of the KICs, decided by the EIT Governing Board, have allowed for fast-track decisions. Such flexibility and simplicity of rules should, where appropriate, also be kept for EIT in the single set of rules established for Horizon 2020.

5.1.2. Level of stakeholder support for policy options

The current discrepancy of rules has led to complaints expressed by several stakeholders. In the case of JTIs, they perceived some tailor-made rules as detrimental to their interests⁴⁷. In particular:

- in IMI JU, the interim evaluation report highlights the need to adequately address the issue of IPR and the reimbursement of indirect costs⁴⁸.
- in FCH JU, the (non-FP7) funding levels resulted in a level of participation considerably below initial expectations⁴⁹.

Concerning Article 185 TFEU initiatives, the implementation of the first Article 185 initiatives also points to the need for such harmonization, as reported in the second Van Velzen report on EDCTP⁵⁰ and in the interim evaluations of two FP7 initiatives⁵¹. With regard to the rules on national funds, a certain harmonization could contribute in particular:

- to a clearer initial agreement on a binding global envelope, which could then be complemented by annual agreements;
- to a common approach to be followed in the case of exhaustion of national funds.

Also the stakeholders' and beneficiaries' consulted through the Green Paper and workshops carried out during the Impact Assessment found the use of different sets of rules burdensome and made clear that a unique and simpler common set of rules is necessary. This position was also shared by direct beneficiaries of CIP funds. A dedicated consultation focused on these beneficiaries confirmed their views on the need to increase coordination and coherence with other EU instruments, in particular the Framework Programme

⁴⁷ See MEP question E-5826/2010: "It is argued that JTIs are led by the industry and too closed to participation by universities and SMEs. ...".

⁴⁸ According to the expert report on IMI, p. 17, recommendation 1.2: "Universities, Research Organisations and SMEs have concerns with the implementation of the IMI Intellectual Property Policy. The IMI JU should (...) address specific issues arising in negotiations of intellectual property issues (...) It is also necessary to adequately address the problem created by the current financial policy for the reimbursement of indirect costs as this may jeopardise academic participation in IMI."

⁴⁹ See recital no 3 of the draft Commission Proposal for a Council Regulation amending Council Regulation (EC) No 521/2008 of 30 May 2008 setting up the Fuel Cells and Hydrogen Joint Undertaking.

⁵⁰ According to the second Van Velzen report on EDCTP, p. 8: "The Commission should (...) request that the co-funding rules be made simpler, open and transparent."

⁵¹ According to the expert report on AAL, p. 39-40, there is "limited evidence yet of well developed financial integration across all countries" and "lack of standardised rules". See also recommendations 13 ("Harmonise financing conditions"), 14 ("Participation rules across countries should be better harmonised") and 15 ("Establish a European framework for project management"). According to the expert report on Eurostars, p. 5, there is "scope to further improve the harmonisation and synchronisation of the national procedures ..."

for research and technological development, in order to create synergies and avoid duplication. Certain stakeholders also acknowledged the need for tailor-made solutions for specific actors, potentially attained by an enhanced flexibility of the rules. Therefore there is abundant evidence that **the participants in research and innovation actions are strongly favouring policy option A2**

This is also the view shared by the legislators. Council Conclusions of 26 November 2010 stressed that. "*Fragmentation, duplication, complexity and lack of critical mass for achieving real breakthroughs need to be tackled urgently, notably by more efficient and less bureaucratic governance at all levels*" accentuating the need to ensure coherence and coordination between different EU policies in order to provide more efficient EU action and the need for "*maximizing value for money by tackling fragmentation and by increasing the efficiency of public spending on RDI at EU, national and regional level*". Further Council conclusions recognized the need for a critical review of the current set of programmes and instruments, as well as for the coherence of their rules to facilitate the interoperability of the instruments in different programmes (e.g. FP, Competitiveness and Innovation Framework Programme, Structural Funds) with a view to exploiting further the synergies resulting from their combined use.

Similarly, the European Parliament in its resolution on simplifying the implementation of the Research FPs recommended a reduced set of rules and common principles for funding to govern EU funding for R&D. The resolution also called for coherence and harmonisation in the implementation and interpretation of the rules and procedures across the whole FP and associated instruments and within the Commission, regardless of the entity or executive agency in charge of implementation.

A number of stakeholders opinions have however indicated particular qualities of the EIT initiative that call for enhanced flexibility.⁵²

5.1.3. Administrative costs and simplification effect for participants

The policy option A1 would mean applying the revised Financial Regulation and its Implementing Rules, which could bring some simplifying effect and lead to a small reduction of administrative costs. Yet, the

⁵² *KIC InnoEnergy sees a danger in stressing the HOW rather than the WHAT. What counts ultimately as attractive for any institution and individual are two (2) things: the output and a good return on investment. (...) In KIC InnoEnergy we do not believe in a unique set of rules. (cf. KIC InnoEnergy response to the Open consultation on the Common Strategic Framework).*

The current EIT appears to be awarded a significant degree of autonomy to organise their partnerships and flexibility to respond to their particular thematic are. This is essential given the desire to be reactive to widely different industrial and societal needs (cf. Rolls- Royce response to the OPC on the EIT).

The specific role and autonomy of EIT should be maintained within the CSFRI, as it encompasses vital aspects of the research, education and innovation landscape. EIT should be a part of the CSFRI while maintaining a strong link to the European Higher Education Area (EHEA). The EIT's regulation allows for significant autonomy, which should be maintained and strengthened, so that the demands of high pace innovation can be adequately addressed. The EIT's operations should remain flexible and simple. Efforts should be made to incorporate the regulation applying to EIT in a future streamlined CSFRI regulatory framework. However, preserving the current flexibility and innovativeness must be made a priority. (SE Government response to the open consultation on the EIT)

(...)A balance will have to be found for the European Institute of Innovation and Technology (EIT) between much needed flexibility and freedom on the one hand and its alignment within a common framework on the other hand.(...) Recommendations:

(...) Align the EIT with the requirements of a common framework in a flexible manner.

(...) A balance will therefore have to be found between the EIT's need to retain enough flexibility to address distinct needs whilst ensuring alignment with other elements based within a common framework.

(cf. LERU LEAGUE OF EUROPEAN RESEARCH UNIVERSITIES response to the OPC on the CSF)

A high –trust and business-like approach is a condition sine qua non to bring about systemic impact (3TU Federation response to the EIT open consultation which involves the Delft University, Eindhoven University and university of Twente).

administrative burden resulting from the application of different sets of rules would nevertheless remain unchanged

Policy option A2 would allow significant reduction in the burden for coordinators. The impact of adapting to a new set of rules is clearly visible from the results of the survey on administrative costs of FP7 participants. Aggregated data on amount of time spend during the entire life of the project shows clear differences between new and experienced coordinators (there is no significant difference for partners and rather limited one for mono-beneficiaries). The median number of person-days spent varies from 184 days for experienced coordinators (already participating in the FP7) to 207 days for coordinators who participated in the previous FP and 205 days for newcomers (11,4% difference between experienced coordinators and newcomers)⁵³⁵⁴.

Concerning the CIP the option A2 combined with the preferred option identified with regard to scope of the rules (see Point 5.3) would be a real simplification having the potential to allow beneficiaries to base themselves on a single reimbursement system, thus reducing errors in their cost declarations. Concerning ICT PCP part of CIP some actions are funded mainly via lump sum (scale of unit costs), while other are already funded via reimbursement of eligible costs applying a single funding rate (of 50% or 80% depending on instrument) for all beneficiaries is set. Also a single flat rate for indirect costs is defined for certain actions (pilot projects).

Also the extension of the Guarantee Fund would reduce costs for beneficiaries and improve sound financial management of the programme. Recent study of DG ENTR on administrative costs of participants in Entrepreneurship and Innovation Programme (EIP) indicated that considering a bank guarantee worth € 100,000 to remain in force for two years, financial costs can easily reach the level of €4,000 – 5,000. To this one must add the processing fee, which may range from as little as €50 to more the €500, depending upon the bank⁵⁵. These savings would apply to private entities only (including not-for profit organizations), as public sector applicants are exempted from providing bank guarantees⁵⁶ For CIP a systematic verification of the financial capacity of applicants has to be carried out due to the absence of guarantee fund while example of ICT PCP actions shows that an average EU funding per participant amounts approximately 140.000 EUR (in FP7 no verification of the financial capacity is necessary for beneficiaries requesting less than 500.000 EUR). Such verification adds to the complexity and length of the negotiation phase. Also the participants in FP7 have indicated that administrative effort of verification was on average 2 working days⁵⁷ :

The data gathered for EIP show that current administrative costs are comparable to that of FP7 projects indicated in Annex I. From division of administrative cost it can be concluded that also impact of changed scope of rules analysed in point 5.2.3 would be only slightly lower in case of CIP.

⁵³ Some additional costs initially not envisaged in the questionnaire were reported by certain percentage of beneficiaries. When applying weights to these cost and adding them to the numbers presented above, these become 189, 213 and 213 days respectively.. Presuming that such additional costs would be borne by all coordinators including the ones who did not report them, the numbers would raise respectively to 213 for experienced coordinators, 238 for coordinators who participated in the previous FP and 251 days for newcomers (17,8% difference between experienced coordinators and newcomers). See annex I, Point 7.5

⁵⁴ These numbers do not take into account the recurrent character of certain activities throughout the project lifecycle, namely project administrative management, including horizontal issues, such as ethics, gender or dissemination activities, and reporting. For that reason, the actual number of person-days spent per participant is actually higher, and e.g. for typical 'Small scale Collaborative project' with duration of 3 years and two periodic reports the administrative cost of average coordinator is 270 days (277 with weighted additional costs)

⁵⁵ It is however necessary to remark that e.g. for CIP ICT PSP DG INFSO has requested in total only four bank guarantees covering a total amount of 471 297 EUR.

⁵⁶ Report on online survey on the cost for beneficiaries of grants and the cost for financial intermediaries for financial instruments of the Entrepreneurship and Innovation Programme (EIP)

⁵⁷ See annex I, point 3.1.2

Table 2: Staff Time Devoted to Various Activities (Staff-days) (Source DG ENTR⁵⁸)

| | | Application | Contracting | Impl. - One-off | Impl. - Recurrent | Audit & Evaluation | Total |
|-----------------------|------------------------|-------------|-------------|-----------------|-------------------|--------------------|--------------|
| Network Grants | Lead/sole applicants | 38.8 | 8.2 | 20.2 | 170.0 | 24.6 | 261.8 |
| | Consortium partners | 24.9 | 6.4 | 11.3 | 86.4 | 9.9 | 138.9 |
| | Overall average | 26.8 | 7.6 | 15.0 | 100.2 | 16.3 | 165.9 |
| Eco-Innovation Grants | Overall average | 35.8 | 13.1 | 14.7 | 121.8 | n.a. | 185.4 |
| Other Grants | Lead/sole applicants | 31.4 | 8.2 | 9.6 | 137.7 | 30.3 | 217.1 |
| | Consortium partners | 9.3 | 6.3 | 11.0 | 58.5 | 6.3 | 91.3 |
| | Overall average | 27.9 | 7.6 | 10.5 | 105.9 | 19.8 | 171.7 |
| SMEG () | Overall average | 35.0 | | 24.2 | 168.8 | 11.5 | 239.5 |
| GIF | Overall average | 20.0 | | 10.0 | 40.0 | n.a. | 70.0 |

5.2. Content of the rules

5.2.1. Implications of modifications of the legal framework defined by the rules for participation and dissemination

Regarding this policy issue, the assessment will focus on whether introducing the changes in the content of the rules as described above would help to achieve the objectives of the Horizon 2020

Pre-commercial procurement (PCP) is defined as the procurement of R&D services enabling public authorities to find solutions to address challenges of public interest for which no commercially stable solutions exist. PCP may only finance original development of small scale test series and can not cover deployment or commercial development type activities. As a mechanism of approaching the research results to market envisaging its use for specific areas (like e.g. border security condition or areas with combined EU/Member States responsibility, as the CO2 trading scheme), it would lead to innovative solutions that could subsequently be commercialised on a larger scale. Public procurement of innovative solutions is a step forward from PCP, providing funding for public procurers to encourage them to purchase innovative product/service already developed. Together these two instruments would provide a supplementary system and allow supporting transfer of research result to the market. Prizes for researchers proved their motivating value in research (example being the EU Descartes Prize for Collaborative, Transnational Research, and new type of induction prizes would lead to mobilisation of funds for research many times as large as an amount of prize (as can be seen on examples of many such initiatives world wide e.g. X Prize Foundation initiatives or US government DARPA Grand Challenge aiming for developing driverless vehicles). Therefore all these measures would contribute to expanding the innovative potential of future Framework Programmes.

Regarding **international cooperation**, the adoption of a more differentiated approach to cooperation with third countries will address both identified problems, namely the large proportion of the EU funding going to emerging economies as well as the general inadequate scale and scope in EU international cooperation activities in particular with key industrialised countries and emerging economies.

The proposed new approach and related changes to the Rules for Participation would be expected to increase the overall level of internationally orientated STI cooperation relative to the "business as usual option" (where a pro rata level of international cooperation as compared with FP7 and the effective decline of EU contribution against rapidly increasing levels of international cooperation by Europe's strategic competitors). This would be achieved through a clarification of the conditions under which such cooperation is undertaken, provision of greater focus, enlargement of the scope and flexibility for the Commission to conduct joint/coordinated calls with third countries and potential for closer alignment of

⁵⁸ Op. cit.

research agendas with strategic international research partners (and, at the same time, to increase the potential for reciprocal funding opportunities).

Regarding the modification of the **rules on exploitation and dissemination** improving but without radically changing these rules will allow better exploitation and dissemination, generalising the principle of open access to research publications and envisaging experimenting with open access to results of research funded by the Framework Programmes in appropriate areas will help spur new innovation, while providing access rights to the results for the European Union and its bodies will ensure better targeted, implemented and monitored programmes.

Regarding **the scope of the guarantee fund**, it seems appropriate to extend it to other activities that cannot currently participate in the FP7 GF as they are not subject to the FP7 rules for participation, as JTI, Article 185 Initiatives, the CIP and the EIT actions that will be incorporated into the Horizon 2020. As these actions will be financed by the EU to a large extent and as the nature and structure of the participants to these instruments is largely congruent with the participant population in traditional FP7 actions, the same protection level should be ensured.

Regarding the **main funding model**, the assessment of the presented options is strictly related to the issues of administrative costs and simplification effect for participants and, at the same time, to the costs of implementation for the Commission. Given its political relevance and its complexity, it will be extensively analysed in the relevant point, taking separately into consideration the impact of the envisaged measures on administrative costs for participants and on implementation costs for the Commission. The beneficial impact of the presented options on **error rate** in implementation of the Framework Programme will be analysed in the Financial Statement accompanying the Horizon 2020.

5.2.2. Level of stakeholder support for policy options

There is an overall consensus among stakeholders on the fact that relevant changes are to be implemented in the rules in order to simplify the participation and management for the beneficiaries of research grants and to reduce the associated administrative burden. Calls for a better balance between risk and trust and for a wider acceptance of usual accounting practices are nearly unanimous. In this context, a business-as-usual approach would be very negatively perceived. This view was also shared by the Council in its conclusions of 26 November 2010 which inter alia acknowledged importance of "*simplifying and streamlining urgently European programmes and procedures in RDI*" and "*taking action to ease access to finance for RDI purposes by companies, especially SMEs*". The Council identified simplification as a key issue for the forthcoming research and innovation programmes and as a crucial and urgent necessity to overcome the current complexity of the funding rules leading to excessive administrative burden and discouraging potential beneficiaries. The conclusions of the Council also stated that the simplification process must be ambitious while pursuing stability, consistency and legal certainty. These recommendations were equally shared by the European Parliament.

Simplification is however very differently understood depending on the specificities of the stakeholders. Concerning in particular the main funding system, there is an evident preference for a continuity of the cost reimbursement method (options B2a and B2c) provided that stability and legal certainty are improved compared to FP7. Yet, there is no overwhelming majority of voices for any particular option. For instance Option B2b, output based grants, gets some very positive views among individual researchers and SMEs but it is quite strongly opposed by part of the institutional participants. Overall it receives a limited support from stakeholders with a vast majority expressing serious doubts about its systematic use. This reserved view is shared by the European Parliament. Similarly, a number of stakeholders perceive the use of flat rates as a clear simplification element, while others are concerned about the impact on the level of the EU financial contribution to costs of the project and would prefer claiming actual cost.

Council Conclusions of 3 December 2009 invited the Commission, together with Member States where relevant, to pursue vigorously further reduction of the administrative burden.

Regarding the introduction of pre-commercial public procurement and public procurement of innovative solutions, the public consultation has revealed lack of awareness with regard to the topic. The reactions received came mainly from industry (around one third), recognizing the large, untapped potential of the public sector purchasing power to drive innovation and stimulate private R&D, and highlighting that pre-commercial procurement can be a powerful tool for driving innovation. The subject was recognised by the Council asking Commission for *"making a strategic use of public (including pre-commercial) procurement for innovative products and services"*. Opinions concerning inducement prizes were rather mixed with equal (and rather small) number of partisans and opponents.

Concerning international cooperation the view of the stakeholders point to protection of EU interests, need for a strategic approach based on reciprocity and focusing more on addressing the global problems and common strategic interests of EU. The European Parliament in its resolution recommended further internationalisation of the future FPs through cooperation with third countries, including developing countries, providing them with simple and specific management rules. Also the Council perceives *"scientific and research cooperation with third countries as a matter of common concern"*. These concerns are taken into account in the second policy option.

Improvement of the rules on exploitation and dissemination without radical changes has gained a common acceptance of stakeholders. Introducing the principle of open access to research publications as a general approach was widely welcomed. Quality of current rules and value of stability were recurrent in the opinions received.

From this feedback it can be concluded that **the measures envisaged in the second option would align better with the preferences of the actors directly concerned** by the content and implementation of the rules for participation and dissemination.

5.2.3. Administrative costs and simplification effect for participants

- **Costs and benefits of policy option B1 "Business-as-usual"- Keeping the** keeping the same content for the Horizon 2020 rules for participation and dissemination

Keeping the current cost reimbursement system unchanged would simply **ignore the repeated calls for simplification** issued by the Council, the Parliament and stakeholders in EU funded research. In this context, **this option should be discarded for the** Horizon 2020 Framework Programme and serve only as **baseline scenario** for assessing the administrative costs reduction potential of the other options.

The online survey of FP7 beneficiaries has gathered a significant number of data (3.900 responses) on the administrative efforts associated with participating in an EU funded research project. Median values have been calculated for working time associated with all the tasks and processes carried out across the project life cycle. These median values are available for the different types of participants in the different types of projects. By applying the Standard Cost Model methodology, it is then possible to estimate the participation costs under the FP7 (see annex I). It has to be highlighted that these participation costs do not consist only of "information requirements" or purely administrative tasks (form filling, financial accounting, etc). They represent the overall effort of the beneficiaries, i.e they **include also tasks such as developing the scientific-technical content of a proposal, adapting this content during the negotiation phase, managing the consortium or dealing with scientific reporting, ethics, gender, dissemination and stakeholders involvement at project implementation phase.**

Based on the figures gathered in the survey among FP7 beneficiaries, and applying the Standard Cost Model, estimates on the administrative costs for participating in a set of typical average FP7 model projects were made (see annex I). For example, in a typical 3-year **collaborative research project**, receiving an EU contribution of €3.000.000, the financial effort related to participation (administrative and content-oriented tasks of the beneficiaries) is in the order of €277.000 for the whole consortium of 9 partners. The table at right summarizes such estimates associated with participation for a set of 5 "typical **average FP7 projects**". It is to be mentioned that part of the costs incurred during the project implementation phase are eligible for

reimbursement by the EU grant. Without a change in the rules, one may consider that these figures would not substantially change in the future programme.

| | |
|--|-----------|
| 1. Small-scale Collaborative project (9 partners) | € 277.000 |
| 2. Large-scale Collaborative project (20 partners) | € 885.000 |
| 3. SMEs project (9 partners) | € 303.000 |
| 4. Marie Curie Individual Fellowship (1 partner) | € 18.000 |
| 5. ERC grant (monobeneficiary) (1 partner) | € 36.000 |

The above analysis also applies to Fission indirect actions. Administrative cost of the

Fusion activities was assessed in the specific survey, the results of which are presented in Annex Vb.

– **Cost and benefits of policy option B2 "Modifying the Rules for participation and dissemination for the future Framework Programmes"**

Introduction of mechanism for funding the pre-commercial public procurement and public procurement of innovative solutions would have limited impact on simplification. The two forms differ from the general model of public procurement provided for in the Financial Regulation and also differ from each other. The relatively small rate of replies to consultation shows that the knowledge of these mechanisms (notwithstanding its innovative potential) might be limited and that an learning effort would be required for many participants adding to their administrative costs. Prizes on the other hand would be a rather simple instrument with very few requirements to abide by.

Regarding the *adaptation of the Rules for Participation in relation to international cooperation*, it would have a simplification impact for participants in joint calls with third countries' funding agencies for example through, a single set of conditions and a single joint evaluation in addition to the coordinated projects, as they are currently practised under the FP7 rules for participation. The introduction of the possibility for EU financial contributions to programmes managed by international organisations or by third countries will also facilitate the participation of EU entities in such programmes.

Regarding the *modification of the rules on exploitation and dissemination*, generalising the principle of open access to research publications would have no relevant impact on participants in terms of administrative burden.

Regarding the *extension of the guarantee fund (GF)*, the financial risk of extending the current GF to the instruments mentioned above cannot be quantified at this point in time since it will depend on the apportionment of budget to the different funding schemes under the Horizon 2020, specifically concerning the funding schemes for SMEs. However, as the population of participants in the instruments in question does not represent major differences to the population of traditional research project participants, the increase of the financial risk should be minimal and covered by the additional contributions received from the instruments. The administrative costs of this exercise are not quantifiable at this point in time.

As regards the *main funding model*, the analysis will be carried out taking into account the three proposed sub-options.

Sub-option B2a – Simplified cost-based funding (with simplified cost eligibility criteria and single reimbursement rate per project: under this approach, getting acquainted with the financing rules and applying these rules when preparing or negotiating proposals would be easier, requiring less effort from the beneficiaries. The same would apply for managing the financial aspects of the running projects, reporting and certifying the costs, and in case of ex-post auditing.

Sub-option B2b – Output/results based funding: this sub-option would largely decrease the need for detailed administrative and financial interaction with Commission services during the implementation of the projects. In contrast, the scientific and technical follow-up would be more demanding during the negotiation and the implementation phases. However, time-to-grant could be affected negatively, because of the more complex and detailed negotiations for fixing project-specific lump sums and the measurable output against which they would be paid. Moreover, the focus on output may become a disincentive to high-risk high-gain proposals for which the potential output cannot be specified and guaranteed ex-ante.

Sub-option B2c – Simplified cost-based funding as in sub-option B2a, combined with a flat rate on direct costs for indirect costs as a general rule: with this approach the benefits and savings from sub-option B2a would be further enhanced since administrative efforts and uncertainties linked to the calculation and reporting of indirect costs would be reduced.

The impact, on monetary terms, of the three options has been estimated taking into account the expected effect of the option on each process step. The resulting figures, expressed as differentials from the baseline scenario (business as usual) are summarized as follows (with percentage indicating reduction of administrative cost)⁵⁹:

| | Option B1 (baseline) | Option B2 | | | | | |
|--|-------------------------|------------|------|------------|------|------------|------|
| | | Option B2a | | Option B2b | | Option B2c | |
| Small-scale Collaborative project (9 partners) | 277.000 | 249.000 | -10% | 208.000 | -25% | 232.000 | -16% |
| Large-scale Collaborative project (20 partners) | 885.000 | 777.000 | -12% | 588.000 | -34% | 699.000 | -21% |
| SMEs project (9 partners) | 303.000 | 265.000 | -13% | 205.000 | -32% | 257.000 | -15% |
| Marie Curie Individual Fellowship (1 partner) | 18.000 | 18.000 | 0% | 18.000 | 0% | 18.000 | 0% |
| ERC grant (mono-beneficiary) (1 partner) | 36.000 | 32.000 | -11% | 22.000 | -39% | 29.000 | -19% |

Amounts in expressed in Euros

5.2.4. Costs of implementation for the Commission

The costs associated to the options presented in this analysis can be found in the Commission's communication "More or less controls? Striking the right balance between the administrative costs of control and the risk of error"⁶⁰. The methodology explained below was agreed upon and used to guarantee the coherence of data throughout the services. As per that established methodology, the **cost of implementation of the Framework Programmes in the Research policy group totalled around €267 million annually.**

The table below summarizes the total cost (in full time equivalents and in million Euros) of implementation of the FPs in 2009 for the Research family DGs and four executive agencies, as well as the impact of the three sub-options for main funding model that are analysed.

| RESEARCH family DGs | Baseline Scenario | | Sub-option B2a | | Sub-option B2b | | Sub-option B2c | |
|---------------------|----------------------------|-------------------------------------|------------------|-----------------|------------------|------------------|------------------|-----------------|
| | Project stage | EC Officials & External Staff (FTE) | Variation (%) | Amount (M€) | Variation (%) | Amount (M€) | Variation (%) | Amount (M€) |
| | Selection of proposals | 474 46,4 M€ | No Change | 46,4 | + (12,08%) | 52,0 | No Change | 46,4 |
| | Negotiation of contracts | 439 42,1 M€ | - (5,00%) | 40,0 | + (9,17%) | 46,0 | - (5,42%) | 39,9 |
| | Project management | 1.136 113,4 M€ | - (2,50%) | 110,6 | - (26,25%) | 83,6 | - (3,75%) | 109,1 |
| | Ex-post (audits & results) | 187 36,8 M€ | - (4,58%) | 35,1 | - (6,25%) | 34,5 | - (7,50%) | 34,0 |
| | Subtotal | 2.236 238,7 M€ | - (2,78%) | 232,1 | - (9,47%) | 216,1 | - (3,89%) | 229,4 |
| | Additional resources | 2,7 M€ | Diff. | - 6,6 M€ | Diff. | - 22,6 M€ | Diff. | - 9,3 M€ |
| | Outsourced audits | 11,4 M€ | | | | | | |
| | Certification | 14,9 M€ | | | | | | |
| | Total | 2.236 267,7 M€ | | | | | | |

This **cost of implementation** was built up by assessing the full-time equivalents (FTE) allocated to the stages of the project cycle. Each DG assessed the percentage of work-time spent by its staff on control tasks

⁵⁹ As the elements of the 'business-as-usual' costs depend on the beneficiary, it is impossible to deduct them from overall cost, therefore the administrative burden is only part of the cost indicated and its reduction is in fact significantly higher

⁶⁰ (COM(2010)261), op. cit.

(selection of proposals, negotiation of contracts, project management, ex-post audits and implementation of results from ex-post audits). The results were then multiplied by an annual average cost per category (€22.000 for Commission officials and €64.000 for external agents), thus reaching a total cost for human resources. An important advantage of this methodology is the inclusion of the overheads in the amounts indicated.

The data collection was based on figures for the year 2009, and for that reason the impact of the recent Commission Decision on three measures to simplify the management of EU FP7 Research grants is not taken into account in the baseline scenario.

As established on the basis of the abovementioned data, the option 1 "**business-as-usual**" amounts to **238,7 M€** in terms of cost of human resources involved (baseline scenario). Other costs like additional resources, outsourced audits and certification of financial statements will not be considered for the purpose of assessing the impact of the different options, since for the level of detail of the analysis their impact can be considered constant from year to year.

In order to analyse the impact of the different alternatives for costs reimbursement, a survey was launched internally at the Commission. A sample of officials working in the operational, financial and audit units assessed the impact in percentage terms of 3 different scenarios. The average of the assessments is shown in the column 'variation' of the table above. The following scenarios do not take into account potential increase in the funding for the Horizon 2020 Framework Programmes. Also potential benefits and cost of further externalisation are not analysed here.

The first scenario considered the introduction of a number of measures of simplification in the present way of operating. This sub-option would not affect the first stage of the project cycle but could indeed reduce the error rate and the administrative costs linked to the ex-post controls stage. The result for this type of scenario is a small reduction of approximately **2,8%** in total, leading to savings of around **6,6 M€** per year.

The second scenario considers a more profound change and shows a higher impact if we migrate from a cost-based system into a result-based system. All stages of the project cycle would be affected, increasing the costs of the selection of proposals and negotiation of contracts but reducing the costs for the Commission in what concerns the project management and the ex-post controls. Focusing on a more precise definition of results to be achieved and working with a fixed sum for contribution would alleviate the management of projects. The ex-post audits would become technical rather than financial, thus potentially reducing the effort with recoveries and extrapolation. The reduction would be approximately **9,5%** and the level of savings would be **22,6 M€** per year⁶¹. However, **when considering a radical change towards output-based funding as the main funding model, other aspects have to be taken into account**, as such a change would require major organisational changes in the Commission and the other implementing bodies, building up new skills and changing the distribution of professional profiles of staff..

Finally, the third scenario considers the introduction, on top of scenario 1, of a unique flat rate for the reimbursement of indirect costs. In the officials opinion, the impact would be the same as in the first option for calls for proposals and contract negotiation but higher for the two last stages. The result would be a reduction of approximately **3,9%** and savings of **9,3 M€** per year.

⁶¹ Initial results of the study on the output-based funding carried out on the specific themes of 'Space' and 'Security' indicate that for these specific areas application of different type of 'output-based funding' namely pre-defined lump sums per project (as defined in Point 3.3 of the Communication of the Commission: "Simplifying the implementation of the Research Framework Programmes" of 29 April 2010 (COM(2010) 187)) may even lead to economies attaining 25%. However, due to limited scope of the study results are not transposable on a general basis to the whole Framework Programme.

5.3. Comparing the options

On the basis of the data presented above and annexed to this Impact Assessment, supported by a number of ex-post evaluations, studies, statistical data, workshops with experts and external stakeholders, etc., we have summarised below the expected impact of the two sets of options:

| Comparative table of the impacts on the policy objectives and other decisional considerations | Policy Options | | | | | |
|---|----------------------------------|----------------------------------|------------------------------------|--|--|----|
| | Policy issue: Scope of the rules | | Policy issue: Content of the rules | | | |
| | Option A1 Business-as-usual | Option A2 Single set of rules | Option B1: Business as usual | Option B2: Modifying the rules | | |
| Option B2a <i>Simplified cost-based funding</i> | | | | Option B2b <i>Output/result based funding</i> | Option B2c <i>Simplified cost-based funding with indirect costs flat rate</i> | |
| Policy objectives | | | | | | |
| 1.1 Simplify funding provisions | ○ | ✓✓ | ○ | ✓ | ✓ | ✓✓ |
| 1.2 Reduce administrative burden | ○ | ✓ | ○ | ✓ | ✓✓ | ✓ |
| 2. Harmonisation | ✗✗ | ✓✓ | ✗✗ | ○ | ○ | ✓ |
| 3. Protection of EU against risks of participants' errors and insolvency | ○ | ✓ | ○ | ○/✓ | ○ | ✓ |
| 4. Impact on international cooperation | ○ | ○ | ○ | ○/✓ | | |
| 5.1 Economic impact on businesses including SMEs | ○ | ✓ | ○ | ✓ | ○/✓ | ✓ |
| 5.2 Impact on innovation results | ○ | ✓ | ○ | ○/✓ | | |
| Other Impacts | | | | | | |
| Expectations of policymakers | ✗✗ | ✓✓ | ✗✗ | ✓ | ✗ | ✓ |
| Stakeholders' opinion | ✗✗ | ✓✓ | ✗✗ | ✓ | ✗✗ | ✓ |
| Impact on cost of implementation | ○ | ✓ | ○ | ✓ | ✓✓ | ✓ |
| Impact on stability of rules | ✓ | ✗ | ✓ | ✓ | ✗✗ | ✓ |

Symbols: (✗) negative impact; (✓) positive impact; (○) no impact, (✗✗/✓✓) significant impact

5.4. The preferred option and its advantage

As regards choices presented for **policy issue 1**, it can be concluded that **policy option A2 is considered the preferred option**.

For *JTIs and Article 185 Initiatives*, policy option A1 would not adequately address the current complexity of both of them, and efforts towards harmonization would be scattered.

Policy option A2 would reduce the complexity of the rules, delivering simplification to the stakeholders. Possibility to apply additional rules or duly justified derogations would allow for necessary flexibility.

For *Competitiveness and Innovation Framework Programme*, policy option A1 would not be adequate to reach the objectives mentioned above, because it would not address the harmonisation needs pointed out by beneficiaries and would perpetrate fragmentation of the legislative framework.

Policy option A2 would be the preferred one, as it introduces a harmonised approach resulting in simplification for beneficiaries, reduction in number of IT tools and guidelines, increase in the visibility of the CIP. It also allows to apply clearly developed and coherently interpreted rules. The main concerns for this option will be addressed by making the rules more general and flexible with possibility of specific derogations. It would also present certain benefits regarding the reduction of the administrative burden.

As for the *European Institute of Innovation and Technology*, an overwhelming majority of stakeholders have stressed the need to preserve and further enhance EIT's current levels of flexibility.

Taking these reservations into account when concerning the scope of the future rules for participation, **policy option A2 is considered a preferred option**, provided that the specific character of the implemented actions of the EIT and the typology of its beneficiaries requiring a high level of flexibility are duly taken into consideration.

As regards choices presented for **policy issue 2**, it can be concluded that **policy option B2 is considered the preferred option**.

Policy option B1 would not adequately address the current problems identified above and would be perceived by participants as incapacity of the EU to react to the needs clearly pointed out in the several consultations carried out.

Modifying the rules for participation and dissemination for the future Framework Programmes as proposed above under policy option B2 seems the option that would better achieve the proposed objectives. Focusing the attention on the politically most relevant modification proposed above, i.e. the **main funding model**, the preference for option B2 is based on the following elements:

- In financial terms, option B2b seems to offer the perspective of larger savings in administrative costs, both for beneficiaries as for the Commission, than the other options. However, these expectations are highly speculative since output based grants have been tested only on a limited scale and there is no comparative international funding programme in the area of research⁶². The risk of additional administrative burdens and bottlenecks in the management of the scheme entailing higher administrative costs needs to be accounted for in the light of the novelty of this model. Moreover, stakeholders and legislative authorities called the Commission to take prudent steps in the implementation of radically new schemes which could put at stake legal certainty for beneficiaries. Against this background, the options based on a continuity of the reimbursement of eligible costs as the main funding stream are to be favoured.

- In this context option B2c is the preferred option. It has the benefits resulting from option B2a (i.e. continuity of the main well-established scheme, large support from stakeholders, simplification of rules, etc) but also adds on the advantages of a single flat rate covering the indirect costs as a general rule. This flat rate largely reduces the long-standing problem of financial errors resulting from the calculation of indirect cost. In addition it grants beneficiaries a high degree of legal certainty on the EU contribution claimed. Furthermore, it reinforces sound financial management by the Commission and the protection of EU financial interests. The rules for participation will include, nonetheless, provisions allowing for the application of output based grants where the characteristics of the action to be carried out allow for the optimal use of this model.

⁶² The study "Evaluation of output based funding for the space and security themes" (Booz & co.) prepared for the Directorate-General Enterprise and Industry included an extensive international benchmark exercise on research funding schemes. The preliminary findings of this study showed that pure output based grants in these areas are applied on a limited scale in some programmes (e.g. NASA).

5.5. Proportionality of the preferred option

As the future rules for participation will keep a number of measures currently in force for FP7, questions of proportionality arise only in the case of the measures altering the *status quo*, i.e. the recommendations for actual changes. In that context the preferred option is fully in line with the principle of proportionality, as regards the choice of the legislative act prescribed in the TFEU as well as the content of the individual measures envisaged. This option presents particular value in achieving a careful balance between harmonisation and need for flexibility as well as the reduction of the administrative costs of the participants and the Commission and the desire of beneficiaries to keep the solutions that are working properly and they are familiar with. Above all, this option is the minimum necessary to achieve the objectives of ensuring the implementation of the Horizon 2020 and securing the innovation impact set out in the "Europe 2020" strategy. The costs imposed on participants, in particular businesses, are largely reduced and can be considered proportionate to the stated objectives

Likewise, the costs of implementation linked to the preferred option are also proportionate to the objective of effective implementation of the Horizon 2020. For each issue in the preferred option the effort was made to choose the least intrusive measures that are nevertheless in line with the Financial Regulation as well as with the specific character of research and innovation actions. They allow to achieve all identified objectives and are respondent to positions of the concerned parties and the general public.

6. MONITORING AND EVALUATION

6.1. Purpose

In order to implement the Horizon 2020 successfully and to achieve the general policy objectives and specific operational objectives set out in Chapter 3, it is vital to put in place an appropriate monitoring and evaluation system, with a focus on efficiency and effectiveness.

The system will be based on a comprehensive and harmonised strategy, with a strong focus on throughput, output and impact. It will be supported by an appropriate data archive, experts, a dedicated research activity, and increased cooperation with Member States and Associated States, and it will be valorised through appropriate dissemination and reporting.

The Horizon 2020 monitoring and evaluation system will need a clear strategic orientation in order to cover the wide range of activities in a consistent and coherent way. This orientation will be the subject of a dedicated Commission Communication.

6.2. Key principles of the Horizon 2020 monitoring and evaluation system

The key principles of the Horizon 2020 monitoring and evaluation system can be summarised as follows:

- **Comprehensive strategy**

At the beginning of the Horizon 2020, a comprehensive evaluation and monitoring strategy should be developed and agreed by all actors involved. This strategy should ensure evaluation coverage of all Horizon 2020 action lines and define a detailed timetable for specific evaluation work. The strategy should be updated and revised annually, taking into account new developments in the overall evaluation context. The adequate coverage of the operational objective mentioned in chapter 3.3 will be a central element of this approach.

- **Well-timed and focused approach**

At the overall level, two key deliverables are envisaged:

- A comprehensive **Horizon 2020 Interim Evaluation** in 2017 (3 years into the programme), with a specific focus on the Horizon 2020 implementation so far and recommendations for possible improvements. This evaluation will also provide valuable inputs to stimulate the debate on the future of EU funding programmes for research and innovation after the Horizon 2020, and is expected to contribute substantially to any forthcoming Ex-Ante Impact Assessment.
- A full-scale **Horizon 2020 Ex-Post Evaluation** will be carried out in 2023 (2 years after the end of the programme), analysing in depth the rationale, the implementation and the impact of the Horizon 2020 activities. The findings of this evaluation should be taken up, where relevant, in the management of subsequent activities.

Both overall Horizon 2020 evaluations will be carried out by groups of independent experts, using a broad evidence base provided by the Horizon 2020 evaluation and monitoring system. The findings of these evaluations will be immediately taken into account in the implementation and management of the Horizon 2020. They will also be communicated formally to the other institutions and to the stakeholder community at large in order to provide the opportunity for a broad debate on the issues addressed.

- **Broad analytical portfolio**

The following components are envisaged to support and complement the overall Horizon 2020 evaluations:

- Each of the thematic or specific components of the Horizon 2020 should be submitted to an Ex-Post Evaluation, supported by relevant studies and evidence gathering, within 2 years of its completion.
- Specific evaluation studies will be carried out by all services with management and policy responsibilities under the Horizon 2020, according to the timetable and objectives defined by the Horizon 2020 evaluation and monitoring strategy.
- Cross-cutting studies, will be set out in the Horizon 2020 evaluation and monitoring strategy, and should shed more light on issues of transversal interest for the Horizon 2020 implementation. This will be of particular relevance to the issues raised in this document.
- The Horizon 2020 evaluation and monitoring system will also be the basis for carrying out the Ex-Post Evaluation of FP7 in 2015 according to the legal requirements.

- **Harmonised key indicators**

For all of the above studies, common templates, methodologies and indicators will be adopted, as far as possible, so as to promote comparability and coherence, and to facilitate an aggregated overview.

The available data will be used to calculate a series of key indicators on the Horizon 2020 activities. Given the diversity of action lines, these indicators will cover a wide range of intermediary objectives under the overall context of the Europe 2020, Innovation Union and Horizon 2020 objectives. Main indicators can be found in the table below, other appropriate indicators may also be developed for an adequate monitoring of the objectives specified in chapter 3.

| OBJECTIVE | Indicator(s) |
|---|--|
| To increase the attractiveness and accessibility of EU research and innovation | Time to Grant |
| | Reduction of administrative costs |
| To find a good balance between the need of harmonisation of the rules and the need for flexibility | Satisfaction of participants and NCPs |
| To ensure an appropriate and harmonised protection of the EU against risks of participants' errors and insolvency | Number of interventions of the Guarantee Fund following bankruptcies and liquidations of beneficiaries |
| | Relation of intervention costs to GF assets |
| To achieve a level of international cooperation corresponding to the strategic objectives of the EU | Number of participating non-EU researchers and legal entities |
| To boost innovation | Share of participating SMEs introducing innovations new to the company or the market |
| | Patent applications filed |

- **Integrated data archive**

Experience from recent Framework Programme evaluations has clearly demonstrated the paramount importance of a comprehensive system for collecting all kind of relevant data for the evaluation and monitoring process. For FP7, CORDA provides a wide range of relevant data, which are all retrieved from the application, negotiation and reporting processes without any additional burden on the applicant. The principles of this successful approach will be used for the development of a corresponding Horizon 2020 evaluation and monitoring data archive. The main challenges consist in the need to integrate a much broader range of activities under single common IT architecture and the need to integrate additional information on outputs and outcomes.

- **Independent expert advice**

The internal efforts by the respective evaluation functions should be supported by a Reference Board of independent evaluation experts and users. This reference board should monitor the development and implementation of the Horizon 2020 evaluation strategy, and provide expert advice and strategic guidance on the further development of the system.

- **Increased cooperation with Member States and Associated States**

While networking across the Commission services involved is essential to ensure an efficient and coherent evaluation and monitoring approach, it is equally important to step up the efforts to connect with actors at national and regional level. Not only will the Horizon 2020 portfolio include a growing number of instruments for which evaluation activities at different levels should be envisaged, but there is also a growing need to put evaluation work at EU level and at national or regional level into mutual context. To this end a European Research and Innovation Evaluation Network will be created, evolving notably from the experiences gained over the last decade with the EU RTD evaluation network. This reorganisation should reflect the enlarged scope of the Horizon 2020 activities and provide the basis for a substantially increased cooperation with Member States and Horizon 2020 Associated States.

- **Dedicated research activity**

It is envisaged to launch a specific research effort in the field of Science of Research and Innovation Policy to develop innovative new evaluation methods and appropriate IT tools. The key objective of this initiative is to stimulate the development of novel methodologies for the evaluation of research and innovation activities, notably through the use of web based data and services. At the same time this activity should both deepen and widen the so far rather limited expert community in this area.

6.3. Dissemination and reporting

Transparency of the evaluation process is a key element of an overall strategy for full accountability. The Horizon 2020 evaluation and monitoring system will in particular include the following elements:

- Annual Horizon 2020 Monitoring Reports will present key data and indicators on the implementation of the Horizon 2020. These reports will essentially draw on the information available through the Horizon 2020 evaluation and monitoring data archive.
- Annual Horizon 2020 Evaluation Reports will highlight progress on the implementation of the Horizon 2020 evaluation and monitoring strategy and will present the key findings from evaluation activities recently completed, the key features of the ongoing evaluation studies, and the planning for evaluation work in the near future.
- A Horizon 2020 Evaluation and Monitoring website will present all relevant material and should develop into an active tool to stimulate the exchange on evaluation activities for research and innovation programmes across Europe.

GLOSSARY

AAL – Ambient Assisted Living Joint Programme

AC – Associated Countries

ARTEMIS – Embedded Computing Systems Joint Technology Initiative

BRIC – Brazil, Russia, India, China

CIP – Competitiveness and Innovation Framework Programme

Clean Sky – Aeronautics and Air Transport Joint Technology Initiative

CORDA – Common Research Data Warehouse

CORDIS – Community Research and Development Information Service for Science

CS – Clean Sky (Joint Undertaking)

DARPA – Defense Advanced Research Projects Agency

DG COMM – Directorate-General for Communication

DG EAC – Directorate-General for Education and Culture

DG ENTR – Directorate-General for Enterprise and Industry

DG HR – Directorate-General Human Resources and Security

DG INFSO – Directorate-General for Information Society and Media

DG RTD – Directorate-General for Research & Innovation

EC – European Commission

EFDA – European Fusion Development Agreement

EIP – Entrepreneurship and Innovation Programme

EIT – European Institute of Innovation and Technology

EMRP – European Metrology Joint Research Programme

ENIAC – Nanoelectronics Technologies 2020 Joint Technology Initiative

EPEC –European Policy Evaluation Consortium

ERA – European Research Area

ERA-NET – European Research Area Network

ERC – European Research Council

ERCEA – European Research Council Executive Agency

F4E – Fusion for Energy European Joint Undertaking

FCH – Fuel Cells and Hydrogen Joint Technology Initiative

FP7 – Seventh Framework Programme for Research and Technological Development

FTE – Full time equivalent

GDP – Gross Domestic Product

GF – Guarantee Fund

ICT – Information and Communication Technologies

ICT PSP – Information and Communication Technologies Policy Support Programme

IPR– Intellectual Property Rights

IMI – Innovative Medicines Initiative Joint Technology Initiative

JRC – Joint Research Centre

JTI – Joint Technology Initiative

JU – Joint Undertaking

KIC – Knowledge and Innovation Community

LERU – League of European Research Universities

NASA – National Aeronautics and Space Administration

NCP – National Contact Point

PCP –Pre-commercial Procurement

PPP – Public Private Partnership

REA – Research Executive Agency

RSFF – Risk Sharing Financial Facility

S&T – Science and Technology

SME – Small and Medium Enterprise

TFEU – Treaty on the Functioning of the European Union

TTG – Time-to-grant