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The European R&D Programme Horizon 2020: a multilevel financial approach for a sustainable development of space technologies and applications.

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Abstract

The paper intends to define a possible harmonisation among funding policies existing at different geographical levels, i.e. EU, national and regional (through the Structural Funds). In particular, it describes the great investment effort that European Commission (EC) is pursuing within space R&D activities thanks to the so-called Horizon 2020 Framework Programme (H2020). Within this Programme yearly several Industries, SMEs, Universities and Research Centres present a quite impressive number of proposals. Among these only a very limited number is financed, while a large part, even though interesting and positively evaluated, remains unfunded. The paper provides an overview of presented proposals, with a focus on those positively evaluated but not financed, in order to understand the great effort that Industry, including SMEs, Universities or Research Centres bear for applying to H2020.

In order to overcome this issue, the paper proposes a set of possible mechanisms for financing R&D proposals presented within H2020 that have not been financed by the EC due to lack of funding, even though positively evaluated. The proposed mechanisms adopt the Virtual Common Pot system that is already in use within EC programmes (e.g. in ERA-NET or EUREKA). With the Virtual Common Pot system each participating funding organisation funds its own successful participants. Funding is not available from one funding organisation for participants from other funding organisations, thus there is no cross border funding involved.

Furthermore, the paper discusses the different possible mechanisms of financing, enlightening the positive and the negative aspects and suggesting which could be the more promising one(s).

Finally, the paper reports the survey carried out towards SMEs, large companies, universities and research centres in order to investigate which difficulties they foresee with such mechanisms and to understand their ... to be funded through these mechanisms.

The application of the suggested mechanisms would enhance the efficiency of the EC evaluation process and would increment the number of valuable proposals financed. Moreover, the survey on the spacefaring regions and Nations would increase in any case the awareness and the success of a potential implementation of the Virtual Common Pot system, while the survey towards the EC could spark the development of an appropriate regulation.

Keywords: H2020 Proposals, virtual common pot, funding mechanism

Acronyms/Abbreviations

COMPET	Competitiveness of the European Space Sector topic within H2020 work programme;
DG GROW	Directorate General Internal market, Industry, Entrepreneurship and SMEs;
DG RTD	Directorate General Research and Innovation;
FP9	9 th Framework Programme
EASME	Executive Agency for Small and Medium sized Enterprises
EO	Earth Observation / Earth Observation topic within H2020 work programme;
EURADA	European Association of Development Agencies;
EC	European Commission;
GSA	European Global Navigation Satellite Systems Agency;
H2020	Horizon 2020 Work Programme;
IA	Innovation action;
MEP	Member of European Parliament;
NEREUS	Network of European Regions Using Space Technologies;
PROTEC	Protection of European assets in and from space topic within H2020 work programme;
REA	Research Executive Agency;
RIA	Research Innovation Action;
SME	Small and Medium sized Enterprise;

1. Introduction

Every year within the Horizon 2020 Framework Programme (H2020), several Industries, SMEs, Universities and Research Centres present a quite impressive number of proposals. Unfortunately, due to the not enough available budget many, perhaps too many, proposals remain unfunded even though well-evaluated. The relative investment from the space community at large is not at all negligible, in terms of manpower and time spent in order to submit good proposals.

In order to overcome this issue, the paper proposes three possible mechanisms for financing R&D proposals presented within H2020 that have not been financed by the EC due to lack of funding, even though positively evaluated. The proposed mechanisms adopt the Virtual Common Pot system that is already in use within EC programmes (e.g. in ERA-NET or EUREKA).

The realisation of a “Seal of Excellence” to those SMEs having submitted a good proposal, but not funded through the SME instrument is acknowledged. Nevertheless, in this paper we are focusing on the collaborative proposals, where a proposal to be eligible

has to include more than 3 entities from 3 different countries.

In order to understand the viability of these mechanisms, the possible difficulties in their implementation, the needed regulation adaptation and the willingness of bidders to be funded through these mechanisms and of the national or regional funding agencies to finance the proposals, a survey has been drafted and distributed among the European space community.

2. European Space community efforts in participating in H2020 calls

As said in the introduction, quite a large number of entities each year present an impressive number of proposal responding to the H2020 calls, in particular only in the period 2014-2017, only for the calls “space”, a total of 1088 proposals have been submitted.

In Table 1 a breakdown of all submitted proposals to H2020 space for topics is presented.

Table 1. Breakdown of all submitted proposals per topics (2014-2017)

	2014	2015	2016	2017	Total
COMPET	120	159	103	144	526
EO	64	67	62	52	245
GALILEO*	109	91	-	79	279
PROTEC*	27	11	-	-	38
Total	320	328	165	275	1,088

* no GALILEO calls in 2016 and no PROTEC calls in 2016 and in 2017.

Among these proposals only a limited number is funded due to the budget availability. In the period 2014-2017, in average each year the space topics, without considering the SME Instrument and the other actions, could benefit of 120 Million euro, that in 4-years calls means 480 Million euro.

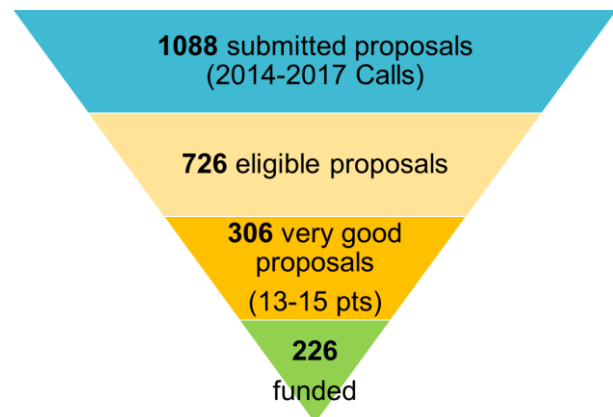


Fig. 1. Repartition of submitted proposals in eligible, very good and funded proposals.

Of course, it is not possible, and not even worth, to fund all the received proposals. However, just to give an idea, in the period 2014-2017, the requested

contribution of all the proposals that have reached the threshold (10 points), but that have not been funded, is more than 953 Million euro (including also the associated countries to H2020), as it is shown in Table 2, for a total of 447 proposals.

Table 2. Breakdown of requested EC contributions per topics (2014-2017) from proposals that have reach the threshold (10 points).

	2014	2015	2016	2017	Total
COMPET	82,819,031	135,144,749	96,708,915	188,282,462	502,955,157
EO	87,703,413	55,424,858	33,313,956	18,352,358	194,794,585
GALILEO	70,438,080	60,873,421		77,933,041	209,244,542
PROTEC	39,351,906	6,972,037			46,323,943
Total	280,312,430	258,415,065	130,022,871	284,567,861	953,318,227

In order to lower down the number of proposals and especially the amount of money needed to fund them, we have taken in consideration and focused only on the best proposals, meaning those having received a score higher than 13 points. In this way, the needed budget to fund these proposals would be something more than 160 Million euro (see

Table 3), considering the budget that the different consortia requested as contribution to the EC (including also the associated countries to H2020). This eventual extra budget would finance a total of 80 additional proposals.

Table 3. Breakdown of requested EC contributions per topics (2014-2017) from proposals received more than 13 points as score.

	2014	2015	2016	2017	Total
COMPET	9,352,382	3,9676,023	21,868,130	5,6047,859	126,944,393
EO	1,9911,171		3,983,853	2,070,178	25,965,201
GALILEO				5,664,663	5,664,663
PROTEC	1,989,867				1,989,867
Total	31,253,420	3,9676,023	25,851,982	63,782,699	160,564,124

2.1 Short analysis on geographical distribution of well-evaluated proposals

For better evaluate which could be the impact of the proposed mechanisms at national level, a short analysis on geographical distribution of well-evaluated proposals is presented and discussed.

As said before, in the period 2014-2017, the proposals having reach an evaluation of more than

13.00 points have requested a total contribution of more than 160 Million euro, in Fig. 2 the distribution of this amount of money is represented per country. As it is possible to notice, the large space countries are those that most benefitting of the implementation of a mechanism for funding the well-evaluated proposals, but not funded with the EC budget.

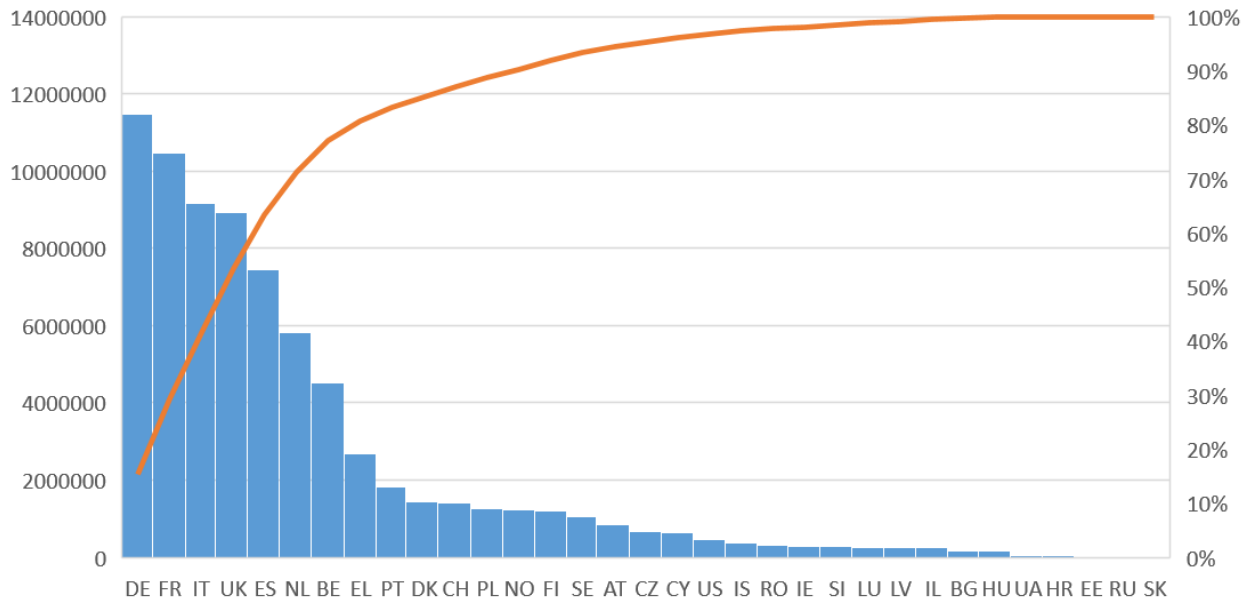


Fig. 2. Breakdown of requested EC contributions per country (2014-2017) from proposals received more than 13.00 points as evaluation.

In terms of number of beneficiaries that could benefit from this mechanisms, in the period 2014-2017, considering only the proposals having reach more than 13.00 points 539 participants would be eligible for

being granted, with the majority of the beneficiaries in the larger space countries, but also with a significant number in the other countries, as shown in Fig. 3.

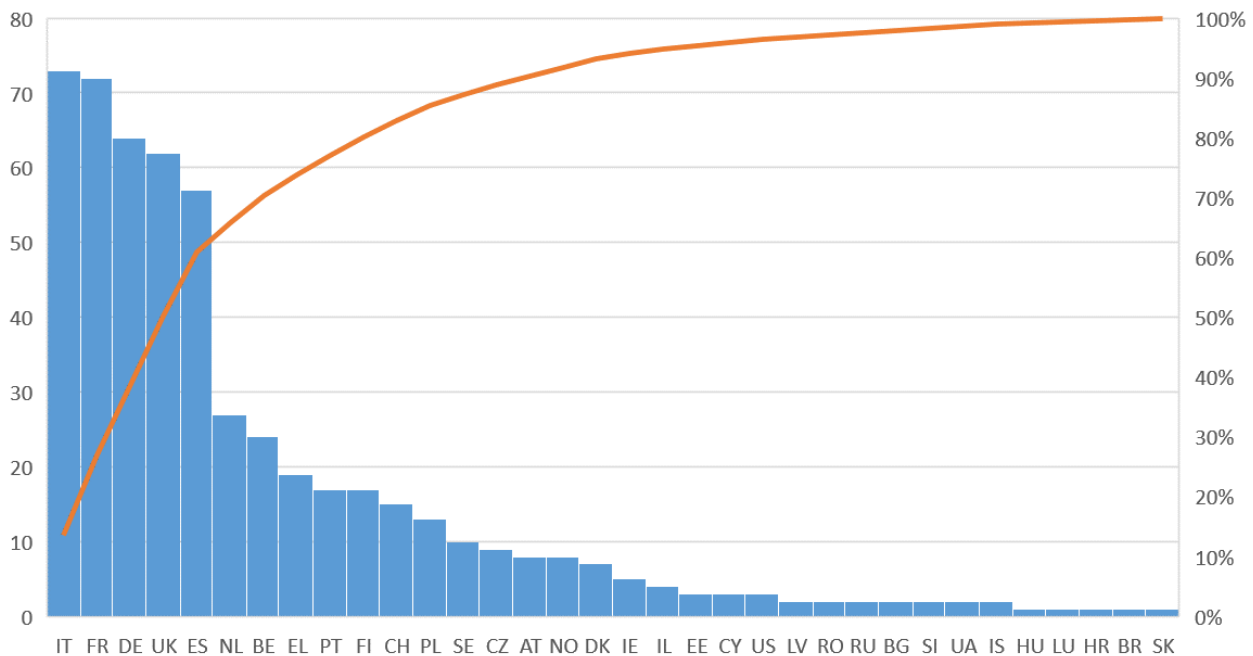


Fig. 3. Geographical distribution of partners of the proposals scored more than 13.00 points in the period 2014-2017.

3. The proposed mechanism to fund well-evaluated, but not funded proposal in H2020

The proposed mechanisms could enlarge the number of the funded proposal thanks to the adoption of the

Virtual Common Pot system, where each participating funding organisation funds its own successful participants. Funding is not available from one funding organisation for participants from other funding

organisations, thus there is no cross border funding involved.

In particular, the following possible mechanisms have been identified:

1. In parallel with the H2020 and, in future, with Horizon Europe (9th Framework Programme - FP9), each country/region interested in participating in this mechanism for funding the well-evaluated space proposals, but not funded, decides the amount of money to dedicate to this purpose and indicates the topics of interest. Each country/region presents in advance its own regulation to be followed by its entities, which may differ from country to country and also from EC one. On the basis of the available resources, the origin of the partners in consortia, the number and the quality of the unfunded proposals, a list of eligible proposals is drafted. In this scheme, the funding reporting is managed at national/regional level, i.e. each consortium partner has to report its own expenses to its funding agency. The proposed mechanism foresees also that the overall scientific monitoring at project level will be managed by the Research Executive Agency (REA) from the European Commission, that will receive an extra budget from each funding agency on the basis of a percentage of the overall allocated funds.

2. The interested countries/regions do not decide in advance how much allocate and on which topics, but they decide on a case by case basis. The following steps are the same of mechanism No 1.
3. The same mechanism No 1, but with an independent central service for the scientific monitoring of the funded projects established and financed by the participating countries.

A graphic representation of the differences between the three proposed mechanisms is shown in Fig. 4.

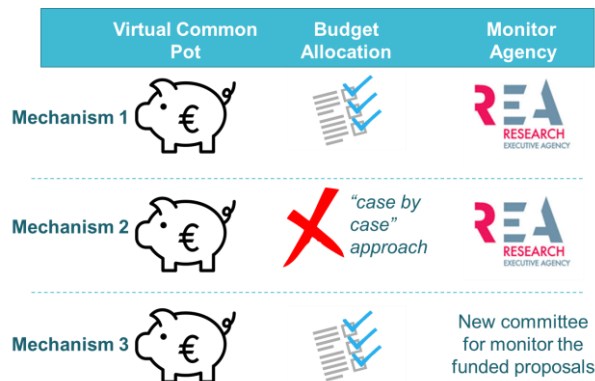


Fig. 4. Graphic representation of the differences between the three proposed mechanisms

4. Survey results discussion

In order to understand how space community (namely SMEs, large companies, universities and research centres), but also EC, the Members of European Parliament (MEP), National Space Agencies and National bodies and regional funding bodies, see the proposed mechanisms and which difficulties they already foresee or which regulation adaptations are needed, a survey (see Appendix A) was drafted and distributed towards all these targets (in Appendix B, some more details of the composition of the targets are provided).

The survey received a good number of replies from SMEs, but very few or none replies were provided by the other targets, as shown in

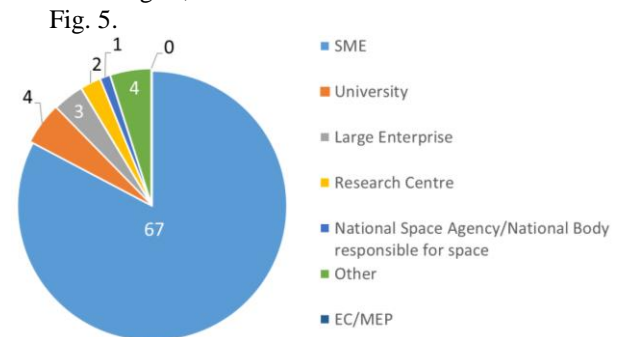


Fig. 5. Number of survey respondents per category

In total the survey received 81 replies from 20 countries, as shown in Fig. 6, with Italy (18), Spain (8), Germany (7), United Kingdom (6), Netherlands (6) and Belgium (6) providing the 63% of the replies. In any case, these first replies were very useful to understand at least the SME attitude towards the proposed mechanisms.

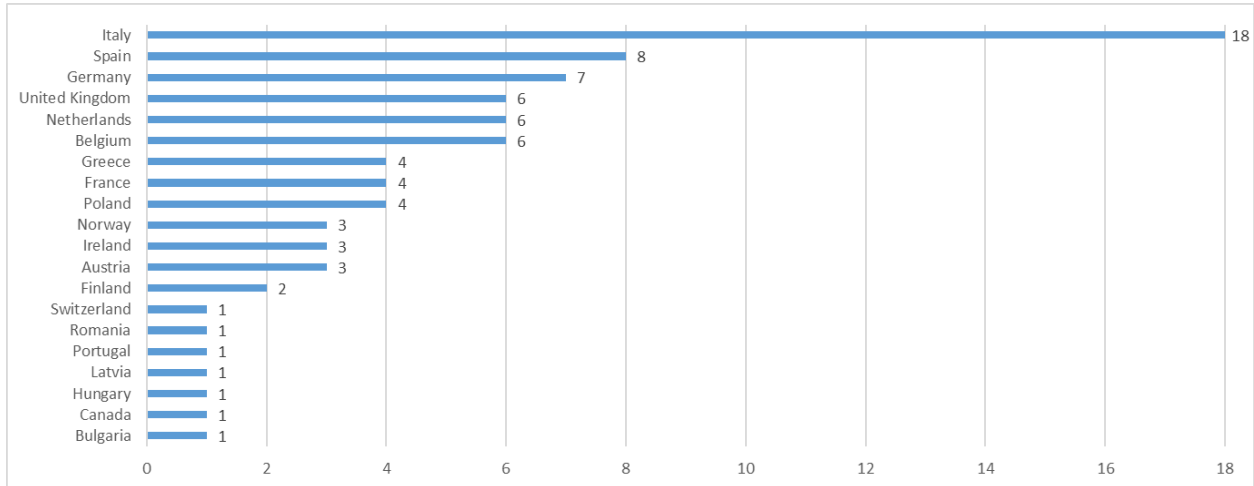


Fig. 6. Geographical distribution of survey respondents

In the survey it was first of all asked to indicate the degree of likelihood of some possible difficulties in implementing the mechanism:

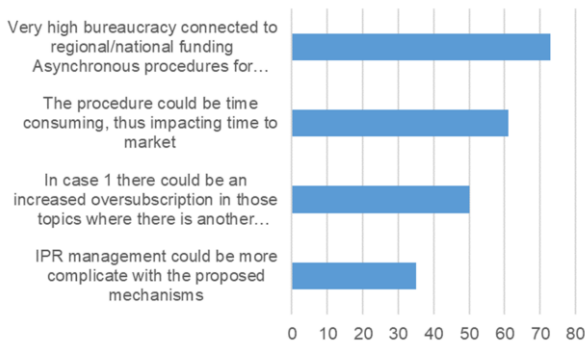


Fig. 7. Possible difficulties in implementing the proposed mechanisms per degree of likelihood

In addition, it was requested how much the respondents agree or disagree with the following statements:

- The proposed mechanisms are too complicated and they could not solve the issue of unfunded proposals (Fig. 8).
- The proposed mechanisms could solve the issue of funding good proposals in reserve list or not funded due to limited amount of money (Fig. 9).
- The proposed mechanisms allow to align European, National and Regional fund (Fig. 10).
- The proposed mechanisms could benefit a larger number of companies, universities and research centres (Fig. 11).
- The proposed mechanisms will enhance the efficiency of the proposal selection procedure (Fig. 12).

- The proposed mechanisms will reinforce the European Space companies, universities and research centres' competitiveness (Fig. 13).

In general terms, even though the survey sample cannot be considered statistically representative, some considerations and some general indications can be noted.

In Fig. 8, the majority of the respondents believes that the proposed mechanisms could be too complicated, considering both strongly agree and somewhat agree together.

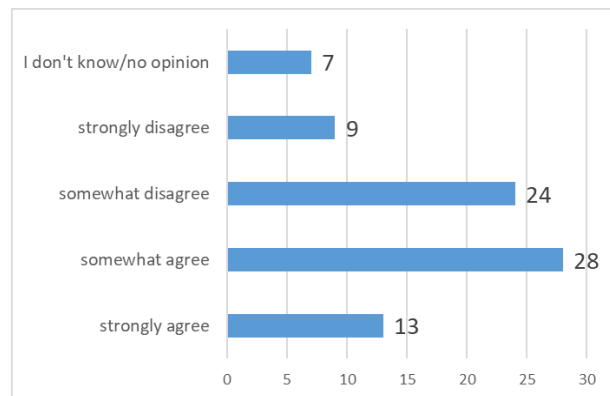


Fig. 8. Replies to statement: The proposed mechanisms are too complicated and they could not solve the issue of unfunded proposals.

Nevertheless, taking in consideration the results shown in Fig. 9, the majority of respondents considers that the proposed mechanisms could solve the issue of funding the well-evaluated proposals remaining unfunded in H2020.

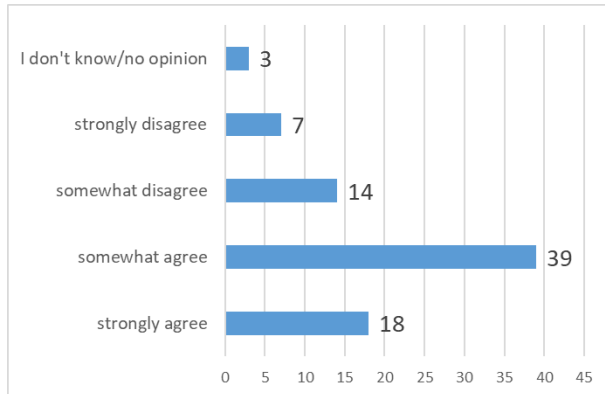


Fig. 9. Replies to statement: The proposed mechanisms could solve the issue of funding good proposals in reserve list or not funded due to limited amount of money.

Moreover, the proposed mechanisms are judged as possible good means to align European, national and regional funds. Especially if we consider, as demonstrate by Kersan-Škabić and Tijanić (1), that many regions and countries are not fully able to absorb the European funds (with special mention to structural funds).

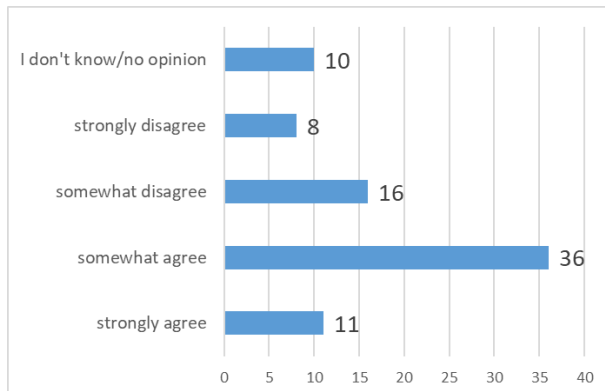


Fig. 10. Replies to statement: The proposed mechanisms allow to align European, National and Regional funds.

It is also worth to mention that the absolute majority of the respondents believes that the proposed mechanisms could benefit a larger number of stakeholders.

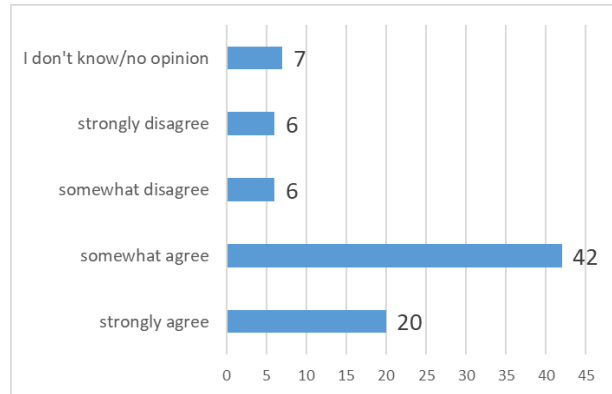


Fig. 11. Replies to statement: The proposed mechanisms could benefit a larger number of companies, universities and research centres.

While there is not a fully agreement whether the proposed mechanisms could enhance the efficiency of the proposal selection procedure (Fig. 12), the majority of the respondents seems confident that the proposed mechanisms could reinforce the European Space companies, universities and research centres' competitiveness (Fig. 13).

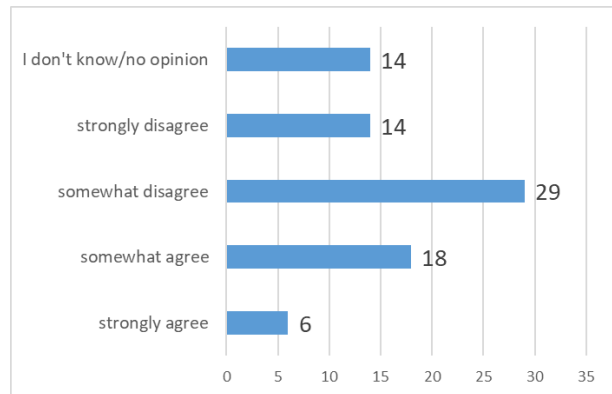


Fig. 12. Replies to statement: The proposed mechanisms will enhance the efficiency of the proposal selection procedure.

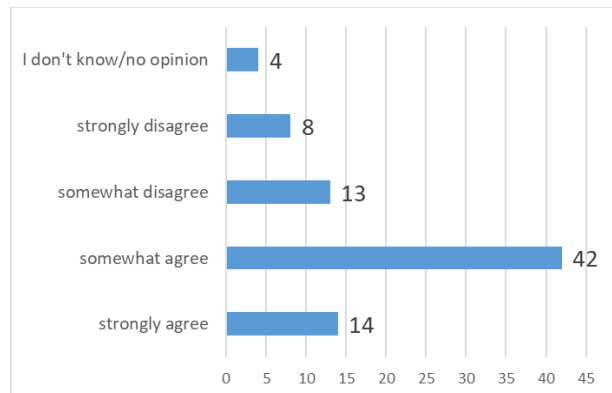


Fig. 13. Replies to statement: The proposed mechanisms will reinforce the European Space companies, universities and research centres' competitiveness.

The most likely (considering likely and very likely indications) difficulties in implementing the proposed mechanisms are represented in

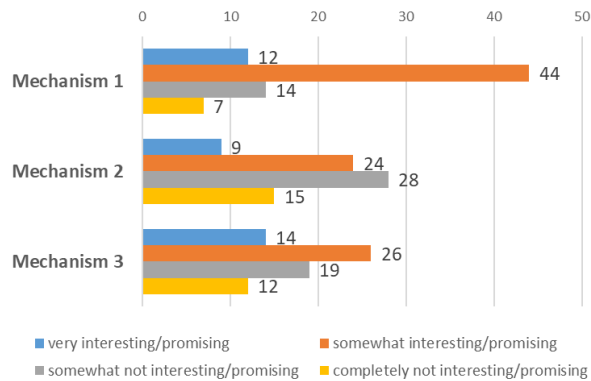


Fig. 14. Rate for the most interesting/promising mechanism.

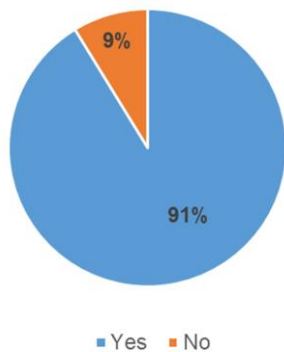


Fig. 15. Interest of respondents in having their proposal funded through such mechanisms, even though the National/Regional funding rate could be different from the EC one

4.1. General open considerations on the proposed mechanisms made by the survey respondents

The respondents gave also some very interesting contributions that we tried to summarise hereafter even though they diverge and sometimes are even in contrast each other.

Many respondents were afraid of possible increasing in the bureaucracy for managing such mechanisms, but on the other hand, the proposed mechanisms are seen as a second opportunity to get financial resources. Indeed, many respondents consider the proposed mechanisms a reasonable approach to reduce the amount of good proposals that go unfunded, through national/regional

funds that base the grants on the European-level evaluation.

In the vision of some respondents, Mechanism 1 and 2 can be set up very fast if countries want to, while mechanism 3 needs more collaboration and organisation.

Another aspect that was mentioned is the actual different rules between European and National rules (see different funding rate 70%/100% for IA and RIA proposals vs no more than 50% of national/regional funding rates).

Some respondents have highlighted that mechanism 2 is the most straightforward, since it does not require a-priori commitment by the country and it could provide more flexibility and visibility, as well as it enables flexible allocation and strategic alignment plus benefiting from EC efficiency in handling the proposals. On the other hand, other respondents underlined that it can lead to arbitrary decisions and non-transparent fund allocations. Moreover, it would be not clear in advance which criteria are going to be considered by Member States and Regions to fund a proposal.

Also Mechanism 1 has his fans, since funds will be committed early on in areas that are really of interest; this will drive more applicants in those areas, but hopefully quality applicants as well. It will definitely allow for more projects to get funded in areas of interest.

Deciding funds upfront it is considered as the best choice, since deciding them later on may bias enter in the decision making process.

The other good aspects that were highlighted in mechanism 1 are:

- The REA, as a good way to use already existing organisations in place and gather the projects under the same roof (both funded by H2020, and those by National/Regional funds).
- The possibility for regions that want to invest in space do not need to set up a dedicated structure to evaluate projects, but could refer to EU structure (for which citizens already pay).
- The opportunity to force a homogenous regulation between EC and Member States, hence Regions.

It is interesting that some respondents consider important to assess the implementation of the monitoring and the potential synergy and coordination with other EU or ESA funded activities.

Also mechanism 3 seems to someone to be very promising. As it proposes a quite good way to fund positively evaluated space proposals. Moreover, also an independent central service seems to be appropriate for the streamlining of the bureaucracy, thus a thorough monitoring with quick response.

There was also someone proposing another possible solution using the pre-commercial procurement approach in which two, or more than two, companies are in competition during the first phases of the project

and then only one is granted with a second phase contract. Of course, in such a way, you will not fund two or more full projects, but could have the possibility to finally fund the more promising not relying only on the proposal, but on the first funded stages of the projects. And even the projects not promoted to the final stages could both refund (at least in part) their effort for the proposal and enhance the maturity of their idea for future steps or calls.

Of course, many respondents see that the final solution of the issue of well-evaluated proposals not funded lays in increasing the EC budget of the work programme.

5. Conclusions

The proposed mechanisms for the authors of these paper could be a good opportunity for finding a way to fund well-evaluated proposals that remain unfunded. Moreover, such a proposal for these mechanisms was also in the intention of the authors a first excuse to point out the issue of the great number of proposals that do not find a way to be financed, without forgetting the great effort that yearly SMEs, large companies, universities and research centres perform in order to submit very good or excellent proposals.

Unfortunately, through our survey, we did not receive any reply from very important stakeholders such as EC, MEP, Space Agencies, National bodies and regional bodies, that could express their views on the proposed mechanisms and maybe let understand how they could be improved and which limitations or obstacles they already foresee.

Thus, the authors intend to further and again disseminate the same survey towards EC, European Parliament Members, National Agencies/Bodies and NEREUS (Network of European Regions Using Space Technologies) Members in order to further investigate the viability of the suggested mechanisms and the willingness of the latter to eventually finance the proposals not financed by the EC.

Acknowledgements

The authors want to thank all the people and the organisations that have participated in the survey, without their replies, we would not be able to write this paper. In our survey, we asked the respondents how and whether they would like to be mentioned in this paper:

- not to be acknowledged;
- only mentioning their name;
- only mentioning their organisation;
- mentioning both their name and organisation.

Thank you very much again to all respondents, even to those that for their choice are not listed hereafter:

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Organisations: Alpha Consult (Italy), ARCA Dynamics (Italy), Born Positium SL (Spain), Deimos Space (Spain), Evenflow (Belgium), f.u.n.k.e. AVIONICS GmbH (Germany), Flexible Optical BV (Netherlands), Information System Architects Ltd. (United Kingdom), InPhoTech (Poland), Lens R&D (Netherlands), Magellium (France), NanoRaven (France), Planetek Italia (Italy), Rzeszow Regional Development Agency (Poland), SATOR (Italy), SM GEODIM S.L. (Spain), Space Structures GmbH (Germany), The National Microelectronics Applications Centre Ltd (Ireland), Tiwah UG (Germany);

Individuals and organisations: Marco Adami (Arescosmo S.p.A., Italy), Eamonn Ansbro (Space Exploration Ltd, Ireland), Umberto Battista (Stam S.r.l, Italy), Carsten Brockmann (Brockmann Consult GmbH, Germany), Jordan Chahanov (JSE Ltd., Bulgaria), Ismael Colomina (GeoNumerics SL, Spain), Pedro Miguel Cruz (CONTROLAR Lda, Portugal), Fabio Dell'Acqua (Università degli Studi di Pavia, Italy), Francisco J. García de Quirós (EMXYS, Spain), Wolfgang Gruber (SEMIC RF Electronic GmbH, Germany), Peter Hargitai (GeoData Services Ltd. Hungary), Jens Janke (CRN Management GmbH, Germany), Konstantinos Katsonis (DEDALOS Ltd, Greece), Tadeusz Kocman (SYDERAL Polska, Poland), Rudnicki Marcin (SpaceCase Sp. z o.o., Poland), Taras Matselyukh (OPT/NET BV, Netherlands), Alberto Monici (E.T.S. Sistemi Industriali Srl, Italy), Erich Neubauer (RHP-Technology GmbH, Austria), Guido Parissenti (GP Advanced Projects, Italy), Esteban Pelayo (European Association of Development Agencies, EURADA, Belgium), Jose Luis Perez Diaz (Universidad de Alcalá, Spain), Harald Skinnemoen (AnsuR, Norway), Andrea Terenzi (M. D. P. Materials Design & Processing Srl, Italy), Francesco Topputo (Politecnico di Milano Italy), Elena Toson (T4i, Italy), Andris Treijs (HEE Photonic Labs, Latvia), Gerhard

Triebnig (EOX It Services GmbH Austria), Barry Twomey (ENBIO Ltd., Ireland), Lluís Vinyals (isardSAT S.L., Spain).

Appendix A (Questionnaire)

Survey on the viability of innovative mechanisms to finance H2020 well-evaluated but not funded Space proposals. (available online at the following link: ec.europa.eu/eusurvey/runner/SpaceProposalsH2020)

Only a small percentage of all projects proposals submitted under the Horizon 2020 Space programme is funded. Although relevant and positively evaluated, a large part remains unfunded due to the lack of funds. SME4SPACE proposes three possible financing mechanisms to overcome this issue: we look forward to your input.

The three mechanisms follow the Virtual Common Pot approach, already in use in the frame of other programmes funded by the European Commission (e.g. ERA-NET or EUREKA). Countries and regions pay for their participants, without involving transnational flows of national funding. No cross-border financing is allowed.

Carrying out R&D activities in the Space sector strongly depends on international collaboration, even more than in other areas. For this reason, Horizon 2020 consortia include industry players as well as SMEs, universities and research centres located in the different Member States. Every year, these stakeholders present a significant number of project proposals which require an essential investment of resources. Although relevant and positively evaluated, a large part remains unfunded due to the lack of funds.

SME4SPACE has identified three possible mechanisms to overcome this issue:

1. In parallel with H2020 / FP9, Member States and Regions interested in funding the positively evaluated space proposals which do not receive funding, allocate a sum of money per topic of interest. The regulation framing this mechanism should be presented in advance, as this may differ from country to country and from the one used by the European Commission. A list of eligible projects is drafted, based on the available resources, the nature of the partners, the number and the quality of the unfunded proposals. Reporting is managed at the national/regional level, i.e. each consortium partner has to report its expenses to its funding agency. The overall scientific monitoring is administered by the EC's Research Executive Agency (REA), which would receive an extra budget from each funding agency in a percentage of the overall allocated funds.

2. The Member States and Regions do not decide in advance how much allocate and on which topics but take decisions on a case by case basis. Reporting and scientific monitoring are the same as above.
3. The same mechanism as in N. 1 but with the scientific monitoring run by an independent central service established and financed by the participating countries.

For all three mechanisms, when the consortium submits its proposal, it has to confirm its availability also to be funded through this alternative scheme since there could be differences in the funding rate/rules between the H2020 Work Programme and the National/regional regulations. Even with these mechanisms, a Consortium Agreement is needed to receive the funding. Then, each partner has to follow its own national/regional regulation and procedure to secure the financing by its national/regional funding agency. These approaches are proposed for Space, but they can also be applied to other sectors. The following survey will help SME4SPACE to understand better which could be the possible obstacles in implementing such mechanisms and to raise the awareness among the stakeholders on this opportunity.

Data policy:

Your feedback will serve as the basis for a paper written together with the Network of European Regions Using Space Technologies (NEREUS) and the Italian Space Agency, which has been accepted for a presentation at the International Astronautical Congress (IAC), held in Bremen in October 2018.

All respondents will receive the full paper and the relative presentation. Moreover, your participation in the survey can be acknowledged in the paper acknowledgements paragraph. The results will be published anonymously, in an aggregated way, and will be treated respecting the General Data Protection Regulation (GDPR).

Respondent Name _____

Email _____

You are a representative of

- EU DG (1)
- European Parliament (1a)
- National Space Agency/National Body responsible for space (2)

- Regional body (3)
- Large Enterprise (4)
- SME (5)
- University (6)
- Research Centre (7)

(2), (3), (4), (5), (6) & (7) Please, indicate the name of your organisation _____

(1) Please, select your DG

- List of all DGs

Please, select your Country

- List of all EU Countries
- Other (8)

(8) Please indicate your Country

(3), (4), (5), (6) & (7) Please, specify your region _____

Please, indicate how much you agree or disagree with the following statements

(strongly agree, somewhat agree, somewhat disagree, strongly disagree, I don't know/no opinion)

1. The proposed mechanisms are too complicated and they could not solve the issue of unfunded proposals.
2. The proposed mechanisms could solve the issue of funding good proposals in reserve list or not funded due to limited amount of money.
3. The proposed mechanisms allow to align European, National and Regional funds.
4. The proposed mechanisms could benefit a larger number of companies, universities and research centres.
5. The proposed mechanisms will enhance the efficiency of the proposal selection procedure.
6. The proposed mechanisms will reinforce the European Space companies, universities and research centres' competitiveness.

Other _____

Please, specify _____

Please, rate the possible difficulties that may occur in the implementation of the proposed mechanisms (very likely, likely, unlikely, very unlikely, not at all, I do not know/no opinion)

- In mechanism 2, one or more countries decide not to put any money for the eligible proposals
- IPR management could be more complicate with the proposed mechanisms

- Very high bureaucracy connected to regional/national funding
- Asynchronous procedures for different regions/nations
- The procedure could be time consuming, thus impacting time to market
- In case 1 there could be an increased oversubscription in those topics where there is another funding option

Other _____

(1 and 1a) Please, indicate which could be the needed modifications in the actual European regulation in order to be possible to implement the proposed mechanisms (more answers possible)

- A sort of standardised procedure should be implemented among different regions/nations
- There is no need to modify the actual European regulation
- The different national regulations should be harmonised each other.
- The national/regional regulations should be aligned with the European one, especially in terms of simplification and of funding rates.

Other _____

Please, rate which mechanism is more interesting/promising in your opinion (very interesting/promising, somewhat interesting/promising, somewhat not interesting/promising, completely not interesting/promising, I do not know/no opinion)

- Mechanism 1
- Mechanism 2
- Mechanism 3

Please, specify why you find (or not) the different mechanisms interesting/promising

(2) & (3) Do you believe your body would be interested in funding such mechanism?

- Yes
- No

(4), (5), (6) & (7) Do you think your organisation would be interested in having its proposal funded through such mechanisms, even though the National/Regional funding rate could be different from the EC one?

- Yes
- No

Do you want to be acknowledged in the paper acknowledgements paragraph as survey contributor?

- No
- Yes, but only with my name
- Yes, but only with my organisation

- Yes, mentioning both my name and my organisation

Appendix B (composition of the targets)

The survey was distributed towards different targets through different dedicated messages/newsletters:

- EC, in particular to:
 - DG GROW;
 - DG RTD;
 - EASME;
 - GSA;
 - REA.
- European Parliament Members part of the Sky & Space Intergroup;
- National Agencies and Regional bodies (through NEREUS mailing list);
- SMEs (through SME4SPACE and NEREUS mailing list);
- Large companies (through SME4SPACE and NEREUS mailing list);
- Universities (through SME4SPACE and NEREUS mailing list);
- Research centres (through SME4SPACE and NEREUS mailing list).

Appendix C (survey statistics)

Some additional tables with statistics from the performed survey not used in the paper are shown in this Appendix.

Country	13.00	13.50	14.00	14.50	Total
AT	849,784	250,000			1,099,784
BE	4,518,415	1,492,811	1,153,781	924,848	8,089,855
BG	161,875	149,719			311,594
CH	1,411,131	1,083,475	783,750	189,000	3,467,356
CY	639,925				639,925
CZ	680,581	119,625		659,064	1,459,270
DE	11,482,907	4,693,713	5,705,138	2,066,750	23,948,507
DK	1,441,375		230,000		1,671,375
EE		242,000	1,086,313		1,328,313
EL	2,690,238	566,550	225,000	658,500	4,140,288
ES	7,458,219	3,710,267	3,527,493	1,200,259	15,896,237
FI	1,209,048	2,683,566	1,130,675	151,308	5,174,596
FR	10,465,147	6,123,651	5,409,130	2,319,443	24,317,371
HR	41,875				41,875
HU	150,000				150,000
IE	289,888	599,434	322,063		1,211,385
IL	240,000	379,166		241,838	861,004
IS	381,775				381,775
IT	9,161,397	9,115,135	3,742,884	1,078,105	23,097,521
LU	262,688				262,688
LV	254,755		150,000		404,755
NL	5,828,995	1,660,698	716,563		8,206,256
NO	1,223,000		1,826,640		3,049,640
PL	1,265,315	810,375		168,800	2,244,490
PT	1,833,989	59,750	1,742,033		3,635,771
RO	320,000	153,329			473,329
RU		171,125			171,125
SE	1,059,125	1,023,543	443,662	305,000	2,831,330
SI	266,856				266,856
SK				241,000	241,000
UA	50,000	150,750			200,750
UK	8,910,981	6,628,038	3,202,428	2,080,926	20,822,372
US	465,735			0	465,735
Total	75,015,017	41,866,719	31,397,550	12,284,839	160,564,124

Table 1a. Breakdown of requested EC contributions per country (2014-2017) from proposals received more than 13.00 points as score.

References

- [1] I. Kersan-Škabić, L. Tijanić, Regional absorption capacity of EU funds, *Economic Research-Ekonomska Istraživanja* 30:1 (2017) 1191-1208, DOI: 10.1080/1331677X.2017.1340174.