

Part A

The survey

Contents

Introduction.....	3
Overview of the main results of the survey.....	5
The survey – approach and target groups.....	6
Composition of respondent groups.....	7
Main results per question	10
Features of research projects.....	11
Desired features of challenging research projects	12
Features of current research projects.....	13
Relevant features of funding schemes	17
Challenges met when applying for FET funding.....	18
Impressions of respondents on their ideal funding scheme	19
Annex	22
Which of the following statements best describe your current or most recently funded FET-Open project?	22
To what extent should research funding schemes encourage researchers to	26
To what extent does your current/most recent funding scheme encourage researchers to	32
What are your main criteria when looking for research funding?	38
Socio-demographic constitution of the sample of respondents	44

Introduction

FET Open presents itself as a research programme stimulating foundational, transformative and risk-taking research that helps exploring new scientific perspectives. It is one of the few research programmes within the European Commission that encourages scientists to explore novel and challenging ideas which are not (yet) embedded in technological roadmaps that try to forecast technological solutions which are needed to arrive at solving societal problems or encouraging competitiveness. Because of its exploratory character FET Open funds Strategic Research Projects, relatively small research projects (budget up to € 3 million) over a relatively short lifespan (less than 3 years, preferably a year and a half up to two years).

Offering scientists the opportunity to bring forward bright and innovative ideas at any moment in time enables a flexible approach towards evaluating proposals. FET Open functions as a continuous scheme which allows participants to submit proposals at any time they desire. Any proposal starts with a short abstract, just indicating the basics of the idea. An evaluation committee – which can be small – will judge the fruitfulness of the idea and if accepted, those who submitted the proposal are invited to submit a full proposal, which will be evaluated again. The evaluation committee is composed of experts in the field, being able to evaluate the idea that is put forward. This is not always easy, given that out-of-the-box ideas are presented that do not belong to standard scientific disciplines or scientific fields of research.

The success rate of submitted proposals is modest: one in ten is accepted as full proposal and gets funding. This means that quite a large group of submitters will be rejected and need either to get funding somewhere else or need to abandon their ideas.

The scheme itself is open to European researchers but they are allowed to involve experts from abroad and to ally with research groups all over the world.

The existence of a scheme such as FET Open is interesting. It functions within the European Commission. Many comparable approaches can be found on national level and/or funded by private organisations (see part B for an overview). The European Commission has an interest in exploring the fruitfulness of the approach which is presented by FET Open (no constraints in advance, simple procedure, no strict obligations with respect to expected results, minimum bureaucratic burden during and after the project). It may present a modus that is of relevance for future funding mechanisms that the Commission wants to explore and use. In order to better understand the perceptions, attitudes and experiences with FET Open by the scientific community we have developed a survey to investigate these perceptions, attitudes and

experiences. In this chapter we will present the set-up of the survey and its main findings.

Overview of the main results of the survey

- The exploratory survey about perceptions, attitudes and experiences of researchers was filled in primarily by senior research scientists and mainly affiliated with a public research organisation.
- Low success rate is not *a priori* a motive for researchers not to try applying for funding, though those who never have been successful are a bit more hesitant than those who have ever been successful.
- Overall, 55% of the respondents to the survey did perceive FET Open as having a positive impact on their scientific careers.
- According to the respondents, research programmes should support research that challenges current thinking, pursues very fragile ideas, takes risks even if these lead to failure, targets real breakthroughs, pursue research topics freely and has the flexibility to explore new ideas.
- This underscores what researchers would like to do: performing research which is not constrained by requirements and boundaries and which gives creative space to researchers in exploring unforeseen opportunities, which may be risky but without fearing that failure will backfire on scientific careers or on opportunities for follow-up funding.
- Nevertheless, there is a large gap between the desired situation and the real situation. Especially features as 'taking risks', 'pursuing fragile ideas' and 'having flexibility to explore new approaches' were considered as not fulfilled by the funding programmes they were currently using.
- Respondents that received funding from FET Open are more positive than other researchers about the extent to which 'challenging current thinking', 'pursuing fragile ideas', and 'targeting real breakthroughs' are promoted by FET Open.
- When considering applying for funding, respondents considered process-related features such as transparency of the selection process, a reasonable success rate and simplicity of application procedures as very relevant features.
- When applying for funding in general, respondents considered the bureaucratic processes in applying for funding, writing the proposal and finding the appropriate level of novelty as main challenges
- When asked about their suggestions for research funding programmes, many respondents indicate that programmes should refrain from too demanding requests in terms of deliverables and milestones. Funding programmes should minimise the administrative burden and maximise the freedom in doing the research. Especially, flexibility in research orientation and timing during the project should be allowed. Moreover, review procedures should be consistent, without contradicting requirements and randomness in selecting proposals.
- According to the respondents, selection processes should look at the track record of scientists, as this will be good indication of good science, although some respondents also plea for better opportunities for younger researchers, who can also have new and challenging approaches but not yet the track record.

The survey – approach and target groups

In cooperation with the Commission's offices we have developed a survey that enabled investigating perceptions, attitudes and experiences with FET Open vis-à-vis other research funding schemes and approaches. The survey is an **exploratory** survey. It does not intend to evaluate or assess the fruitfulness of the approach followed by FET Open. It does not offer an impact assessment with regard to the contribution of FET Open to realising European objectives in scientific, technological, economic and/or social terms. It does not assess or evaluate whether FET Open lives up to its own, either implicit or explicit, expectations. It is oriented towards exploring perceptions, attitudes and experiences on FET Open, enabling a comparison with other funding schemes and mechanisms (with respect to perceptions, attitudes and experiences).

To this end we have developed an on-line survey. The survey has been constructed such that filling in would be a moderate burden (requesting 15' maximum of respondents time). Feedback by participants showed that time needed to fill in the survey was realistically set at 15' and that participants appreciated this. The survey also clearly indicated the purpose of the survey (feeding the Commission with a better perspective on the value of FET Open as conceived by the participants). Open responses indicated that participants did value this approach. Several participants expressed their satisfaction with having the survey and having the specific orientation within the survey.

In order to make a sensible comparison we have targeted four main audiences:

- 1 Those who have ever been involved in a FET-Open project (group A).
- 2 Those who have ever participated in submitting a proposal (either an abstract or a full proposal) but never reached the stage of a final positive evaluation (group B).
- 3 Those who are aware of the FET Open scheme but never have submitted a proposal in any stage (neither an abstract nor a full proposal) (group C).
- 4 Those who are not aware of the FET Open scheme (group D).

The Commission took responsibility for sending out the survey to the first two groups based on a list of contact persons the Commission has collected over the years. The Commission did not differentiate *a priori* between respondents for group A and group B. In the survey, filtering was provided between both groups. Participants of group C and group D have been searched for by posting the survey on a number of professional sites (such as specific groups in LinkedIn and other social media) and by exploring known scientific communities because of participation in previous research projects. Given the fact that the survey has been published at a number of sites it is not

possible to present sensible information about the response rates (the number of respondents approached versus the number that responded). For the first two groups such assessment can be made. Some 2.000 respondents have been selected (over two rounds, sending one reminder after two weeks) of which a bit more than 300 responded by filling in the full questionnaire during the four weeks the survey was online. This response rate (15%) is less than can be expected from focused surveys which are distributed through e-mail. The e-mail was sent to inform about a link that needed to be visited in order to fill in the questionnaire. This may offer a partial explanation why we acquired a lower than to be expected response rate.

The response rate of the other two groups can not be determined. The number of respondents is quite small: some 30 respondents for each group that filled in the full questionnaire.

By comparing the results of the respective questions one should bear in mind this large difference between the respondents of the first two categories (in the survey addressed as group A and group B) and the respondents of the second two categories (in the survey addressed as group C and group D).

Composition of respondent groups

Total numbers for each response vary. Not all respondents filled in all questions. They had the liberty to do so. Given the number of respondents and the minor variation in number of responses we do not expect a major influence because of these differences.

The majority of respondents were senior research scientists and researchers (83% and 12%) (see Annex for details). The majority of respondents were affiliated with a public research institute (84%), with small contributions for private research institutes and industry (7.5% and 5%). The majority of respondents were affiliated with EU27 (88%) with few from other parts of Europe (7.5%) and US/Canada (3.5%). Age distribution is nicely spread around an average of 40-49 years. 88 percent of respondents were male, 12 percent female.

Distribution over group A and B was quite even: 41.5 percent versus 39 percent, while group C and D contributed for 9.5 and 9 percent, respectively. 1 percent of respondents who indicated not to have ever participated to a research project were directly guided to the end of the survey while thanking them for their contribution. Respondents who have ever participated to FET Open or attempted to do so) have on average participated (or attempted to do so) more than once.

Table 1 provides an overview of attempts and successful hits. It shows that those ever successful (group A) have more often attempted to submit a proposal than those who

have submitted at least once but have never been successful (group B). This may partly explain why respondents have not been successful. The number of researchers who have only tried once and failed is (in relative terms) larger than those who tried once (and have been successful). We did not score the number of successful attempts per researcher, neither did we check how many times one needed to try before being successful.

Table 1: Number of submissions by successful and non-successful FET-respondents

How often have you applied for FET Open funding?		
	Successful FET	non-successful FET
1 time	39	71
2 - 4 times	112	74
More than 4 times	18	4

Those who were never successful were asked up till what stage they were successful (see Table 2). It shows that most of this category did not pass the stage of the short proposal. Though most probably a disappointment in itself the amount of time and resources needed to complete the short proposal may have been limited and thus may not have put a large burden on the participants. One respondent, however, expressed that submitting a short proposal is just as demanding as a full-fledged proposal requiring thorough deliberations on what to put into the proposal.

Table 2: Identification of stage when a proposal failed

Please indicate until which stage you were successful with your best FET-Open proposal so far until it was declined:	
I was not able to complete the short first proposal	10
I have successfully submitted a short first proposal	93
I have successfully submitted a full proposal	33
I have successfully submitted a final proposal	9

Asking whether respondents were still willing to submit a proposal revealed a high percentage that would do so (see Table 3). Notwithstanding the probable positive attitude towards this question (why not?) one still can conclude that the relatively low success rate for FET Open is not an *a priori* motive for researchers not to try, though

those who never have been successful are a bit more hesitant than those who have ever been successful.

Table 3: Interests in trying to submit another proposal in FET-Open

Would you apply (again) for FET-Open in the future?			
	Successful FET	non-successful FET	non-FET
Yes	135	88	19
No	6	7	0
May be	31	55	10

Finally, we asked those who were aware of FET Open but never submitted a proposal what motives people considered relevant for not submitting a proposal to FET Open (see Table 4). Only a few indicated that unfamiliarity with the procedures was a relevant motive. Practical reasons for not being engaged are predominant.

Table 4: Motives for non-participation by non-participants to FET Open

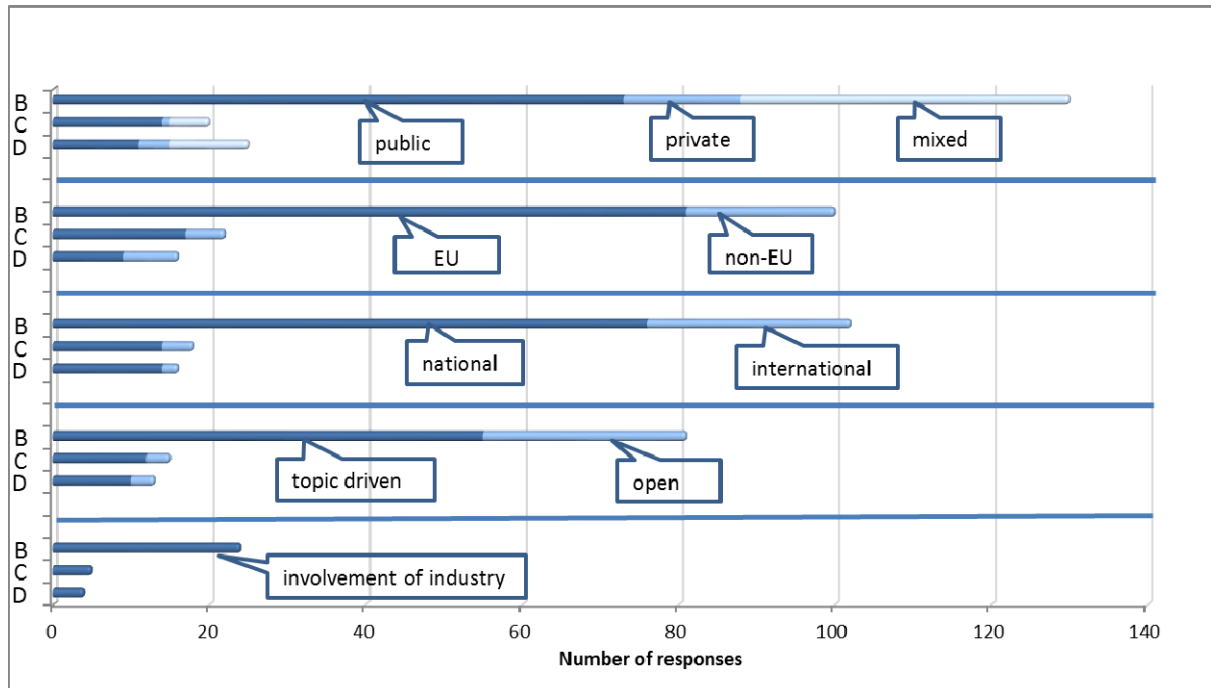
Why did you not apply for FET-Open funding? (select all that apply)	
Unfamiliarity with procedures	4
Could not find a consortium	9
I had no reason to do so as funding from other sources was available	11
Did not seem to be appropriate for my project	8

We subsequently asked respondents to indicate the kind of research efforts they were involved in now. Group A did not respond to this question since we know the answer in advance. The other groups were asked to indicate

- Whether they were active in public, private or mixed scheme
- Whether they participated in EU or non-EU projects
- Whether they participated in national or international schemes
- Whether the scheme was topic-driven or open
- Whether industry was involved

The results are presented in Figure 1.

Figure 1: Specification of research activities of respondent groups B, C and D. Upper level: public, private or mixed funding; second level: EU or non-EU schemes; third level: national or international schemes; fourth level: topic driven or open; fifth and lowest level: involvement of industry



Note: Group B: Participated in submitting a proposal but never reached the stage of final positive evaluation
 Group C: Aware of FET Open scheme but never submitted a proposal in any stage
 Group D: Not aware of FET Open scheme

Apparently, categories were not fully exclusive. Response levels vary. What can be discerned is that most respondents are active in public schemes while fully private schemes are only modestly present. Non-EU projects are modestly present as well. Most schemes are national ones. Most schemes are topic driven, though group B has a clear contribution of open schemes as well. And finally, industry participation is modest but not absent in the projects the respondents are active in.

Main results per question

The core of the survey related to issues concerning features of FET Open and perceptions, attitudes and experiences regarding these features. Though respondents were routed to different parts of the questionnaire (depending on their indication to which audience they belonged), they were asked questions which were similarly phrased in order to increase comparability between respondent groups. Some questions were relevant only for non-FET Open participants. We will present the main

findings per question. The full response tables and figures are presented in the Annex. In the following sections we have clustered responses of respondents by combining the two most positive categories (such as 'very much agree' and 'much agree') together at the positive side. Whenever necessary we have done the same by clustering the two most negative responses (such as 'not at all' and 'a bit'). For a number of questions we also calculated the weighted mean per group. Comparison of weighted means between groups and between responses enables a fast identification of the most outstanding issues. These were plotted in graphs that enable fast comparison.

Features of research projects

We created a list of features which are considered typical for FET Open research. Responses would indicate whether these features are recognised by FET Open participants and whether these features can be found in other research funding schemes as well. Questions varied slightly (respondents of group A were asked to respond for their last FET Open project; respondents of group B were asked for their last FET Open submission; respondents of group C and D were asked for their last or current research project). Overall responses can be found in the Annex.

Overall, one should conclude that basic features of FET Open research are widely recognised. Research projects of respondents are mainly considered to be basic foundational research (group A: 75%), are considered to challenge current thinking (80% overall), are dealing with novel ideas and approaches (over 80%) and are not clear about final outcomes (over 60%). Less evident is interdisciplinarity (less than 60%), the fixation on solving existing problems (slightly over 50%) and building upon previous research (50%). Overall, approximately 55% of the respondents consider the funding programme to have an impact on their scientific career.

These figures do apply for all four respondent groups. For our purpose it is interesting to see that especially group A and B are rather homogeneous in their responses. Being engaged in a FET Open project or being prepared to start a FET Open project is similar in the accompanying mind-set. Respondents of group A perceive their research as more focused to basic and foundational research than respondents of group B. Interdisciplinarity is considered less an issue; interdisciplinarity is present but with an average outcome. Interestingly, respondents of group A (and also C) are somewhat less convinced about the impact on their professional and institutional career than respondents from group B and D. Final outcomes are more unclear at the onset of a research project by respondents of group A than by respondents of group B. This is interesting since it may refer to the selection process with regard to successful FET

Open projects (those that are more risky and have less clear outcomes at the beginning).

Desired features of challenging research projects

We asked respondents what they considered to be prerequisite for research funding schemes targeting breakthrough ideas. All respondents received the same set of issues which could be considered to be of relevance (see Annex for a full overview of response categories).

Overall, differences between the four categories are not very prominent, except for a few categories. Features which are deemed essential for FET Open research are widely recognised as such. Six items all score above 80 percent (indicated to be relevant or very relevant):

- Challenge current thinking;
- Pursue very fragile ideas;
- Take risks even if these lead to failure;
- Target real breakthroughs;
- Pursue research topics freely and
- Have the flexibility to explore new ideas.

All these features clearly underscore what researchers would like to do: performing research which is not constrained by intellectual or strategic boundaries. Interpreted more positively, one could argue that the goals of scientific research are indeed stretched to the boundaries of providing creative space to researchers in aiming at exploring unforeseen opportunities which may be risky without fearing that failure will backfire on scientific careers or on opportunities for follow-up funding. As one also would expect, issues such as building upon previous findings and address specific goals are considered less relevant. Moreover, respondents do not consider 'taking into account societal considerations' as a very relevant feature for research. Also multidisciplinary is only moderately perceived as relevant.

Differences between the respondent groups are visible but overall one should say that all four groups share similar ideas. Again, group A and B are very much alike in their overall scores. Group C and D are close to group A and B, except for a few categories. Interestingly enough, respondents of C and D are a bit more outspoken about categories such as challenge current thinking, pursue very fragile ideas, take risks even if these lead to failure, target real breakthroughs, pursue research topics freely and have the flexibility to explore new ideas. Also multidisciplinary is considered more

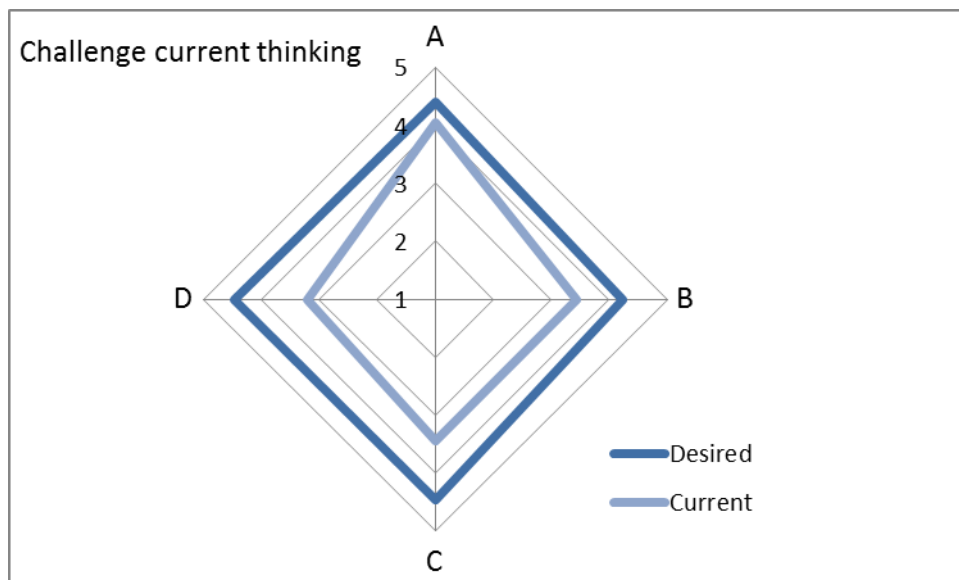
relevant by these groups (especially by category C). Given the small size of the sample one should however be cautious by lending these outcomes too much emphasis.

Features of current research projects

Having asked in the previous question what conditions and constraints respondents perceive as ideal situation for their research efforts we asked in what manner their current research activities lived up to these expectations. The categories we put forward were similar to those of the previous question, making it possible to compare the 'soll' situation with the 'ist' situation.

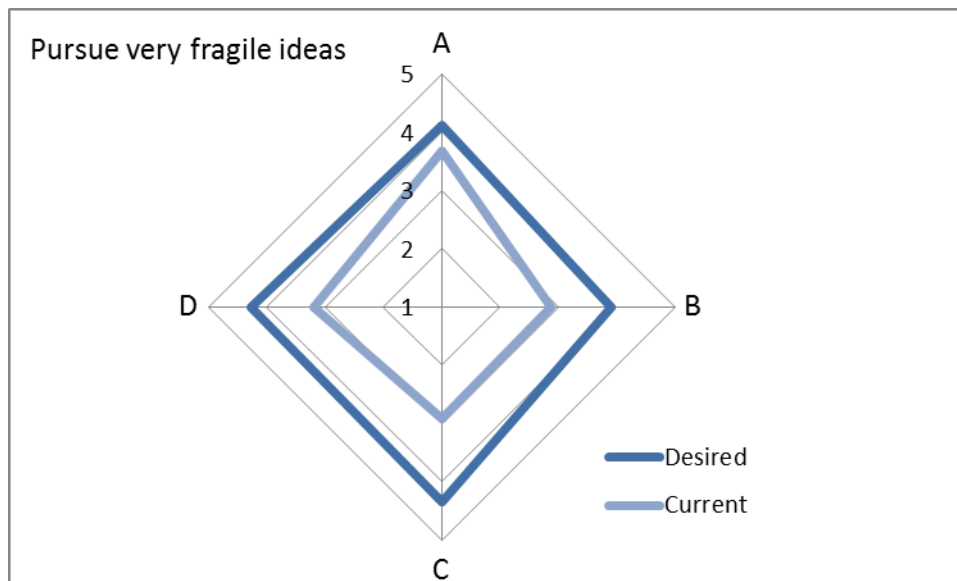
Overall, the difference between the 'ist' and 'soll' situation is rather clear, also in case of the FET Open projects. Looking at the first six categories, which address issues that would traditionally be part of academic freedom and the unhindered search for novel and inspiring ideas, it can be seen that dream and reality are far apart. The figures use weighted average score, taking into account the number of responses in each group. One should bear in mind that the number of respondents in group A are 165, in group B 145, in group C 30 and in group D 25 (with varying figures over the questions).

Figure 2: Comparison of responses to desired and current situation. 1 = 'not at all', to 5= 'very much'; the others are in between.



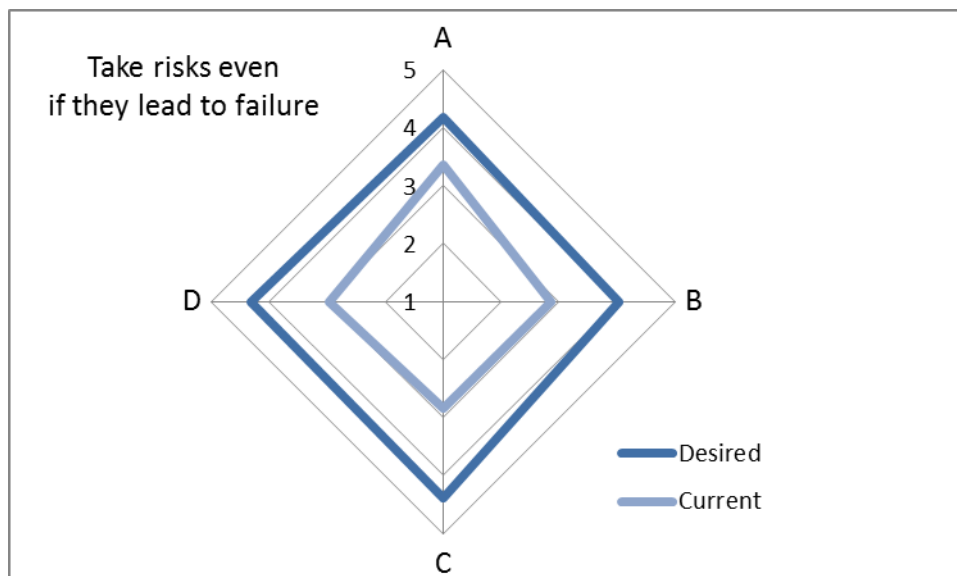
Note: Group A: Involved in FET-Open project
 Group B: Participated in submitting a proposal but never reached the stage of final positive evaluation
 Group C: Aware of FET Open scheme but never submitted a proposal in any stage
 Group D: Not aware of FET Open scheme

Figure 3: Comparison of responses to desired and current situation. 1 = 'not at all', to 5= 'very much'; the others are in between.



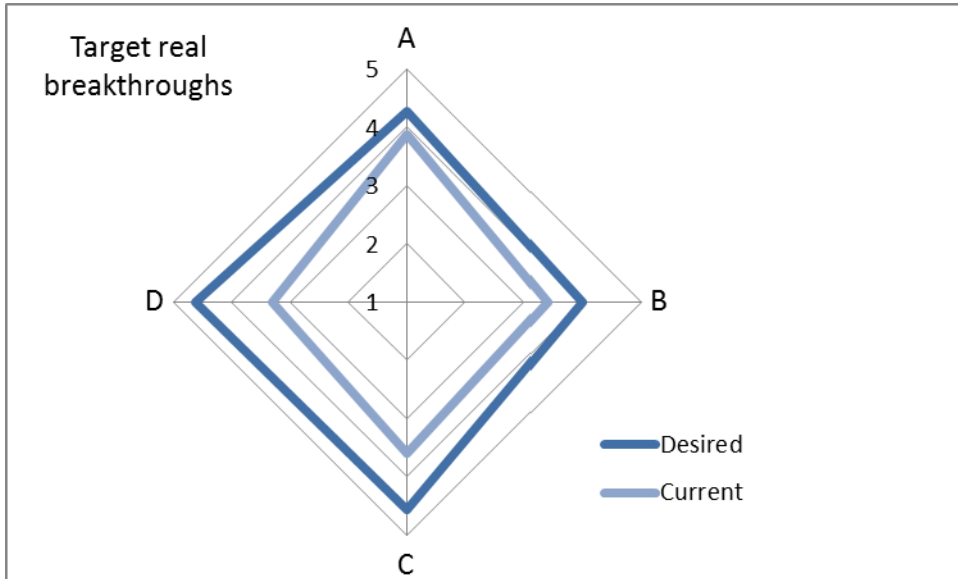
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 Group D: Not aware of FET Open scheme

Figure 4: Comparison of responses to desired and current situation. 1 = 'not at all', to 5= 'very much'; the others are in between.



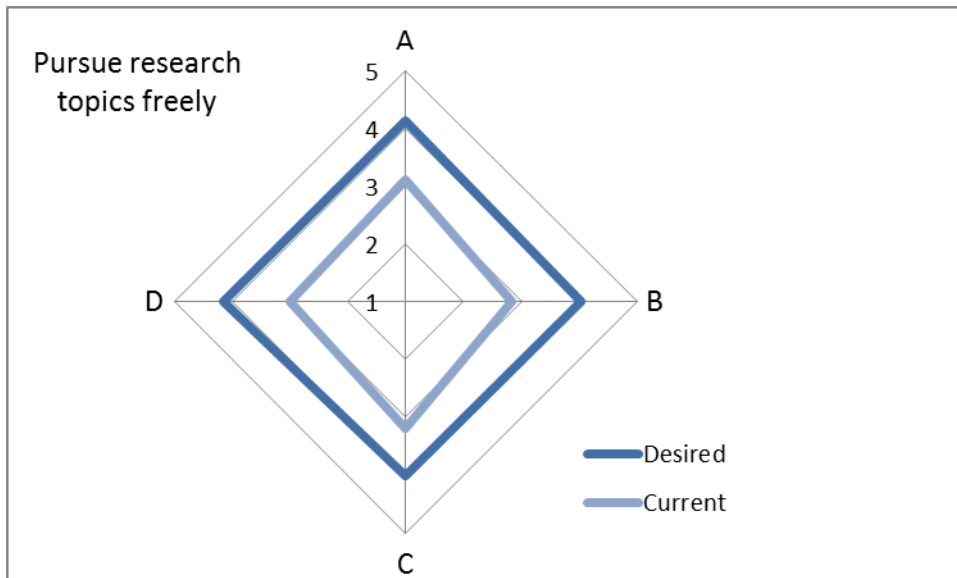
Note: Group A: Involved in FET-Open project
 Group B: Participated in submitting a proposal but never reached the stage of final positive evaluation
 Group C: Aware of FET Open scheme but never submitted a proposal in any stage
 Group D: Not aware of FET Open scheme

Figure 5: Comparison of responses to desired and current situation. 1 = 'not at all', to 5= 'very much'; the others are in between



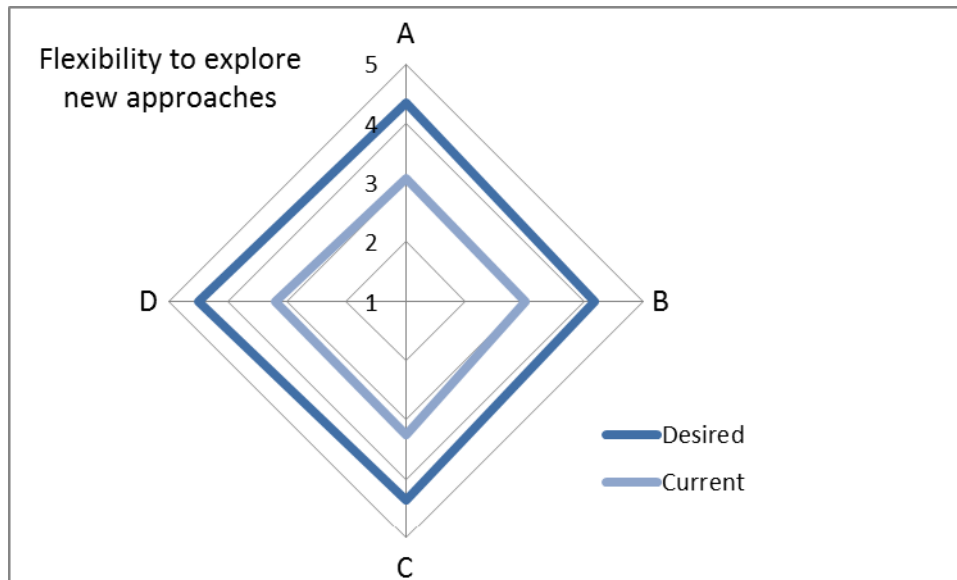
Note: Group A: Involved in FET-Open project
 Group B: Participated in submitting a proposal but never reached the stage of final positive evaluation
 Group C: Aware of FET Open scheme but never submitted a proposal in any stage
 Group D: Not aware of FET Open scheme

Figure 6: Comparison of responses to desired and current situation. 1 = 'not at all', to 5= 'very much'; the others are in between



Note: Group A: Involved in FET-Open project
 Group B: Participated in submitting a proposal but never reached the stage of final positive evaluation
 Group C: Aware of FET Open scheme but never submitted a proposal in any stage
 Group D: Not aware of FET Open scheme

Figure 7: Comparison of responses to desired and current situation. 1 = 'not at all', to 5= 'very much'; the others are in between



Note: Group A: Involved in FET-Open project
 Group B: Participated in submitting a proposal but never reached the stage of final positive evaluation
 Group C: Aware of FET Open scheme but never submitted a proposal in any stage
 Group D: Not aware of FET Open scheme

For all these items one can see the gap between the desired situation and the real situation. This is rather clear in case of the responses to 'taking risks', 'pursuing fragile ideas' and 'having flexibility to explore new approaches', especially when one looks at the categories that relate to full agreement (responses at the right side of the figure). Group A respondents (which relate to FET Open researchers) show to experience slightly higher levels of satisfaction (if one considers the conformity between desired and real as a degree of satisfaction) than the other groups, especially in 'challenging current thinking', 'pursuing fragile ideas' and 'targeting breakthrough's but in other categories they do not differ much from the other respondent groups (especially in 'pursuing research topics freely' and in 'flexibility to explore new approaches'). 'Challenging current thinking' is the single item in which some similarity between desired and real situation can be found for group A respondents, while 'Pursuing fragile ideas' and 'Targeting real breakthroughs' closely follow. For the items of 'Pursuing research topics freely' and 'Flexibility to explore new approaches' also group A respondents show a gap between the desired and the existing situation, which especially is emphasised by the relatively low level of respondents who consider the present situation as very much focused on realising these features (see Annex for details).

For the other four features in this item ('Embracing multidisciplinary', 'Addressing specific goals', 'Building upon previous findings' and 'Taking into account social considerations') the differences between the 'ist' and the 'soll' are much smaller. Interestingly enough, one can notice in case of 'taking into account social considerations' respondents indicate that they perceive their current projects more tuned towards social considerations than they indicated what should be desirable. This is similar for the feature 'Address specific goals'. This might be interpreted as again a mismatch between what researchers would like to be visible within their research activities and what they experience in their current activities. Respondents of group A respond in a similar vein as the other respondent groups.

Relevant features of funding schemes

We asked respondents about what features they consider of relevance when looking for a funding scheme. Features addressed were:

- Reputation of the scheme
- Transparency of the selection process
- Reasonable success rate
- Simplicity of the application procedure
- Anonymity at first stage
- Covering a broad spectrum of research areas
- Leaving room to alter approaches
- Supporting basic research
- Observing a milestone approach
- Focus on specific research areas

Overall, differences in responses by the respective respondent groups were moderate, with the exception of 'Supporting basic research'. This shows to be most relevant for group A (80% relevant or very relevant) with a steady decline in relevance towards group D (slightly more than 60% relevant or very relevant). Overall, 'Transparency of the selection process', 'Reasonable success rate' and 'Simplicity of the application procedure' are considered to be most relevant (up to 80% relevant to very relevant) and are considered more relevant than 'Reputation of the scheme' (slightly more than 60% relevant or very relevant). Flexibility in the project as covered by 'Leaving room to alter approaches' is considered as rather relevant by 50% of the respondents. Interestingly, respondents do not care about anonymity in the first stage. This is considered to be relevant or very relevant for just a small fraction of respondents (less

than 20%). Similarly, the milestone approach is evaluated as not relevant. Other issues, such as, 'Covering a broad area of research areas' and 'Focusing on a specific research area' are not considered to be that relevant as well. (less than 40% relevant or very relevant).

One can conclude that process features such as simplicity and transparency are considered to be very relevant, just as the success rate. Though this latter seems to be an obvious measure of success, dependencies between these measures are of relevance as well (these can however not be distilled from our responses). Anonymity is not one of the determining features.

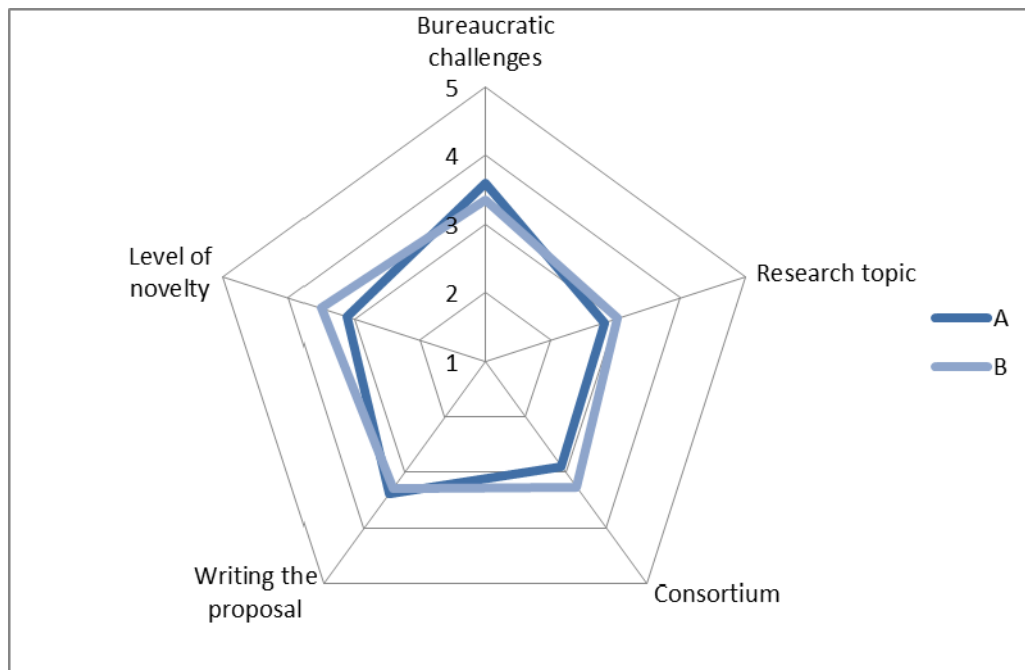
Challenges met when applying for FET funding

The next question was only addressed to respondents of group A (FET Open researchers) and group B (those who tried but had not been successful). The question relates to the challenges the researchers were confronted with when they applied for FET Open funding. The most interesting differences to be found are those between group A and group B respondents. Do responses shed light upon perceived differences between successful and non-successful applicants? We asked for a number of features:

- Bureaucracy/understanding the procedure/fulfilling the requirements
- Formulating an appropriate research topic
- Building an appropriate consortium
- Writing the proposal
- Finding the appropriate level of novelty

Figure 8 shows the overall results of this question. It shows that differences are small and that for some features successful respondents score higher than non-successful respondents (in the sense that they consider that feature more challenging than respondents of group B). This is the situation for the bureaucratic challenges met (which may relate to having to go all the way through the full and accepted proposal) and writing the proposal (which can relate to having to write the full proposal). Group B respondents consider the level of novelty as a larger challenge than successful respondents (which may be attributed to hindsight perspectives), while forming a consortium and having the appropriate research topic are more or less a similar challenge for both groups. 'Bureaucratic challenges', 'Writing the proposal' and 'Level of novelty' are considered by 60% of the respondents of group A or B to be a real challenge.

Figure 8: Challenges when applying for FET Open funding. A=successful FET Open applicants; B=non-successful applicants. 1 = 'considered not to be a challenge'; 5 = 'considered to be a very real challenge'



Impressions of respondents on their ideal funding scheme

Next to a large number of closed questions we asked the respondents to present their main ideas about an ideal funding scheme in an open question. 94 respondents presented their ideas in a nutshell, distributed over all four categories. The largest number of responses came from group A (52 responses), followed by group B (29 responses), while group C and D had in absolute terms moderate responses (6 and 7).

We did a qualitative analysis on the responses, simply by clustering them to themes they addressed and by organically creating the themes that were raised. The analysis shows the responses of group C and D to be less focused than group A and B and also to show less direct relevance to the FET Open scheme. This is understandable, given the position of respondents in respect to FET Open activities (group C being aware of FET Open but never tried and group D not being aware of FET Open). Given the small sample of responses we decided to focus on the responses presented by group A and group B.

Notwithstanding the open mode of the question, which allowed for any kind of response, most responses stressed a particular aspect of funding schemes that need to be addressed. Many respondents made the comparison with existing funding schemes and of these many compared it to FET Open. A number of respondents identified FET Open itself as the ideal funding scheme (8 respondents). The number of respondents that reflected upon parts of the FET Open scheme however outweighed the number of clear and unambiguous positive signs.

The remark most often made related to the need to have as much **freedom** and as less **bureaucracy** as possible. This was uttered in various manners but the kernel of the responses related to the same issues: refrain from too demanding requests in terms of deliverables, milestones, administrative procedures and create a scheme which is based on a minimum of bureaucracy needed and a maximum of freedom that can be offered in terms of accountability for pre-set objectives, milestones, deliverables, etc. This remark was both made by group A and group B respondents. For group A respondents this remark scored highest in all remarks made.

Not surprisingly, the most common feature for an ideal funding scheme for group B relates to the **review procedure**. For group A this is not an issue (which is not a surprise as well). A third of the respondents in this category mention the lack of consistency in the review procedure, the contradicting requirements, and the apparent randomness in the decision procedure as a problematic part of any funding scheme that hinders realisation of an ideal scheme. Clearly, most of these comments from group B are directly related to experiences with the FET Open scheme.

Third in rank, and often quoted by respondents of group A, is the feature that an ideal funding scheme should take into account the **track record** of the scientists. They plea for rewarding proven scientific excellence and reputation. These features are the best guarantee for good research and innovative breakthroughs. Some of the respondents do not emphasize previous excellence but stress the unique emphasis on good research above all other characteristics.

Fourth in ranking is the request for **flexibility**, once the funding has been provided. One should be able to redirect the research orientation when in the course of a project that seems to offer better promises for interesting results, without being penalised in any sense. This argument is supported both by group A and group B respondents. part of flexibility also had to do with timing. Sometimes, it really takes many months to recruit the appropriate scientific researchers. One should be able to stretch the time in which funding is provided.

Group B respondents emphasized the orientation of an ideal funding scheme to **realising specific (societal or industrial) objectives**. This was only mentioned once by a group A respondent. Some argued that research should be focused on solving societal problems and that funding schemes thus should take this into account.

Other issues that were raised were usually scored by just one or a few respondents. Higher **success rates** was mentioned only once, while some made a plea for **smaller grants with smaller consortia** in order to create an innovative playing level for innovative research. Some argued for more focused attention for **young researchers**, since these sometimes experience problems to fit all requirements of funding schemes while they can be the bearers of new and challenging approaches.

Finally, some **examples** of ideal schemes were presented. Next to mentioning FET Open as an example a number of other schemes were mentioned:

- Human Frontier Science.
- AT&T's approach in the 1970s which requested a five page outline and which led to two years research budget that could be spent without any bureaucratic procedures.
- The ERC grant scheme was mentioned twice, though not necessarily as the ideal scheme but as a scheme with some interesting features.
- A specific national scheme that was positioned in between ERC and FET Open. It had features such as competitive, long term, large grants, flexible, small bureaucracy, and focused on networking. The scheme itself was not identified.
- The EPSRC approach.

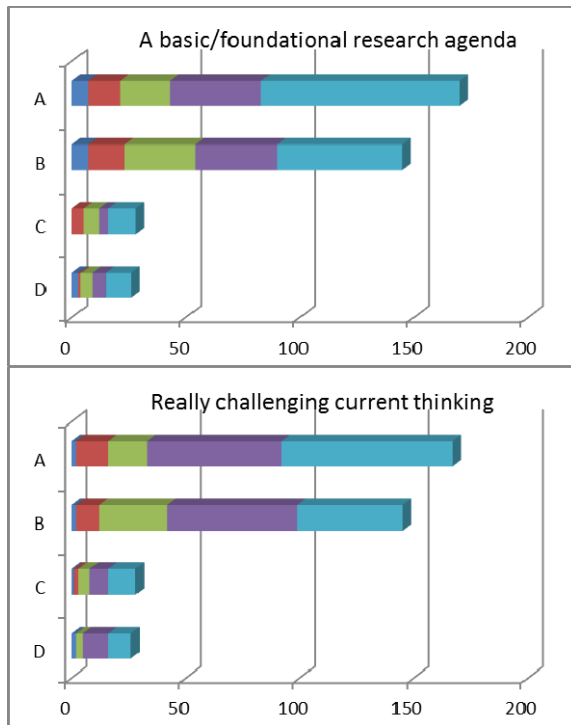
Annex

Which of the following statements best describe your current or most recently funded FET-Open project?

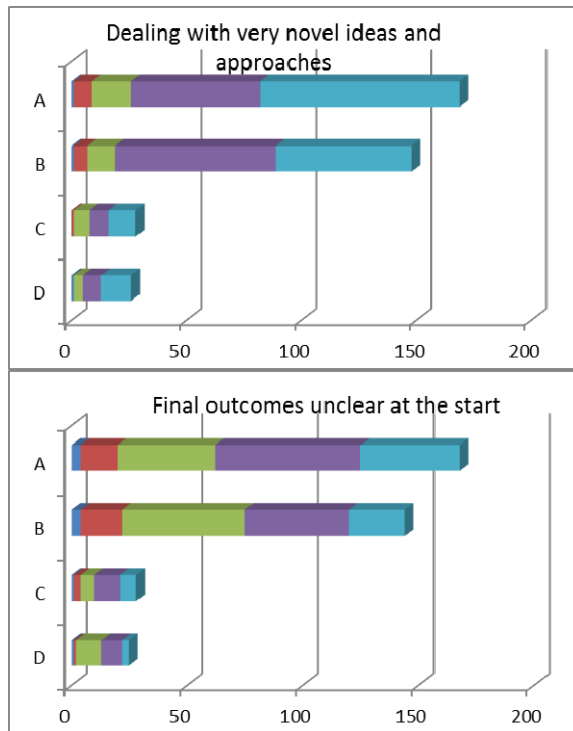
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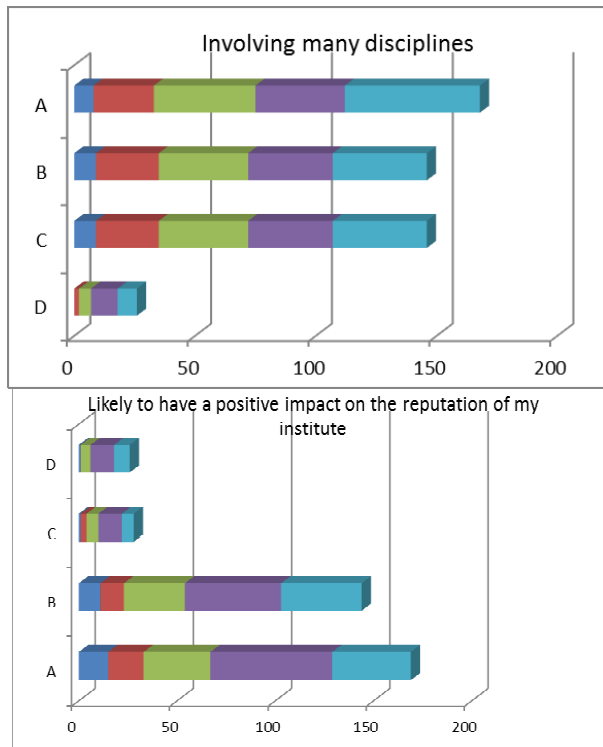




A basic/foundational research agenda	1	2	3	4	5
A	7	14	22	40	87
B	7	16	31	36	55
C	0	5	7	4	12
D	3	1	5	6	11
Total weighted average	0,362115	0,725619	1,380338	1,531928	3,142637
Really challenging current thinking	1	2	3	4	5
A	2	14	17	59	75
B	2	10	30	57	46
C	1	2	5	8	12
D	2	0	3	11	10
Total weighted average	0,229441	0,378184	0,987813	2,404562	2,654864



Dealing with very novel ideas and approaches	1	2	3	4	5
A	1	8	17	56	87
B	1	6	12	70	59
C	0	1	7	8	12
D	1	0	4	8	13
Total weighted average	0,100354	0,227477	1,087341	2,584828	3,473897
Final outcomes very uncertain at the start	1	2	3	4	5
A	4	16	42	63	43
B	4	18	53	45	24
C	1	3	6	11	7
D	1	1	11	9	3
Total weighted average	0,158407	0,466312	1,563381	1,8119	1,013697



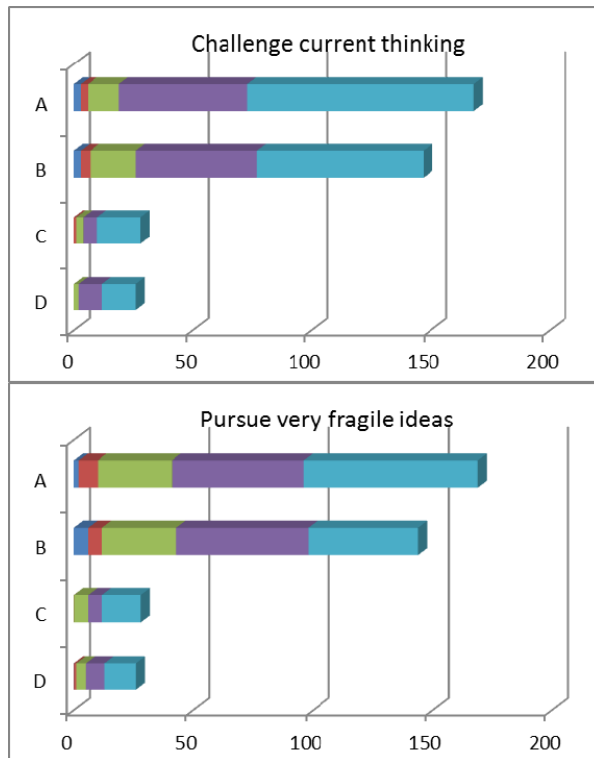
Aimed at further developing existing R&D	1	2	3	4	5
A	14	40	47	42	24
B	18	37	32	41	16
C	2	5	7	10	4
D	4	2	5	9	6
Total weighted average	0,52186	0,877116	1,120338	1,480685	0,759499
Likely to have a positive impact on my career	1	2	3	4	5
A	12	25	45	53	33
B	8	17	34	46	39
C	5	3	6	11	3
D	2	2	7	5	10
Total weighted average	0,490079	0,59209	1,334643	1,583188	1,360873

To what extent should research funding schemes encourage researchers to ...

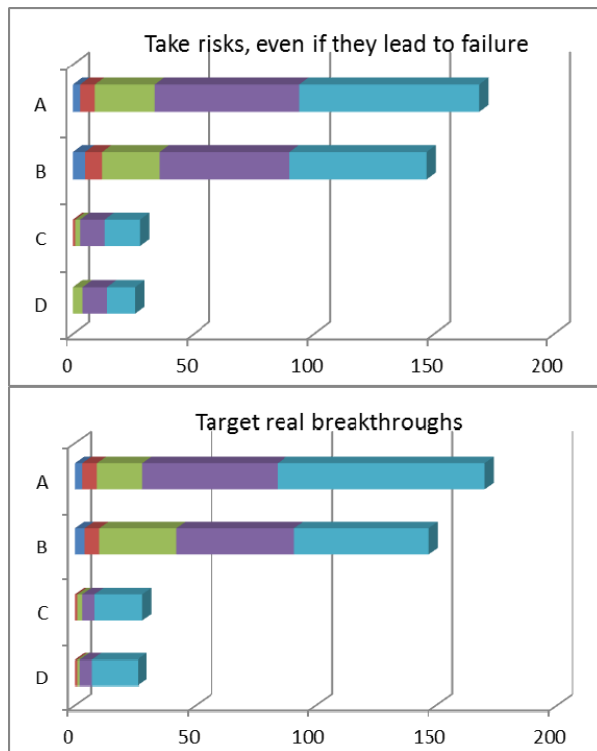
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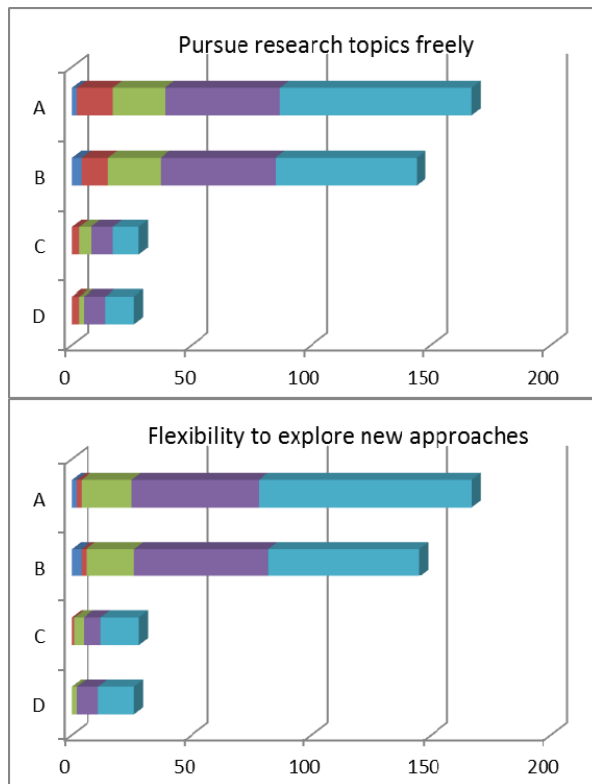




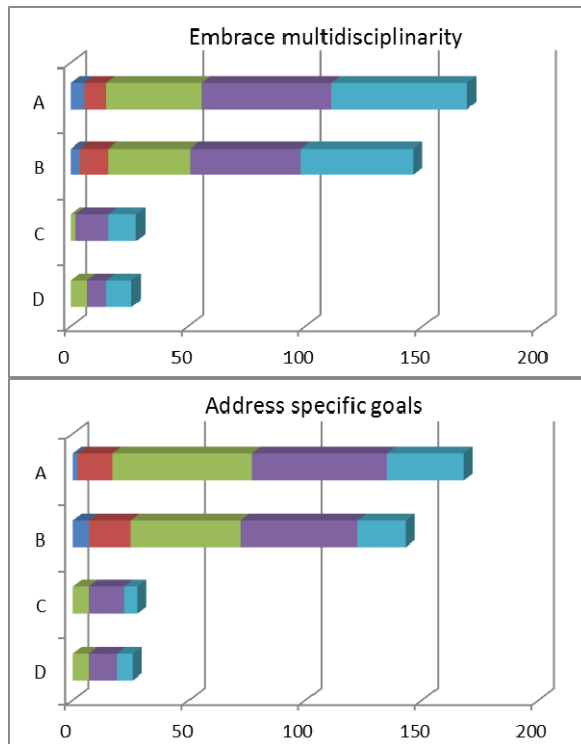
Challenge current thinking	1	2	3	4	5
A	3	3	13	54	95
B	3	4	19	51	70
C	0	1	3	6	18
D	0	0	2	10	14
Total weighted average	0,038265	0,080782	0,390699	1,267268	2,222985
Pursue very fragile ideas	1	2	3	4	5
A	2	8	31	55	73
B	6	6	31	55	46
C	0	0	6	6	16
D	0	1	4	8	13
Total weighted average	0,053501	0,127465	0,766842	1,229366	1,822826



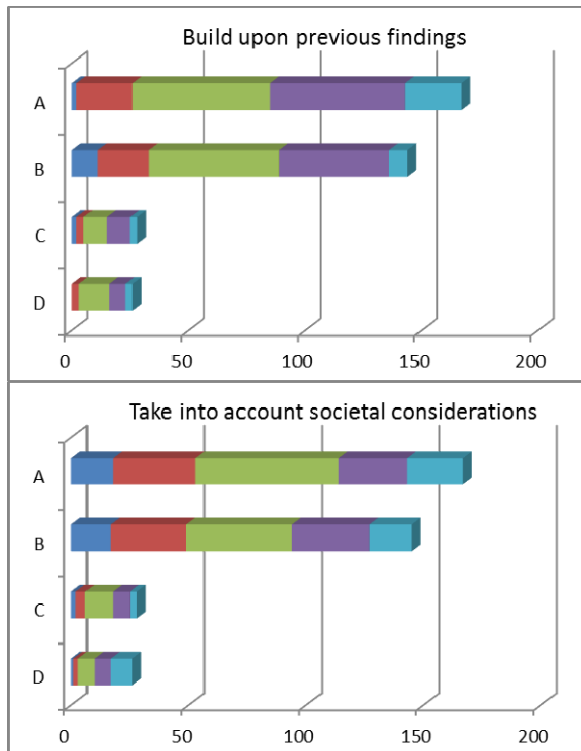
Take risks even if they lead to failure	1	2	3	4	5
A	3	6	25	60	75
B	5	7	24	54	57
C	0	1	2	10	15
D	0	0	4	10	12
Total weighted average	0,051765	0,118836	0,536469	1,464135	1,828795
Target real breakthroughs	1	2	3	4	5
A	3	6	19	56	86
B	4	6	32	49	56
C	0	1	2	5	20
D	0	1	1	5	19
Total weighted average	0,044858	0,150286	0,439342	1,033624	2,33189



Pursue their research topics freely	1	2	3	4	5
A	2	15	22	48	80
B	4	11	22	48	59
C	0	3	5	9	11
D	0	3	2	9	12
Total weighted average	0,039754	0,388737	0,540009	1,288341	1,74316
Flexibility explore new approaches	1	2	3	4	5
A	2	2	21	53	89
B	4	2	20	56	63
C	0	1	4	7	16
D	0	0	2	9	15
Total weighted average	0,039562	0,061483	0,48346	1,299726	2,115769



Embrace multidisciplinary	1	2	3	4	5
A	6	9	41	55	58
B	4	12	35	47	48
C	0	0	2	14	12
D	0	0	7	8	11
Total weighted average	0,0629	0,135446	0,822989	1,455054	1,523611
Address specific goals	1	2	3	4	5
A	2	15	60	58	33
B	7	18	47	50	21
C	0	0	7	15	6
D	0	0	7	12	7
Total weighted average	0,060856	0,21516	1,205045	1,692141	0,826798

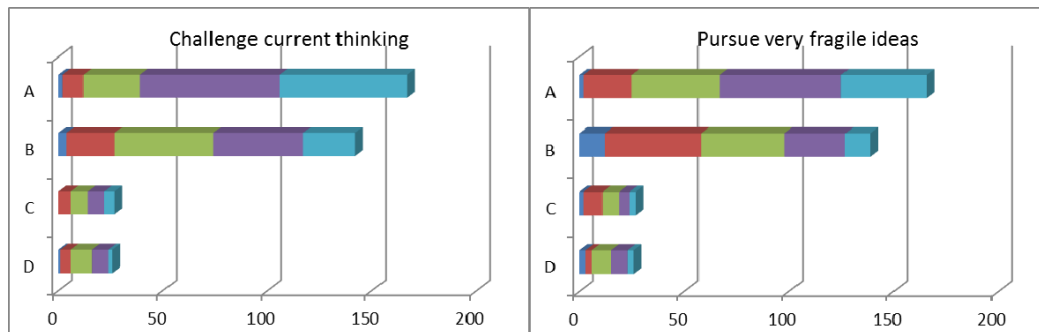


Build upon previous findings	1	2	3	4	5
A	2	24	59	58	24
B	11	22	56	47	8
C	2	3	10	10	3
D	0	3	13	7	3
Total weighted average	0,159794	0,519018	1,599325	1,300068	0,421796
Take into account societal considerations	1	2	3	4	5
A	18	35	61	29	24
B	17	32	45	33	18
C	2	4	12	7	3
D	1	2	7	7	9
Total weighted average	0,334916	0,650051	1,373416	0,92047	0,721147

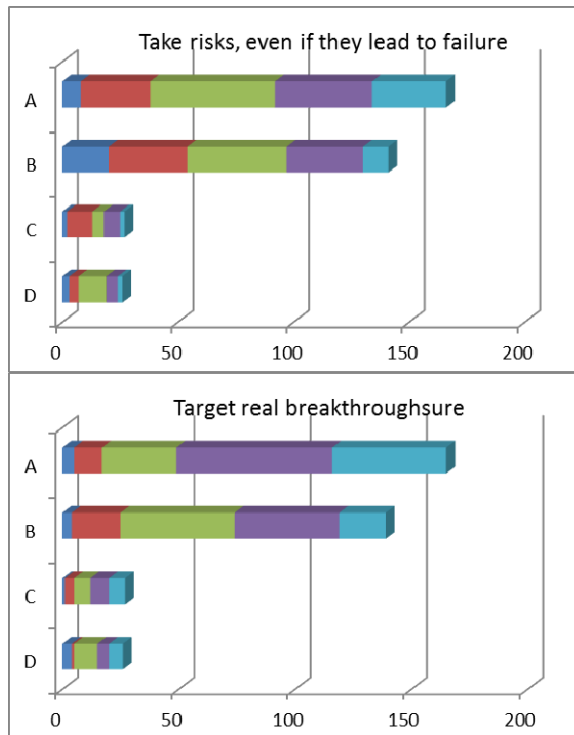
To what extent does your current/most recent funding scheme encourage researchers to ...

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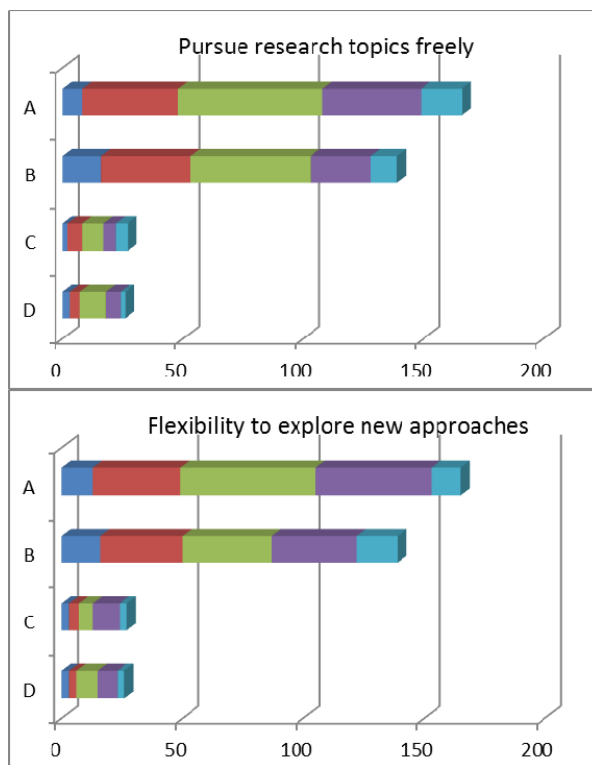
Note 2: 



Challenge current thinking	1	2	3	4	5
A	2	10	27	67	61
B	4	23	47	43	25
C	0	6	8	8	5
D	1	5	10	8	2
Total weighted average	0,078607	0,636382	1,173574	1,308003	0,803434
Pursue very fragile ideas	1	2	3	4	5
A	2	23	42	58	41
B	12	46	40	29	12
C	2	9	8	5	3
D	3	3	9	8	3
Total weighted average	0,287838	0,918207	1,183232	1,050908	0,559815

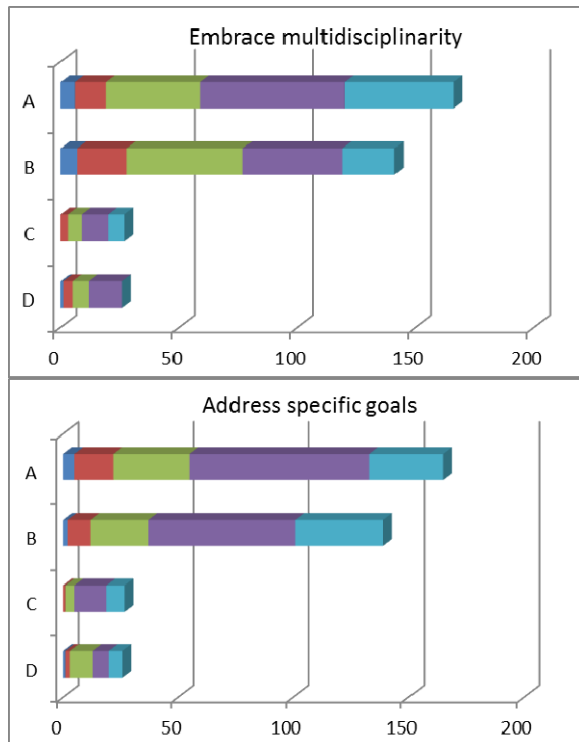


Take risks even if they lead to failure	1	2	3	4	5
A	8	30	54	42	32
B	20	34	43	33	11
C	2	11	5	7	2
D	3	4	12	5	2
Total weighted average	0,379495	0,983111	1,276989	0,938622	0,421782
Target real breakthroughs	1	2	3	4	5
A	5	12	32	67	49
B	4	21	49	45	20
C	1	4	7	8	7
D	4	1	10	5	6
Total weighted average	0,249963	0,410416	1,190332	1,218406	0,930883

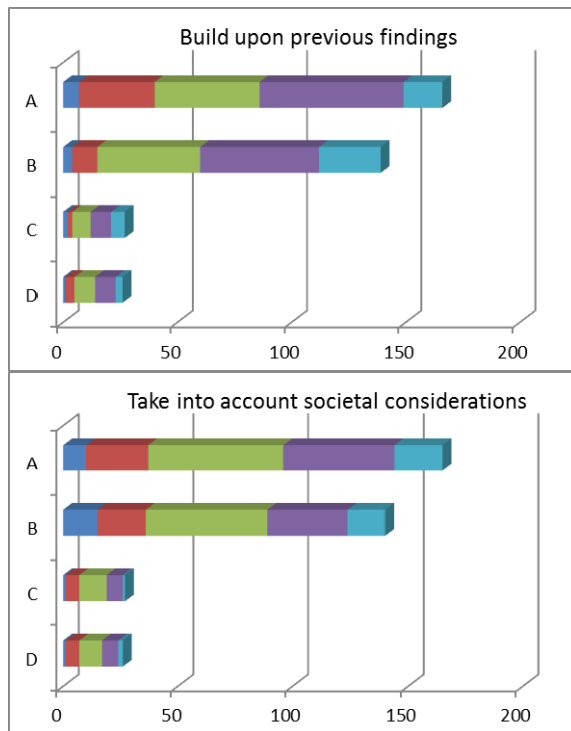


Pursue their research topics freely	1	2	3	4	5
A	8	40	60	41	17
B	16	37	50	25	11
C	2	6	9	5	5
D	3	4	11	6	2
Total weighted average	0,352759	0,883219	1,477568	0,842798	0,443655

Flexibility explore new approaches	1	2	3	4	5
A	13	36	56	48	12
B	16	34	37	35	17
C	3	4	6	11	3
D	3	3	9	8	3
Total weighted average	0,420392	0,726319	1,173957	1,257807	0,421525



Embrace multidisciplinary	1	2	3	4	5
A	6	13	40	61	46
B	7	21	49	42	22
C	0	3	6	11	7
D	1	4	7	14	0
Total weighted average	0,124252	0,492207	1,079935	1,611211	0,692396
Address specific goals	1	2	3	4	5
A	5	17	33	78	32
B	2	10	25	64	38
C	0	1	4	14	8
D	1	2	10	7	6
Total weighted average	0,083153	0,288933	0,91262	1,720908	0,994386



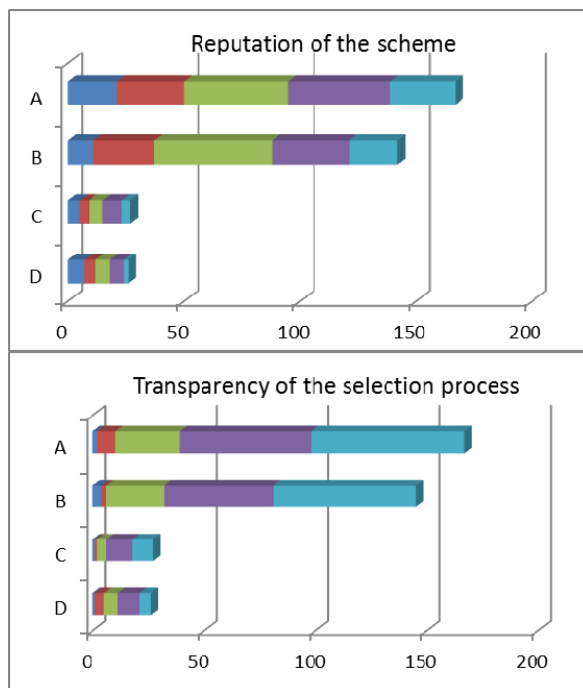
Build upon previous findings	1	2	3	4	5
A	7	33	46	63	17
B	4	11	45	52	27
C	2	2	8	9	6
D	1	4	9	9	3
Total weighted average	0,183481	0,505852	1,2433	1,433106	0,634261
Take into account societal considerations	1	2	3	4	5
A	10	27	59	48	21
B	15	21	53	35	16
C	1	6	12	7	1
D	1	6	10	7	2
Total weighted average	0,243247	0,766628	1,565207	1,069399	0,355519

What are your main criteria when looking for research funding?

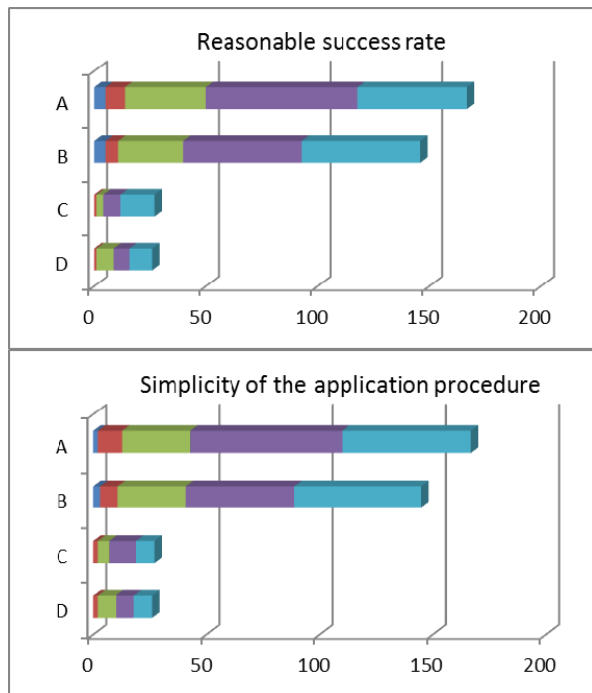
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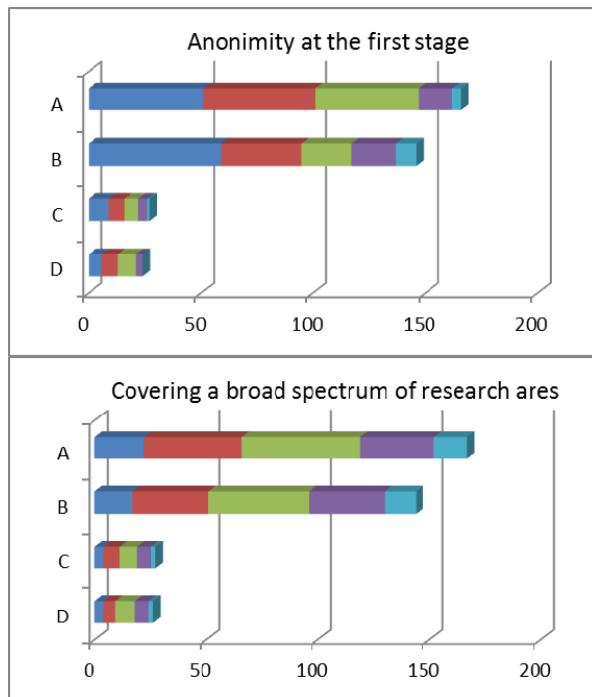




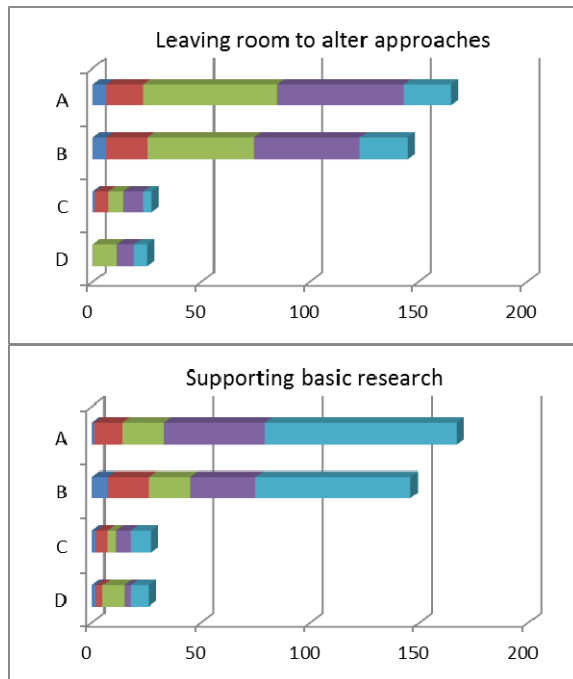
Reputation of the funding scheme	1	2	3	4	5
A	21	29	45	44	28
B	11	26	51	33	21
C	5	4	6	8	4
D	7	5	6	6	2
Total weighted average	0,657629	0,697207	1,081607	1,022933	0,540623
Transparency of the selection process	1	2	3	4	5
A	2	8	29	59	69
B	4	2	26	49	64
C	1	1	4	12	9
D	1	4	6	10	5
Total weighted average	0,115061	0,25258	0,73188	1,520284	1,380194



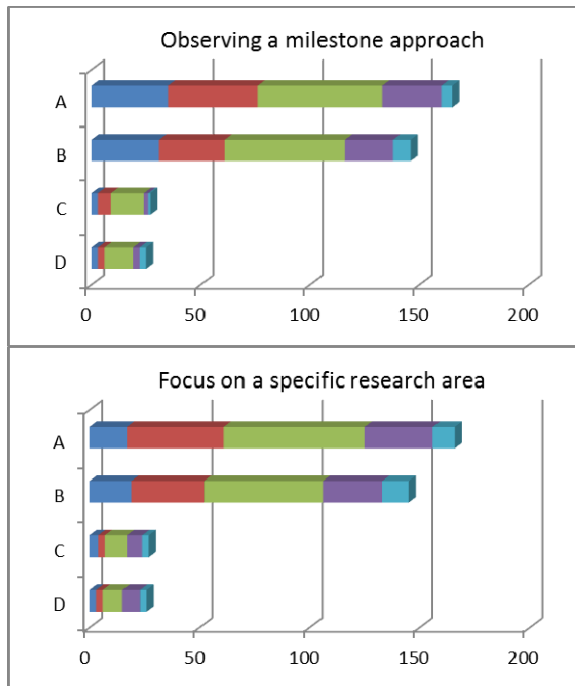
Reasonable success rate	1	2	3	4	5
A	5	9	36	68	49
B	5	6	29	53	53
C	0	1	3	8	15
D	0	1	8	7	10
Total weighted average	0,064187	0,170487	0,833002	1,335726	1,596598
Simplicity of the application procedure	1	2	3	4	5
A	2	11	30	67	57
B	3	8	30	48	56
C	0	2	5	12	8
D	0	2	8	8	8
Total weighted average	0,032666	0,272038	0,879415	1,484369	1,331513



Anonymity at first stage	1	2	3	4	5
A	51	50	46	15	4
B	59	36	22	20	9
C	9	7	6	4	1
D	6	7	8	3	0
Total weighted average	1,294672	1,098706	0,983349	0,500496	0,122777
Covering a broad spectrum of research areas					
	1	2	3	4	5
A	22	44	53	33	15
B	17	34	45	34	14
C	4	7	8	6	2
D	4	5	9	6	2
Total weighted average	0,551786	0,951151	1,272315	0,886707	0,33804



Leaving room to change approaches during the project	1	2	3	4	5
A	6	17	62	58	22
B	6	19	49	49	22
C	1	6	7	9	4
D	0	0	11	8	6
Total	0,11478	0,456287	1,412948	1,34278	0,673206
Supporting basic research	1	2	3	4	5
A	1	13	19	46	88
B	7	19	19	30	71
C	2	5	4	7	9
D	2	3	10	3	8
Total	0,20493	0,508551	0,776673	0,855572	1,654273



Observing a milestone approach	1	2	3	4	5
A	35	41	57	27	5
B	31	30	55	22	8
C	3	6	15	2	1
D	3	3	13	3	3
Total weighted average	0,655561	0,796187	1,797722	0,508395	0,242135
Focus on a specific research area	1	2	3	4	5
A	17	44	64	31	10
B	19	33	54	27	12
C	4	3	10	7	3
D	3	3	9	8	3
Total weighted average	0,496977	0,719142	1,47448	0,939905	0,369495

Socio-demographic constitution of the sample of respondents

