Future and Emerging Technologies
Evaluation criteria

Briefing for Remote Evaluators
8 November 2017

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FET-Open Unit
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1. Excellence criterion
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### 1. Excellence

1) Clarity and novelty of long-term vision, and targeted breakthrough towards that vision.

2) Novelty, non-incrementality and plausibility and its foundational character.

3) Appropriateness of the research methodology

4) Range and added value from interdisciplinarity

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### 2. Impact

1) Transformational impact on technology and/or society.

2) Future European scientific and industrial leadership

3) Quality of methods and measures for achieving impact beyond the research world

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### 3. Implementation

1) Soundness of the workplan and clarity of intermediate targets.

2) Relevance of expertise in the consortium.

3) Appropriate allocation and justification of resources (person-months, equipment).

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1. Clarity and novelty of long-term vision, and ambition and concreteness of the targeted breakthrough towards that vision.

- Is there a clearly defined novel long-term vision?
- Is there a clear and concrete description of the proposed breakthrough research? Is it focused enough? Is it ambitious?
- Is there good argument for the relevance of the targeted breakthrough for the long-term vision – it should be outlined how the breakthrough would lead to the proposed vision.
- Are the objectives well described in the proposal? Are they specific, measurable, achievable, relevant, and time-bound within the duration of the project?
2. Novelty, non-incrementality and plausibility of the proposed research for achieving the targeted breakthrough and its foundational character.

• Is the proposed research novel? – It should be more than continuation of research being already done or currently pursued. Is the analysis of the state-of-the-art comprehensive and complete?

• Is the research proposed abrupt and far-reaching, not just another small incremental step along a path already followed?

• Is the research plausible? Is it possible to achieve the project objectives within the proposed lifetime of the project?

• Does the research proposed have a potential to start a new line of investigation, which can be followed for years to come and could lead to completely new technologies?
3. Appropriateness of the research methodology and its suitability to address high scientific and technological risks.

• Are the chosen methods the right ones for achieving the proposal objectives?
• Is the chosen methodology appropriate for high risk project? (The details of risk analysis and mitigation plan should be addressed under Implementation!)
4. Range and added value from interdisciplinarity, including measures for exchange, cross-fertilisation and synergy.

- To what extent the main idea requires involvement of knowledge and methodology from different disciplines? The interdisciplinarity of the ideas should be addressed here, while the appropriateness of the composition of the consortium should be treated under Implementation!
- How "distant" are these disciplines involved? (There are disciplines, which traditionally work together, while others speak different languages and use different methodologies. The expectation is that putting together distant disciplines may bring qualitatively new solutions).
- How are these different disciplines intertwined and how the ideas from different disciplines support the scientific breakthrough?
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1.1. Clarity and novelty of long-term vision, and ambition and concreteness of the targeted breakthrough towards that vision.

Example of a remote evaluator comment

"The proposal aims to detect circulating tumour cells (CTCs) by a novel µTool activated with monoclonal antibodies like trastuzumab, cetuximab and bevacizumab. I do not see how this can work, here is the pitfall of the entire proposal: As long as the surface receptors against which these antibodies are directed are expressed, the targeted therapy works. Problems in cancer treatment and cure arise from tumour cells that cannot be longer targeted with antibodies due to loss of surface receptor expression. These tumour cells are the real malignant ones that cause therapy failure, formation of metastases and finally death of the patient. I excuse myself for repeating me, but what else can I write! The concept of the proposal is flawed because activation of the µTool is based on receptor/antibody recognition."
Request for modification

- The comment includes personalized statements like "I do not see..." or "I excuse myself for repeating me, but what else can I write!".

- Please try to be as neutral as possible in your comments and remove personalized statements like "I do not see..." or "I excuse myself for repeating me, but what else can I write!".

- There is an explanation on what is not correct in the proposal. The evaluator enters into a dispute with the proposers.

- Please re-write your comments into the form: "It is not convincingly explained how tumour cells that cannot be longer targeted with antibodies due to loss of surface receptor expression will be treated..."
1.1. Clarity and novelty of long-term vision, and ambition and concreteness of the targeted breakthrough towards that vision

Example of a remote evaluator comment

"The proposal addresses the scope of the working program H2020-FETOPEN-2017-RIA. The scientific breakthrough is excellent. The targeted technologic breakthrough is comprehensive and detailed and the objectives are well-formulated and very good. The long term vision of the proposal is clearly expressed, concrete and focused and the need for the proposed technology and development is clear."
Request for modification

- The comment is based on general statements which are not substantiated, missing clear reference to the proposal.

- The comments discuss the appropriateness of the proposal to the scope of the call.

- Please indicate which is the targeted breakthrough and provide specific details to explain why the project has a long-term vision.

- Please also remove your opinion regarding whether the proposal fits or not the scope of the call, you will find further in the IER the place where to discuss that.
1.2. Novelty, non-incrementality and plausibility of the proposed research for achieving the targeted breakthrough and its foundational character.

Example of a remote evaluator comment

"The ambition is correct, proposing a free wireless network by using light. The multi-user target with handover function is ambitious but the solution mentioned by the consortium is convincing. The foundational character is good."
Request for modification

➢ The comment is difficult to understand.

➢ It is based in statements which are not substantiated.

➢ Please explain clearly if you consider that the proposal is novel, plausible and foundational and provide specific details to explain why.
1.2. Novelty, non-incrementality and plausibility of the proposed research for achieving the targeted breakthrough and its foundational character.

Example of a remote evaluator comment

"This is a large-scale highly ambitious project, aimed at development of theory and pilot implementation in real-world commercial setting. Results may have wide applications in security surveillance in different public places, large commercial enterprises, analyzing people’s behavior".
Request for modification

- The comment discusses about the impact of the proposal, explaining the potential applications.

- The foundational character has not been discussed.

- Please move to the corresponding sub-criterion, comments related to impact.

- Please comment on the foundational character.
1.3. Appropriateness of the research methodology and its suitability to address high scientific and technological risks.

Example of a remote evaluator comment

"Research methods that will be used are neither listed nor described. The interplay of multiple disciplines that underlies the proposal is very generic. The proposed trial-error methodology is not appropriate to such project."
Request for modification

- The second statement comments the interdisciplinarity of the proposal.

- The third comment, about the methodology, is not well substantiated.

- Please discuss about the interdisciplinarity of the concept in the appropriate sub-criterion.

- Please explain why the methodology is not appropriate.
1.3. Appropriateness of the research methodology and its suitability to address high scientific and technological risks.

Example of a remote evaluator comment

"The research methodology is appropriate. Different tasks are covered by scientifically well designed approaches. The scientific and technological risks are appropriately approached."

score: 5
Request for modification

- The comment is too generic, please give evidence from the proposal inasmuch the methodology is appropriate. The comment in its actual form could stand for any given proposal.

- You have to explain also if the methodology is suitable to address risks (is it adaptable?). All explanations on risk assessment and mitigation, should be in 3.1.
1.4. Range and added value from interdisciplinarity, including measures for exchange, cross-fertilisation and synergy.

Example of a remote evaluator comment

"As an emerging technology, the proposal needs to have several skills. This need for inter-disciplinary is well describe and pertinent: wireless propagation, optical module and communication network skills."
Request for modification

- The comments is merely descriptive and not very clear.

- The range of skills if fairly narrow in order to talk about interdisciplinarity.

- Please assess the interdisciplinarity necessary for the realization of the research idea and the "distance" between the disciplines involved.

- Please provide judgement and avoid using purely descriptive statements.
1.4. Range and added value from interdisciplinarity, including measures for exchange, cross-fertilisation and synergy.

Example of a remote evaluator comment

"The team includes researchers at academic institutions and industry, ranging from biomedicine, to cellular and molecular biology, surface chemistry, (bio)physics, optics, material science, and mechanical engineering. There are excellent opportunities for cross-fertilisation and synergy."
Request for modification

- The provided assessment concerns the proposal team, not the interdisciplinarity of the research idea.

- Please assess to what extent the main idea requires involvement of knowledge and methodology from the different disciplines. Please comment also on the point how these disciplines are intertwined and how the ideas from these disciplines support the scientific breakthrough.
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**Threshold:** 4/5
**Weight:** 60%

**Threshold:** 3,5/5
**Weight:** 20%

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1. Importance of the new technological outcome with regards to its **transformational impact** on technology and/or society

- Is the long-term technological outcome **clearly defined**?

- Is the transformational impact on technology, on society or on both convincingly argued?

- It is not sufficient to have just a scientific impact based simply on peer reviewed publications!
2. Impact on future European scientific and industrial leadership, notably from involvement of new and high potential actors.

- Does the proposal seek to involve new actors, who are usually underrepresented (e.g. junior researchers, female or male researchers in specific disciplines)

  → HOWEVER, gender balance is not an evaluation criteria

- High tech SMEs

  → HOWEVER, presence of SME is not mandatory
3. Quality of methods and measures for achieving impact beyond the research world and for establishing European thought leadership, as perceived by industry and society.

- Are the "standard" measures (scientific publications, website) properly described and planned?

- Does the proposal go sufficiently far beyond the "standard" measures? For example, are there additional measures, based on new media included?

- Is it clearly explained how the dissemination measures, communication activities and the plan for exploitation of results would support achieving the expected impact?
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2.1. Importance of the new technological outcome with regards to its transformational impact on technology and/or society.

Example of a remote evaluator comment

"The neuroscience experiment should provide useful incremental progress over important scientific questions related to understanding human perspective taking.

As experimental scenarios with the robots appear rather artificial and remote from real-world human-robot interaction contexts, it will be challenging for the project to have significant technological impact".
Request for modification

- Please rephrase your comment and remove the term "should" because it is not sufficiently justified on the basis of the proposal description and may lead to some misunderstandings.

- Specify which and how the experiments and technological approaches have an impact on society and/or economy.
2.1. Importance of the new technological outcome with regards to its transformational impact on technology and/or society.

Example of a remote evaluator comment

"The project is unlikely to transform either technology or society in any substantial way. This does not mean that the results of the project are not useful, but the overall impact will be minor".
Request for modification

- The provided assessment is unsubstantiated. Please justify the assessment given on the basis of the analysis of the long term technological outcome and its transformational impact on society/technology, as described in the proposal.
2.2. Impact on future European scientific and industrial leadership, notably from involvement of new and high potential actors.

Example of a remote evaluator comment

"No industrial connection is included in the proposal. The early stage of the work makes this connection difficult. The proposal mentions that "...companies and industrial partners will be involved at a later stage of the project...” although no industrial partner is involved at any stage"
Request for modification

➢ The statement provided does not include any assessment, please add it, bearing in mind that inclusion of industrial partners is not compulsory in FET OPEN.

➢ Please provide assessment also on the basis of the proposal description in relation to the inclusion of junior researchers or other potential actors for empowerment.
2.2. Impact on future European scientific and industrial leadership, notably from involvement of new and high potential actors.

Example of a remote evaluator comment

"As said above, the specific contributions of this proposal with respect to its impact are not well elaborated and are rather very general, so it is not clear how the empowerment of new actors would result"
Request for modification

Double punishment

- Please do not repeat (and cite) previous comments.

- Assess in this subcriterion only whether the proposal description foresees the empowerment of new and high potential actors (junior researchers, SMEs, start ups, etc) towards future technological leadership.
2.3. Quality of methods and measures for achieving impact beyond the research world and for establishing European though leadership, as perceived by industry and society.

Example of a remote evaluator comment

"The quality of measure is good. The dissemination process is precise and very good with scientific publication, workshop and conference name. The project could have intellectual property results and there is no standard body contribution mentioned"
Request for modification

The provided comment is unclear and unsubstantiated:

- Please integrate an objective and justified assessment given on the basis of the level of quality of the measures presented in the proposal to achieve the impact.

- Please remove the wording "could" as it has been stressed in the handout that it is inappropriate.
2.3. Quality of methods and measures for achieving impact beyond the research world and for establishing European though leadership, as perceived by industry and society.

Example of a remote evaluator comment

"Classical dissemination measures will be taken including paper and communication. IPR will be generated following European Community proposed rules."
Request for modification

- The provided comments are generic and lack the specificities of the proposal description.

- Please provide an assessment duly justified based on the analysis of the proposal description against the subcriterion 3 of Impact criterion, e.g.:
  
  - Is there a forecast in terms of communication to peers and in terms of communication to general public?
  
  - Is there something that looks like an exploitation perspective?
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**Threshold: 4/5**
**Weight: 60%**

**Threshold: 3,5/5**
**Weight: 20%**

**Threshold: 3/5**
**Weight: 20%**
1. Soundness of the workplan and clarity of intermediate targets.

- Is there a clear description of the tasks that will be performed, with specific deliverables allowing the verification of the execution of the tasks? Are there well defined work packages with relevant interdependencies among them? Is the time-dependence of the different tasks meaningful and convincing?

- Are the intermediate targets (milestones) properly defined and timely? These should be major achievements serving as verification points if the work should continue according to the original plan or alternative paths should be followed.

Note: It is very important to remember that the work plan, described in the proposal will become the Description of Action (DoA) in case the proposal is selected for funding!
2. Relevance of expertise in the consortium.

- Is the expertise in the consortium broad enough in order to tackle all proposed tasks and is it of high enough quality?
- Is the interdisciplinarity of the ideas in the proposal (if present) properly reflected in the composition of the consortium?
- Is the consortium well-balanced, without redundancies?
3. Appropriate allocation and justification of resources (person-months, equipment).

- Do the person-months allocated correspond to the proposed tasks to be performed?

- Is the necessary equipment present or properly described and budgeted?
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3.1. Soundness of the workplan and clarity of intermediate targets.

Example of a remote evaluator comment

"Perfect structured, containing useful deliverables, clearly defined milestones and interacting WPs. The objectives are specific, measurable, relevant and time-bound."

[SCORE: 4]
Request for modification

- Please, substantiate your comments with evidence from the proposal; provide more specific comments and better clarify the strengths and weaknesses of the workplan, project periods, tasks and deliverables based on their description in the proposal.

- Please, assess whether the milestones are realistic and timely defined.

- Quality of objectives should be judged at criterion 1.3.

- The score and the comments should be aligned.
3.1. Soundness of the workplan and clarity of intermediate targets.

Example of a remote evaluator comment

"This project is proposed to be executed by 5 partners in 7 work packages. The work plan structure and envisaged procedures are well described. The milestones and deliverables are coherent and well described being in line with the project objectives."

[SCORE: 3.5]
Request for modification

- "5 partners in 7 work packages" is a neutral statement with no value added to the evaluation; please provide your clear assessment (is it good enough? is it bad? Etc.)

- The provided comments (in particular the 2nd and 3rd sentences) are generic and do not reflect enough the specificities of the proposal.

- Please, provide clear evaluation statements on the strengths and weaknesses of the work packages, project periods, tasks and deliverables based on their description in the proposal and against the specific objectives.
3.2. Relevance of expertise in the consortium.

Example of a remote evaluator comment

"The coordinator is a senior researcher with 34 peer-reviewed journal publications, 3 patents and 1 book contribution. It is surprising to see that the coordinator has only 2 researchers as staff involved while the other participants have 5 or 6 involved researchers. In general, a question mark exists concerning the implication of some partners in some tasks. As described above the proposal lacks interdisciplinarity at the ideas level and so does the consortium."

[SCORE: 4.5]
Request for modification

- Clearly assess whether the PI's expertise is relevant for the project; the statement "...34 peer-reviewed journal publications, etc" does not clearly present the expert opinion about the expertise of the coordinator.

- The interdisciplinarity of the research idea should be judged under the Excellence criterion; please do not comment on it here to avoid double penalization.

- Please, clearly assess if the research idea's interdisciplinarity is properly reflected in the consortium composition and if it is well-balanced, without redundancies by providing specific evidence.

- Please, comment on allocation of resources under the relevant sub-criterion (3.3).

- Please, avoid emotional statements such as "it is surprising"

- Please make specific comments and avoid to use "In general..."

- Please, ensure consistency between the comments and the score (4.5. seems to high for the given comments).
3.3. Appropriate allocation and justification of resources (person-months, equipment).

Example of a remote evaluator comment

"Overall budget is comprehensive, but I was puzzled by the large number of person-months, which in some cases goes up to 156 for 36 research period (WP4) and comes to all together 1131 person-months, which cannot be entirely justified by WP description."

[SCORE: 3.5]
Request for modification

- The comments are not clear enough; if you consider the effort allocation exaggerated and imbalanced, please justify in relation with the proposed tasks.

- Please, rephrase avoiding the use of emotional statements such as "I was puzzled."

- The overall budget is not a direct subject for evaluation.
3.3. Appropriate allocation and justification of resources (person-months, equipment).

Example of a remote evaluator comment

"The allocation and justification of resources are appropriate. The proposed person-months correspond to the proposed tasks. The proposed budget is comprehensive and realistic for achieving the objectives, including the requested equipment."

[SCORE: 4]
Request for modification

- Please, be more specific and substantiate your judgement by providing specific reference to the proposal. Your comments are too generic.

- Please, ensure consistency between comments and score. Currently it is difficult to judge if the score is appropriate.
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Additional info (1)

**Operational capacity** – reflected in the score for Criterion 3

(Implementation)

Basic operational capacity to carry out their proposed activity(ies) based on the information provided:

- Curriculum Vitae or description of the profile of the applicant
- Relevant publications or achievements
- Relevant previous projects or activities
- Description of any significant infrastructure or any major items of technical equipment

If the applicant lacks of operational capacity, please, make comments and score the proposal without taking into account this applicant and its associated activity(ies)
**Additional info (2)**

- **In/out of scope** – not in terms of topics; reflected in the scores for Criteria 1 OR 2

- **Ethics assessment** – not part of the evaluation

  Please comment (if applicable) on the use of hESC in the dedicated section

- **Horizon 2020 Open Research Data Pilot** – not part of the evaluation
REMEMBER!

Don't introduce comments regarding any of the above 4 points under ANY subcriterion
Countries whose entities are eligible for funding

- **Member States** of the European Union, including their overseas departments and outermost regions.

- **Associated Countries** – Iceland, Norway, Albania, Bosnia and Herzegovina, FYRM, Montenegro, Serbia, Turkey, Israel, Moldova, Switzerland, Faroe Islands, Ukraine, Tunisia, Georgia, Armenia

- **Third Countries eligible for funding** – see the 'Annex A - List of countries, and applicable rules for funding'.

- **Exceptionally, other countries if:**
  - Identified in the Work Programme
  - **Essential for carrying out the action.** The participation has clear benefits for the consortium, such as:
    - outstanding competence/expertise
    - access to research infrastructure
    - access to particular geographical environments
    - access to data.
Non-EU/non-Associated countries funding

Only in exceptional cases – *funding might be admissible in case the participation of the given entity is *essential* for carrying out the action*

In those *exceptional cases*, the IER should clearly mention whether funding should be granted or not (dedicated section)

**NB:** when EU funding is NOT granted, this entity must be considered to participate with its own funding.
Outcome of the UK referendum and Horizon 2020: State of Play

Until the UK leaves the EU, EU law continues to apply to and within the UK, both when it comes to rights and obligations. This includes the eligibility of UK legal entities to participate and receive funding in Horizon 2020 actions. Experts should not evaluate proposals with UK participants any differently than before.
Thank you for your attention!