



ERC Starting Grant Proposals for the Autumn 2012 and Spring 2013 Deadlines

Key points for applicants about making ERC Starting Grant Proposals. (This note covers both Starting Grants and Consolidator Grants.)

1. Background

This note focuses on the practical approaches to both encouraging and supporting applications. This note is designed to help potential applicants to read between the lines of the IDEAS 2013 Work programme.

The funding for ERC Starting Grants has been increasing substantially

Deadline	Funding	MEuro
1 st Call	Spring 2007	290
2 nd Call	Autumn 2008	296
3 rd Call	Autumn 2009	530
4 th Call	Autumn 2010	661
5 th Call	Autumn 2011	730
6 th Call	Starters	395 } 910
	Consolidators	515}

There should be about 525 awards announced this year. The increase in the grants for consolidators to up to 2MEuro is reflected in the above financial split and an equal number of Starting Grants and consolidators is expected in the new call – around 290 of each, so a total of 580. This is an increase of just over 10%.

2. Who should apply?

The whole philosophy of the ERC is to encourage ambitious young researchers to either stay in Europe or to return to Europe.

ERC Starting Grants are designed to support researchers (Principal Investigators) at the stage of which they are starting or consolidating their own independent research team or, depending on the field, establishing their independent research programme. The scheme will support the creation of independent and excellent new individual research teams and will strengthen others that have been recently created.

The objective is to provide appropriate and adequate support excellent researchers, whatever their nationality, located in or moving to the EU Member States and Associated Countries. The ERC is particularly keen to encourage excellent proposals, which involve the establishment of a new research activity in the EU or the associated countries by a Principal Investigator who is moving from a third country into the EU or the associated countries.

The aim is to fund projects carried out by individual teams, which are headed by a single **Principal Investigator (PI)** and, as necessary, include additional **team-members**. The composition of the research team is flexible, team members may be of any age and any nationality. Commonly, it involves researchers from the Principal Investigator's research group or from the same organisation as team members. However, depending on the nature of a project the research team may also involve team members from other research organisations situated in the same or a different country (see paragraph 1.1.6). In certain fields (e.g. in the humanities and mathematics), where research is often performed individually the "team" may consist solely of the Principal Investigator.

This is what the ERC itself says about who should apply:-

1.1.1 Who could be a competitive candidate for the ERC Starting Grant?

A competitive PI is expected to have already shown the potential for research independence and evidence of maturity including producing independently **at least one important publication without the participation of their PhD supervisor**. Applicants should also be able to demonstrate a promising track-record of early achievements appropriate to their research field and career stage, including **significant publications (as main author)** in major international peer-reviewed multidisciplinary scientific journals, or in the leading international peer-reviewed journals of their respective field. They may also refer to monographs or demonstrate a record of invited presentations in well-established international conferences, granted patents, awards, prizes etc.

Applicants are encouraged to evaluate their track-record and leadership potential against the above-mentioned benchmarks that have been adopted by the Scientific Council, in order to decide for themselves their likelihood for success, thus avoiding to invest effort in proposals that are very unlikely to succeed.

The evaluation panels will assess the applicants taking into account the specific stage of the research career they are at the time of the application.

3.The key evaluation criteria

There are the two main criteria for the award ERC starting grants

[1] The quality of the PI, largely as reflected by the quality of their publications.

[2] The quality of the Research Proposal

Successful candidates have to score highly under both criteria. An outstanding score on the project does not compensate for a not quite so good score for the CV of the PI. The capability of the PI is crucial as these are very much personal awards designed to boost the careers of young scientists. So, the personal capability to deliver is as important as having ambitious ideas for your research.

The results of the 2011 submissions are not known in full detail yet, but candidates needed to score above 87% overall to get an award.

It is clear that the evaluation criteria are being applied in rather different ways to the two different categories of candidates in the most recent round where the categories were:-

- 2 up to 7 years post PhD award – the starters
- over 7 and up to 12 Years post PhD award - the consolidators

4. Differences in profiles within the starters and consolidators categories

ERC Starting Grant - Research Career stage

Starting and Consolidator Grants

Special requirements apply to Principal Investigators applying to the Starting and Consolidator Grants based on the date of award of his/her first PhD (or equivalent doctoral degree¹).

For the Starting Grant the Principal Investigator shall have been awarded his/her first PhD **at least 2 and up to 7 years prior to the publication date of the call for proposals of the ERC Starting Grant.**

For the Consolidator Grant the Principal Investigator shall have been awarded his/her first PhD **over 7 and up to 12 years prior to the publication date of the call for proposals of the ERC Consolidator Grant.**

The reference date towards the calculation of the eligibility period should be the date of the actual award according to the national rules in the country that the degree was awarded.

However, the effective elapsed time since the award of the first PhD can be reduced in the following properly documented circumstances.

For maternity, the effective elapsed time since the award of the first PhD will be considered reduced by 18 months for each child born **before or after** the PhD award. For paternity, the effective elapsed time since the award of the first PhD will be considered reduced by the actual amount of paternity leave taken for each child born **before or after** the PhD award.

For long-term illness², clinical training or national service the effective elapsed time since the award of the first PhD will be considered reduced by the actual amount of leave taken for each incident, which occurred **after** the PhD award.

The elapsed time since the award of the first PhD should not in any case surpass 11 years and six months for applicants to the Starting Grant and 16 years and six months for applicants to the Consolidator Grant.

There are obvious major differences in the research backgrounds of potential applicants even within the starter group given the range of over 2 to up to 7 Year post-PhD experience that they can have. A 3-year starter will have had significantly less time to build up research funding than a 6 year post-PhD starter.

Similarly, a consolidator in the 7 to 9 post-PhD range is very different from a consolidator in the 10 to up to 11 years of post-PhD range. Some of the latter may be close to being

¹ See ERC Scientific Council's note on 'PhD and Equivalent Doctoral Degrees' at Annex 9, including specific provisions for holders of medical degrees.

² Over ninety days.

Advanced Grant candidates. A year 11 consolidator will be proposing a research programme that he or she will be leading up to 16 years since completing their PhD - so they are well in to their research careers.

There have been discussions in different ERC selection panels within each domain on what % levels of commitment to the ERC project are optimal for these different sub groups within both the starters and consolidators. The way in which individual proposals are presented need to take this into account. It has implications for the tone of the proposals and for practical aspects such as the level of time commitment that is most appropriate in different circumstances. Younger starters will be well above the minimum, while consolidators will usually be significantly closer to the 50%.

5. The Evaluation Process

- **1 STAGE SUBMISSION**
- **2 STAGE EVALUATION PROCESS**

Who will be the reviewers for your Stage 1 proposal?

You won't know for sure. The panel memberships will be shaken up this year because two sets of panels that met in alternate years are now going to be split between Starting grants and consolidators and new members introduced, There are also likely to be two new panels – one each in LS and SH. The PE panel structure will remain the same with its 10 panels.

You can see the type of person used in previous years. They are all very experienced researchers.

What does a typical panel look like?

LS3 Cellular and Developmental Biology: cell biology, cell physiology, signal transduction, organogenesis, developmental genetics, pattern formation in plants and animals.

LS3_1 Morphology and functional imaging of cells

LS3_2 Cell biology and molecular transport mechanisms

LS3_3 Cell cycle and division

LS3_4 Apoptosis

LS3_5 Cell differentiation, physiology and dynamics

LS3_6 Organelle biology

LS3_7 Cell signalling and cellular interactions

LS3_8 Signal transduction

LS3_9 Development, developmental genetics, pattern formation and embryology in animals

LS3_10 Development, developmental genetics, pattern formation and embryology in plants

LS3_11 Cell genetics

LS3_12 Stem cell biology

It has **14 panel members covering 12 sub-topics**

Typically three of these will be assigned to each proposal for that panel and asked

to provide an initial scoring that determines whether you get through to stage 2.

Your extended synopsis has to “speak” to three people only one of whom will be close to your area. Keep this in mind when writing the 5 pages.

For the Stage 2 evaluation a further three external experts will be appointed for a list of over 2000 experts who have been invited to take part in this process by the ERCA. These people have been selected in advance and agreed to contribute.

Exclusion of reviewers

Applicants can nominate three specified persons to be excluded from the evaluation of their proposal.

This is new for all Starting grants in ERC -2013.

§ The concerned persons will be excluded from the evaluation of the proposal assuming that the ERCEA is still in a position to evaluate the proposal properly.

§ Exclusion may concern any independent expert, including the panel chair, panel members as well as remote referees.

§ Excluded panel members will be informed and these cases that will be treated as a normal conflict of interest.

Such a request will have to be done at the time proposal submission in the Part A (the administrative forms). Applicants will have to specify one of the following reasons:-

1. Direct Scientific Rivalry;
2. Professional Hostility;
3. Similar situation, which would impair or put in doubt the objectivity of the potential evaluator.

6. Proposal Preparation Tactics

So what kind of characteristics makes potential candidates “stand out from the crowd” in the Stage 1 of the ERC evaluation process?

The following comments are based on features of their CVs that most consistently emerged as being important to the reviewers. These are the types of features that tended to be most regularly positively commented on in the Evaluation Summary Reports of successful applicants.

[1] Gaining either their Masters or PhD degrees cum laude/with distinction.

Not essential, but useful. About 30% of successful applicants have met this informal criteria. This of course means that 70% succeeded without having such additional distinctions.

[2] Having done either a PhD or a first post-doc at a European university other than the one that they got their Masters or Bachelors degree.

This is not essential and a good number of awards are made to applicants who had developed their careers within a single university or within their home country - other factors about the quality of their work then come into play and more than compensate for a lack of mobility.

[3] Having done a PhD or a post doc with a leading group at a well-known university in the US.

[4] Having had a Marie Curie or EMBO or CERN Post Doc or other leading national fellowship shows up on the CVs of a quite a number of successful ERC Starting Grant applicants. *(A significant number of these fellows have gone on to get ERC Starting grant awards)*

Two or more of these features apply in around half of successful proposals in the first two rounds in 2007 and in Autumn 2008, when there was just the single category of “Starters”.

[5] Having begun to establish a research group.

Even in the first two rounds of Starting Grants, before consolidators were recognized as a separate category, there was a clear differentiation between starters in the second to fourth years of post PhD research and those in later years with six, seven, eight and latterly up to 10 years of post doc experience.

Typical groups could consist of 2 post docs, from two to four PhD students plus masters/undergraduates.

The closer the candidates were to being a consolidator the more significant their embryonic group might be.

The exceptions to this are those researchers who are in the process of returning to European Institutions from the US or other countries outside Europe.

In the 2009 call, the new category of consolidators had to be seen to have a reasonable size group to consolidate and to fill capability gaps during the consolidation of their groups. This has been reflected in the third, fourth and fifth call decisions.

There have been many successful applicants who have progressed from undergraduate to PhD and to Post doc through either just one university or through two universities in their home country and have now been applying to them as their host institutions for the ERC.

It is just a subjective judgment, but those who might be termed mono-university applicants (i.e. those who had not moved for any steps in their career progressions) seemed to have to have even better publication records in order to justify their overall credibility.

[6] Mentoring of research students - Reviewers pay considerable attention to this, particularly for those applying as potential consolidators.

[7] Publications are used as the main indicator of research capability of applicants – the reviewers are particularly looking for a visible progression in seniority of authorship and in the impact level/factors of the journals in which the articles appear.

The reviewers have been showing a preference for candidates with fewer, but stronger papers, as compared with those that have more papers in which the results are spread more thinly. This raises issues about personal publishing strategies. In many countries the national funding agencies have also been moving in the same direction – quality over quantity.

As stated in the Guide they are particularly looking for papers produced without the involvement of the applicant’s PhD supervisor. This is important for the early starters and progressively more important for consolidators.

The “tribal customs” of different fields vary in terms of the journals that are considered representative for mainstream articles and those that are considered possible for that

field for reporting more significant findings. The ERC reviewers are fully aware of the ground rules in their respective fields, so the first questions are:-

'Which journals are the normal outlets for articles in this field?'

Have the starters got some "independent" articles into any of these?

For both starters and, more particularly, consolidators - *Have they started to have publications appear in journals that have a higher impact than the standard journals for their fields?*

It is pretty clear that consolidators will be expected to be making progressively more frequent appearances in higher impact journals.

For starters the questions can vary: -

Has an "early starter" been a supporting author on a high impact article that was driven by a leader in the field?

What was the early starter's personal contribution to the science reported in these articles?

Is he or she accepted as a collaborator by a research leader in the field elsewhere in Europe or the US?

The level of collaboration /personal network of research contacts looked for varies both between starters and collaborators and between different levels of experience within these two categories.

So, a lot of factors contribute to the final score achieved and it is important to handle these as well as possible in the proposals.

7. Helix support for ERC applicants

Helix provides universities and other institutions with very practical "hands on" seminars for groups of potential applicants. Personal meetings usually follow this with each candidate to talk through their CV's and their individual project ideas.

Helix works with potential applicants ranging from at a very early stage of assessing their own options on timing for an ERC proposal - this can be quite a tricky decision for those on the borderline between starters and consolidators.

[Helix can supply catalogues of abstracts of successful starting grant proposals by panel for the first two calls as background and has an extensive index of Evaluations covering virtually all panels that have useful examples of typical reviewer comments that give insights into what reviewers are really looking for. The reviewers are carefully chosen for their expertise and are familiar with the traditions and tribal customs of their own fields.]

We will discuss proposal outlines and support applicants right through the proposal preparation process with detailed comments on both early drafts through to reviews of their near final drafts.

We will also assist those getting through to the interview by reviewing interview presentations and taking part in mock interview panels.

We also provide similar services to ERC Advanced Grant applicants in a way that is appropriate to meeting the rather different support requirements of senior researchers.

8. The structure of the Proposal

Please be very aware that this is a one-stage submission process and a two stage evaluation process.

Instructions for completing 'Part B' of the proposal

IMPORTANT NOTICE: Please be aware that at step 1 of the evaluation only Section 1 (B1) is evaluated by the panel members, while at step 2 both Sections 1 and 2 (B1 and B2) are evaluated.

When drafting Part B, Section 1 (B1) PIs should pay particular attention to the extended synopsis (Section 1d) and should not consider it as simply complementing Part B Section 2 (B2). It is important that the extended synopsis contains all relevant information, including the feasibility of the scientific proposal since the panel will only evaluate Part B Section 1 (B1) at step 1. Please note that at step 1 the panel has no access to Part B Section 2 (B2).

Part B1 - Section 1

It is likely that the scientific leadership page asked for in previous years will not be included this year. If this change is confirmed, we would still advise that applicants include some elements of this in the form of a research statement.

a. Curriculum Vitae (max 2 pages):

In addition to the standard academic and research record, the CV **should include a succinct 'funding ID'** which must specify any current research grants and their subject, as well as any ongoing application for work related to the proposal. This facilitates the proper assessment of the proposal and the granting process in case the proposal is retained for funding.

It is important that the PI should also report on any significant career breaks. Peer reviewers will take it into consideration during the assessment of the quality of the PI and his/her career progression.

This CV is a fairly standard section but you should aim to make it as informative as possible.

In the funding ID it can be useful to give indications of the kinds of results hoped for from existing grants rather than a list of titles and amounts.

In most areas applicants will be expected to have some existing grants that run into the period of the ERC award and applicant will also be expected to continue to make new applications during the five years to secure their group's future beyond the completion date of the ERC funding.

b. Early achievements track-record (max 2 pages):

1. Publications in major international peer-reviewed multi-disciplinary scientific journals and/or in the leading international peer-reviewed journals, peer-reviewed conferences proceedings and/or monographs of their respective research fields, highlighting five representative publications, those without the presence as co-author of their PhD supervisor, and the number of citations

(excluding self-citations) they have attracted (if applicable).

2. Granted **patent(s)** (if applicable).

3. **Invited presentations to peer-reviewed, internationally established conferences** and/or **international advanced schools** (if applicable).

4. **Prizes and Awards** (if applicable).

The evaluators strictly enforce the requirement for publications without an applicant's PhD supervisor as co-author. This can present problems if there is a departmental tradition of senior members of staff appearing on virtually all publications emerging from their groups regardless of whether or not they have made a direct contribution.

The evaluators pay a great deal attention to the publication records of applicants and their clearly emergence as independent researchers. It is emphasised in the latest documentation that:-

“A competitive Starting Grant Principal Investigator must have already shown the potential for research independence and evidence of maturity. For example, it is normally expected that applicants will have produced at least one important publication without the participation of their PhD supervisor.”

The “tribal customs” of different fields vary in terms of the journals that are considered representative for mainstream articles and those that are considered possible for that field for reporting more significant findings.

There is a huge variation in what constitutes a high impact factor journal in different fields. In some disciplines as diverse as applied mathematics and anthropology impact factors of 3.5 are very high. In other fields, such as condensed matter physics, consolidators might be expected to have regular publications in Physics Review B (IF 3.5) and even a few breakthrough publications in Advances in Physics (IF 19.6) or Nature Materials (IF 29.6).

There is no one single standard level of publications that applies across all disciplines.

The expert reviewers chosen by the ERC are fully aware of the “publications landscapes” in their respective fields, so the first questions are: -

“Which journals are the normal outlets for articles in this field?”

Have the starters got some “independent” articles into these?

For consolidators have the reviewers started to have publications appear in journals that have a higher impact than the standard journals for their fields.

It is pretty clear that consolidators will be expected to be making progressively more frequent appearances in higher impact journals.

For Starters the questions can vary: -

Has an “early starter” been a supporting author on a high impact article that was driven by a leader in the field?

What was the early starter’s personal contribution to the science reported in these

articles?

Is he or she accepted as a collaborator by a research leader in the field elsewhere in Europe or the US?

The level of collaboration /personal network of research contacts looked for varies both between starters and collaborators and between different levels of experience within these two categories.

So, a lot of factors contribute to the final score achieved and it is important to handle these aspects directly in the proposals.

The evaluators are very well aware that different subject areas have their own culture, traditions and their own distinct range of representative journals. They know that some areas do not necessarily have high-level journals that are natural publication outlets for them. While here are a lot of *Nature* spin-outs, there are still areas of science and engineering without normal access to such journals.

There is no real equivalent to *Nature* in many of the social sciences and humanities. In many arts and social sciences fields the publications position is still very fragmented and even the ranking of journals can be quite difficult. The reviewers will know the "publications landscape" within their fields.

Include either the journal impact factor or their ranking within their respective field for all articles listed in the Early Achievement section. The ERC reviewers also look at the number of citations in a way that is appropriate to the field.

If you are at all unsure about any of this publications aspect, we will be happy to give you specific advice directly relevant to your specific field.

2. Granted patent(s) (if applicable).

Patents can be a useful additional indicator of originality in appropriate areas.

In relevant areas is useful to be able to show that some of your patents have been used by other scientists or licensed to companies.

3. Invited presentations to peer-reviewed, internationally established conferences and/or international advanced schools (if applicable).

For those of you who have been doing research for more than 5 or 6 years post their PhD award, this may well have to be a selection of most relevant presentations related to the announcement of key results of either you as the main instigator or of groups that you have worked in.

4. Prizes and Awards (if applicable).

A summary of this data needs to be introduced in the administrative form A1 of the application (see administrative forms at the end of this part).

It is important that applicants should report on any significant career breaks.

Can a PI who is more than seven years past the Ph.D. still be assessed as a "starter" ?

Exceptionally, applicants who have experienced significant career breaks may draw them to the attention of the panels for consideration. The first event that would warrant a change of consideration from "consolidator" to "starter" needs to have taken place *prior* to the maximum seven year limit after Ph.D. for "starters". In these cases clear

supporting material (official documents) need to be uploaded with the application under "Extra Annexes". Please see Box 3 for further details on streaming and Box 2 for further details on eligibility extension).

The responsibility lies with the PI to make a clear case for such a change in career stage consideration (Part B – Section 1a (B1) of the application (scientific leadership profile).

The final decision for such a change in career stage status will be subject to the judgment and responsibility of the panel.

Note: Some men applying have encountered problems, because they did not have good documentary evidence of the duration of the paternity leave that they had actually taken. It cannot just be having had some time off, it has to be formally agreed and documented paternity leave.

Extended Synopsis

c. Extended Synopsis of the scientific proposal (max 5 pages)

The Extended Synopsis should give a concise presentation of the scientific proposal, including the scientific feasibility of the project, with particular attention to its groundbreaking nature and how it may open up new horizons or opportunities for research. Describe the proposed work in the context of the state of the art of the field. References to literature should also be included. **It is important that this extended synopsis contains all relevant information including the feasibility of the scientific proposal since the panel will only evaluate Part B Section 1 (B1) at step 1.**

This is the primary document about the project in Stage 1 of the evaluation.

In addition to the key references it should also include an indication of the amount of time you intend to commit to this project. This has to be at least 50%

The approach of applicants to writing the Extended Synopsis varies. Some like to write this first as a planning document and then write the 15 page project proposal. Others prefer to write the 15 pages first and then summarise it into the extended synopsis.

Whichever route you choose to adopt is entirely a matter of personal preference, but it is important that you treat the extended synopsis as a *very important document* that should be able to “stand completely on its own feet”. ***This should definitely NOT be a “last-minute cut and paste job” or simply a quickly edited down version of the main proposal.***

This should be written FRESHLY as it is an important document in its own right. If the reviewers do not rate this high enough then they simply will NOT read your full B 2 proposal.

Now for Section B2 – This is the heart of the proposal

Section 2 (B2) a, b, c and d:

The scientific proposal (max 15 pages, excluding Ethical Issues Table and Annex) This part is evaluated only in step 2 of the peer review evaluation.

The project proposal should provide detailed descriptions on the project's aim, planning, execution, and required resources.

a. State of the art and objectives: Specify clearly the objectives of the proposal, in the context of the state of the art in the field. When describing the envisaged research it should be indicated how and why the proposed work is important for the field, and what impact it will have if successful, such as how it may open up new horizons or opportunities for science, technology or scholarship. Specify any particularly challenging or unconventional aspects of the proposal, including multi - or inter-disciplinary aspects.

b. Methodology

Describe the proposed methodology in detail including, as appropriate, key intermediate goals. Explain and justify the methodology in relation to the state of the art, including any particularly novel or unconventional aspects. Highlight any intermediate stages where results may require adjustments to the project planning. In case it is proposed that team members engaged by another host institution participate in the project, their participation has to be fully justified. This should be done emphasizing the scientific added value they bring to the project.

c. Resources (incl. project costs)

It is strongly recommended to use the costing table template to facilitate the assessment of resources by the panels.

The Guide does not give any guidance about the length of the different subsections within the 15 pages and following suggested lengths for the subsections under each main heading are our indicative guidelines based on our experience of assisting nearly 120 successful ERC applicants in the first four rounds:-

State-of-the-art and objectives - Suggested length 2 pages

The objectives of the project, 1 page for a strong direct text on your key scientific objectives to seize the attention of the reviewers

Progress beyond the state of the art - Suggested length 2 pages

Discuss - Any particularly *challenging or unconventional aspects of the project*, including multi - or inter-disciplinary aspects. - **Suggested length 1 page**

Impact of the project such as how it may open up new horizons or opportunities for science, technology or scholarship. - **Suggested length 1 page**

The impact should include both your personal vision about what you would do beyond month 60 if you succeed with everything that you hope to achieve and what other researchers could do after you have created new opportunities or opened new windows through the new knowledge that you will publish during this fellowship.

ii. Methodology - Suggested length 8 pages depending on the other sections

Methodology in the context means both scientific strategy and the methods. The reviewers want to be able to see into your mind as to why you are adopting this particular approach, the concepts that are new and the hypotheses that you wish to test.

In the course of doing this you should also highlight any scientific and technical risks – what are the most challenging parts of the science and why, where are you pushing the existing tools to or beyond their existing limits to gain new data or how much information gain will you achieve through the new tools you will develop

The requirement to give an indication of intermediate results/turning points is important. When might you reach appoint when you might have to adjust your strategy or would make a key advance that would enable you to proceed as planned

Here is an example of some reviewers' comments on a top ranked project. This particular reviewer did this as a SWOT analysis, so you can see both what he liked and what he did not like quite so much. This particular project scored 97%.

Strengths

- *Interesting and challenging goal: Use the mathematical framework developed by the PI and others in combination with numerical simulation to improve the design of shape-memory devices, in particular for biomedical applications.*
- *Carefully thought out work-plan with well interleaved activities, milestones and deliverables at both the mid-point and the end*
- *The soft aspects which are nowadays considered very important in EU proposals are very well covered including multi-disciplinarity, wider impact on human society and relation to ERA priority areas, potential industrial connections and industrial co-funding, personal development, etc.*
- *The proposal builds on well-established connections with a local engineering team, documented through various joint publications*

Weaknesses

- *While the general importance and the overall strategy is well described, the proposal is not very specific in describing how the ambitious goals shall be attacked.*
- *An impressive amount of existing literature is cited, but it was not clear to the reviewer what fundamentally new mathematical ideas the PI has introduced and how these will help to attack the problem. For example, trying to combine the rate-independent approach on gradient flows is surely a good idea but a more specific discussion what the difficulties are in doing this and how the PI plans to overcome those would have helped. Similarly the idea to use analytic insight gained by the PI to improve the numerical simulations and to combine forward numerical simulations with goal driven optimization strategies is good, but a more specific (even if more modest) description what the PI wants to do would have been helpful.*

Here is an example from a successful Life Sciences proposal.

The regulation of precise levels of gene expression, in the complexity of the time and spatial constraints of the eukaryotic genome is the key point of attention in today's molecular cell biology. With the onslaught of high throughput data provision due to technological advances the phrasing of the right, answerable questions requires top-notch computational, statistical and experimental abilities. This candidate unites the two former ones and has thus far has established good links with excellent collaborators with which the experimental validation was delivered. This proposal aims to complete the setup such that he can add more depth to the validating experimentation.

Whole genome approaches to transcription control have abounded, but this candidate properly argues that they are to a large extent phenomenological, at best semi-quantitative and typically have a high noisiness as drawback. Instead, he takes a more focused approach, modelling the interactions of nucleosomes and transcription factors with DNA and generating quantitative output. For this he uses yeast ribosome synthesis and galactose metabolisms as models and heat shock resp. glucose/galactose switch as stimuli. Defining the factor/nucleosome binding by digestion and tiling arrays, and designing 10-12 promoter libraries, each containing promoter/GFP constructs of ca 90 relevant genes and some controls. All with the aim to define the precise sequence/binding dependence and potential cross-interference based on factor/nucleosome concentrations.

The objectives are beyond state of the art, as they will yield specific, quantitative, insights which will lead to better predictions and are probably transferable, with adaptations, to other species.

NB: A criticism is the absence of discussion of potential drawbacks of a modelling approach (e.g. the generality of any model and the potential of (some) artefacts by the unavoidable competition between factor/nucleosome binding on one hand and the digesting enzymes on the other). The candidate has every reason to be convinced of his approach, given his track record and the scarcity of confliction data, but it would have been placed better in perspective were parallel work discussed to some extent at least. (E.g. a recent paper by Lee et al. appears to find the overall yeast genome nucleosome spacing to be not necessarily consistent. This paper has appeared after the submission so it can and must be discussed at the interview).

The work requires a high degree of integration between computational and experimental fields, and a deep insight into statistical modelling, all of which have been amply demonstrated

The work is very innovative and the approach of this candidate has attracted wide attention and support. If this work is carried out, it will have major effect on how gene regulation is perceived and understood.

Here is another example this time from the SSH domain which reflects the considerations that apply in the social sciences.

Reviewer 1

Ground-breaking nature of the research: It may be accepted that the research is altogether innovative in the systematic study of the presence of transnational actors in international institutions. The research proposal should identify the different forms or degrees of this participation as well as the character of these actors as a form of emerging global civil society.

*Potential impact: The growing presence of transnational actors in international institutions shall be decisively better known, both in terms of its causes and of its effects. At the long term the project **could** be the beginning of a relevant centre specialised in international institutions design.*

Methodology: The description of the methodology (essentially comparative) is very detailed in every element (theoretical hypothesis, comparative case studies, quantitative analysis, work plan, deliverables). The five international institutions selected for the qualitative analysis may aptly offer different examples of forms of participation of transnational actors. It should be considered whether the EU is still to be considered as an international institution.

The quantitative analysis (database) seems rather too wide in its scope, pointing also at multiple dimensions of institutional design. But the project is open in that it could be down scaled (as well as up-scaled).

Reviewer 2

This project deals with an extremely important topic. The project design is clear, ambitious and creative. The author is well acquainted with the research in the field and able to formulate interesting perspectives in the description of the research agenda of the project. He is rather courageous in his ambitions also of including issues of policy relevance. I accept it as important and needed to make qualitative and quantitative comparative case studies of the transnational shift in international institutions, and I have no doubt that the project will lead to interesting results and further the international research in the field. My only hesitation is that it might be too ambitious to cover all the five institutions (or institutional systems) chosen. Yet, even if the project does not live up to all its ambitions, it will still be a very valuable project.

Reviewer 3

Very solid and ambitious proposal. The hypotheses are strong and interesting, methodology will combine theory development and empirical tests. The research proposal is well written. The research questions are clear. The proposal is related well to the existing literature. The research plan starts out from competing theoretical approaches, derives hypotheses from each of these approaches and provides an adequate methodology based upon comparative case studies. Given the limited number of pages available for the PI, the application is in many ways exemplary. However, there is some room for improvement when it comes to further specification of the conditions under which each theoretical approach can be assumed to provide good approximations to the real world.

Key faults in many initial drafts have included:-

Treating the ERC Starting Grant just like any other grant defined by the five years of funding is a tactical mistake. This project should be the launch of the most important phase of your scientific career and should have a brief indication of the vision beyond the five years. What will you be able to do beyond year 5, if you achieve everything you have set out in the proposal?

Not being bold enough – you need to be genuinely assertive about what you hope to do/achieve. Do not hold back, but argue your scientific case well.

Don't be afraid to discuss scientific risks. Risk is good and shows what is most challenging about your research. It also helps to reinforce that you have a real understanding of the current scientific and technical state of the art in your field as discussed earlier in your application.

One of the most important evaluation criteria is; -

High-gain/High-risk balance:

To what extent does the possibility of a major breakthrough with an impact beyond a specific research domain/discipline justify any highly novel and/or unconventional methodologies ("high-gain/high-risk balance")?

Because of space constraints it has only been possible to give these limited examples in this note. Over the past four years Helix has built up a library of ESRs from successful proposals and with bit of luck may have some useful examples that are close to the fields of individual applicants or at least to the panel that they will be targeting. These can sometimes be made available to applicants that we are working with on the basis of an initial outline of their project proposal. *Note. This kind of material can only be supplied with the agreement in advance of the original applicants*

Describe the size and nature of the team, indicating, where appropriate, the key team members and their roles. The participation of team members engaged by another host institution should be justified in relation to the additional financial cost this may impose to the project (please see paragraph 1.1.6 of this Guide). Describe other necessary resources, such as infrastructure and equipment. The resources requested should be reasonable and fully justified in the proposal. If additional funding, above the normal (EUR 1,500,000), is requested for purchase of major equipment or for covering the eligible "start-up" costs for PI moving to the EU or an associated country then this also needs to be fully justified. Specify any existing resources that will contribute to the project. It is advisable to include a short technical description of the equipment requested, a justification of its need as well as the intensity of its planned use.

Specify briefly your commitment to the project and how much time you are willing to devote to the proposed project. Please note that you are expected to devote at least 50% of your total working time to the ERC-funded project and spend at least 50% of your total working time in an EU Member State or Associated Country.

State the amount of funding considered necessary to fulfil the objectives for the duration of the project. This should be a reasoned estimate of the projects costs. Take into account the percentage of your dedicated time to run the ERC funded activity when calculating your personnel costs. Include the direct costs of the project plus a flat-rate financing of indirect costs on the basis of 20% of the total eligible direct costs (excluding subcontracting) towards overheads. Furthermore, include a breakdown of the budget subdivided in personnel costs, equipment and infrastructure, consumables, travel, publication costs, and any envisaged subcontracts. State how the costs will be distributed over the duration of the project. These figures should be summarised in the financial information form A3 as well as in the costing table provided as a template.

The project cost estimation should be as accurate as possible. The evaluation panels assess the estimated costs carefully; unjustified budgets will be consequently reduced. There is no minimum contribution per year; the requested contribution should be in proportion to the actual needs to fulfil the objectives of the project.

The funding now offered for consolidator has been increased to EUR 2,000,000 plus upto an additional EUR 750,000.

Additional funding is only allocated in a relatively small number of cases. The text is very similar for both starters and consolidators

“If additional funding, above the normal, is requested for purchase of major equipment or for covering the eligible "start-up" costs for PI moving to the EU or an associated country then this also ***needs to be fully justified.***”

Those making resubmissions from 2010 or earlier rounds should note that the Research Environment section has been deleted from ERC applications.

However, we would advise that you should make clear indications of any key existing facilities (and their quality), that you will have access to and where interactions with other staff in the host group will be of particular value to you here in the Resources section.

Resources and Budget - Suggested length 1.5 > 2 pages for normal applications.

This section has become significantly more important compared with previous calls- so do not simply follow any examples of successful past proposals that you may have been given. A new approach is needed and trying to save space on this section could cost you a lot of money, so don't do it!!!!

Over the 12 months, I have been talking to some of the panel members informally, whenever I have come across them, about how their thinking has been developing during the ERC-2011 and ERC-2012 reviews. There has been considerable discussion in at least some of the panels about the optimal % of the personal commitment of PIs applying as starters and consolidators.

The panels have started to look for a more sophisticated approach to the planning of resources asked for over the 5 years of the grants. To give some practical examples/illustrations: -

Genuine starters in years 3 and 4 of their post PhD research might be 80% committed to the starting grant project both time-wise and salary-wise in the first two years of their ERC grant, but then it might reduce slightly as they get the chance to built up other research lines funded by other agencies and that will begin to extend their activities beyond month 60. **The panels want to see that the thrust of the PI's ERC research programme is not going to come to a sudden stop, when the ERC funding expires.**

The slightly older starters just into year 5 and below the 6 year cut off may be expected to have more funding already from other sources equivalent to, say, roughly a third of their time and so might start at 65 or 70% and then reduce to around 50% by year 5.

Consolidators on the other hand might start at 60% and then flatten out at 50%, because, by definition they should have something relatively substantial to consolidate and should also have other research responsibilities/projects.

What they don't want to see is absolutely equal time allocations over each of the five years as that implies too much dependence on the ERC and not enough effort being made by the PI to secure the future of the group through getting more funding for both himself and other members of his team.

In essence what the reviewers are looking for is a good research proposal that has a viable exit strategy in terms of building up other strands of funding to secure the future of the group.

There are lots of different permutations and the SH domain is totally different from PE and LS.

Overall this kind of strategy makes good sense from a both an ERC perspective and in ensuring that the PI is planning beyond month 60 so that there is not a financial black hole that he or she will fall into.

This approach does not mean asking the ERC for less money overall as it may, for example, make it possible for the PI to employ an extra PhD student for years 3 to 5. It is not about economizing. It is about showing that you are planning ahead sensibly for the medium term survival of your research group.

d. Ethical and Security sensitivity Issues

- **Ethical Issues** The Ethical Issues Table serves to identify any ethical aspects of the proposed work. This table has to be completed even if there are no issues (simply confirm that none of the ethical issues apply to the proposal).

If any of the ethical issues listed in the Ethical Issues Table in part B section 2 (B2) apply to your proposal", you **must** provide a brief explanation of the ethical issue involved and how it will be dealt with appropriately. Annex 2 of this guide describes the ethics review process and gives guidance on the completion of the Ethical Issues Table. An Ethical Issues Annex template is provided in EPSS, with Section 2 (B2) templates.

Optionally you may wish to include any supporting documentation, such as any authorization you may already have. This will allow a more effective ethical clearance and an accelerated granting process if the proposal is retained for possible funding³⁸.

Please upload this Ethical Issues Annex and any related documents in the 'Extra Annexes Upload' section included in the EPSS tab 'Part B & Annexes'.

PIs need to be aware that no grant agreement can be signed by ERCEA prior to a satisfactory conclusion of the ethical review.

A dedicated website that aims to provide helpful information on ethical issues is available at: http://cordis.europa.eu/fp7/ethics_en.html

- **Security sensitivity Issues** ERC actions may be classified if they are considered as security sensitive. The proposal can be considered security-sensitive for a variety of reasons, most notably: - if it handles or produces classified information, - if some foreground is planned to be classified. In addition, a proposal may also be considered as sensitive, independently of any security classification, if it plans to exchange material subject to transfer or export licensing. If export licences (or intra EU licences) are required for carrying out the planned work, applicants must clarify the requirement to have such export or transfer licences and must provide a copy of export or transfer licences (or of the requests). For further information on security sensitive issues relevant to this Call, see Annex 5 of this guide.

If your proposal is security sensitive, describe (in your description of work) why, which are the participants concerned by the sensitivity and what are the measures foreseen to cope with it. Please annex to your proposal a first version of the Security Aspects Letter (SAL) using the template provided in Annex 5.

Describe also your experience in managing security sensitive projects, if relevant.

Please note that these security related parts of the proposal are not considered as part of the scientific evaluation. These will only be considered in the scrutiny of security sensitive actions.

There are obvious cases where the ethical questions are more complicated than others. Research involving human stems cells is a clear example. This ethics section should be taken seriously.

The ERC may ask for further information if need be. This is a good sign as it means that they are seriously interested in the proposal.

Supporting Documentation

Supporting Documentation

A scanned copy of the following supporting documentation needs to be submitted with the proposal by uploading electronically on EPSS in PDF format using the corresponding template available on EPSS (see Annex 3 of this guide).

The host institution (applicant legal entity) must provide a binding statement that the conditions of independence set out in the supplementary agreement to the ERC Grant agreement are already fulfilled or will be provided to the PI if the application is successful. This document needs to be originally signed, stamped and dated by the institution's legal representative.

The PI should submit scanned copies of documents proving his/her eligibility for the grant, i.e. the PhD certificate (or equivalent degree, see annex 4) clearly indicating the date of award/defence and, in case of an extension of the eligibility period beyond 12 years and/or the career stage change (streaming) has been requested, the relevant documentary evidence.

Official documents can be submitted in any of the EU official languages. Document in any other language must be provided together with a certified translation into English.

Please provide only the documents requested above. Unless specified in the call, any hyperlinks to other documents, embedded material, and any other documents (company

brochures, supporting documentation, reports, audio, video, multimedia etc.) will be disregarded.

A senior representative of the University, ideally the Vice-Rector for Research or the equivalent should sign this letter of support. It should include the formal text suitably adapted to refer to the specific application, plus some comments that show that university supports the proposal within its overall research strategy for the field and that of the host department or centre.

There have been a very few of instances of applicants been declared ineligible in cases of applicants, who are applying about three or four years post PhD award, where the ERC uses the date on the certificate rather than the date of the decision to grant the award of the PhD. Applicants in a situation in which any doubt might arise are advised to double check that the supporting documentation they supply is absolutely clear about the formal date of the award.

9. Choice of Panels to nominate

It is the PI's responsibility to choose the most relevant ERC panel ('primary evaluation panel') for the evaluation of the proposed research. The initial allocation of the proposals to the various panels will be based on the expressed preference of the PI. In the case of interdisciplinary proposals the PI may indicate a 'secondary evaluation panel'. The primary panel will then decide whether the proposal is indeed cross-panel or even cross-domain and if its evaluation requires expertise from other panels.

Despite the initial allocation being based on the preference of the PIs, when necessary due to the expertise required for the evaluation, proposals may be reallocated to different Panels during the course of the peer review evaluation.

Think carefully about the choice of panel!! The ERC will nearly always follow your first choice. In many cases it is pretty obvious, what this should be, but in other cases it is quite difficult. For example some materials projects have been submitted to

PE8 Products and process engineering: product design, process design and control, construction methods, civil engineering, energy systems, material engineering

And would have been better targeted to: -

PE5 Materials and Synthesis: materials synthesis, structure-properties relations, functional and advanced materials, molecular architecture, and organic chemistry.

If you are at all uncertain about which panel/s to nominate then ask for a second opinion.

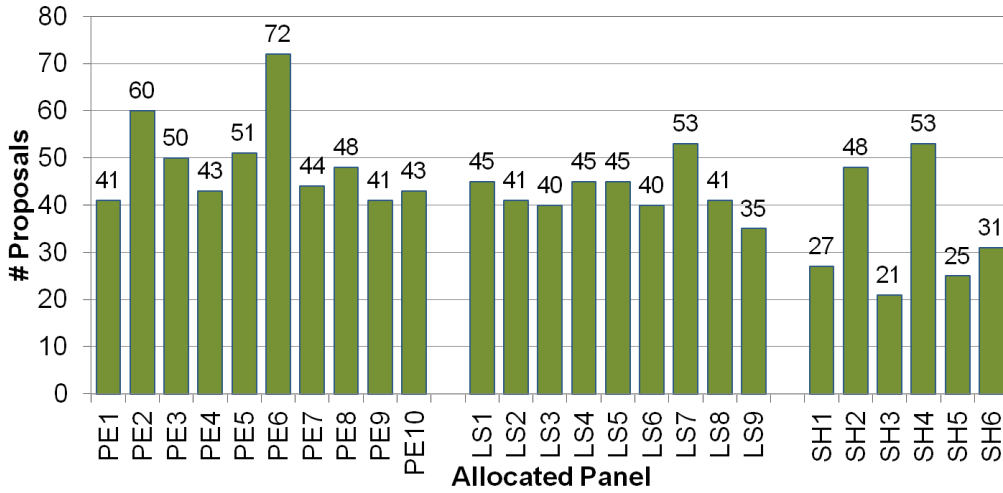
Naming two panels from different areas or domains is a clear indication that you consider your proposal as being inter-disciplinary. About 20 % of Stage 2 applications are referred for inter-panel reviews

10. Getting to interview

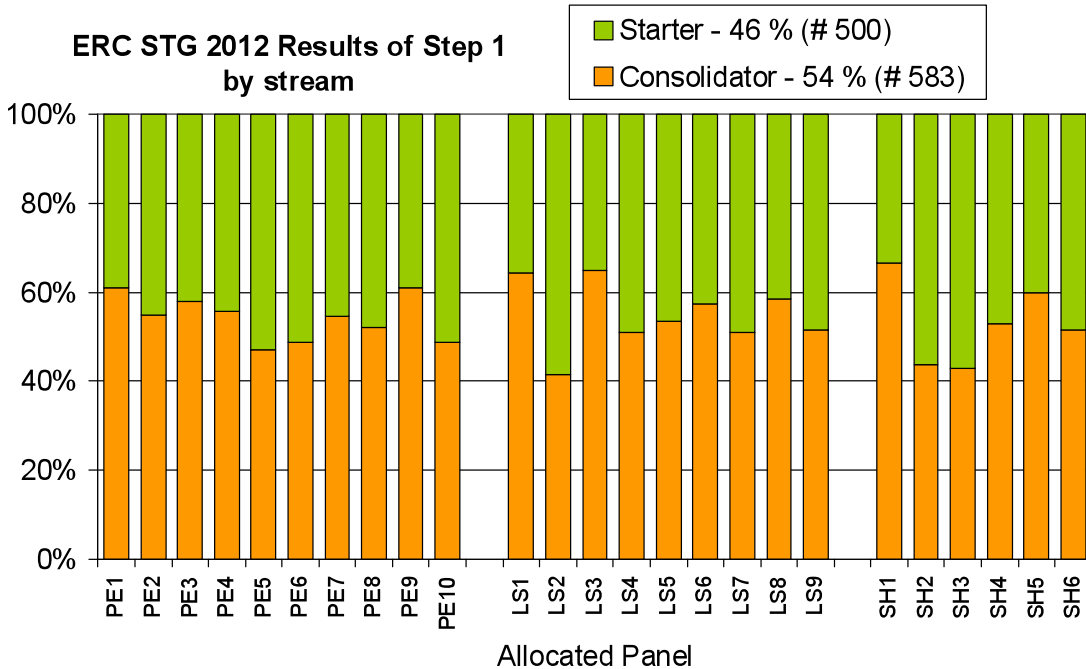
Obviously the short-term objective is to get to interview.

Here are the numbers who got to interview in the most recent call.

**ERC STG 2012 - # Proposals "Passed to step 2"
(# interviews)**



The above were split more or less equally between starters and consolidators and the intention is to have an equal number of starters and consolidators in ERC-2013.



These 1058 proposals should lead to 525 awards.

There is a separate Helix note about how to approach interviews that has been based on the experiences of successful candidates and comments from both retired and current ERC Panel members

11. Timing of getting started

The key to writing a really strong and competitive proposal is to start your preparations in good time. This does not mean long periods of work without a break. There is actually something wrong, if that is happening.

However, you should start the early to allow yourself to have time to think about what you really want to do/achieve in the next five years of your research.

The ERC Starting Grants are a wonderful opportunity and writing the proposals should not be last minute effort.

12. Other questions

It is impossible to cover all the potential questions that applicants may have and we are always happy to answer individual questions during face-to-face meetings or by email.

The key objective of your proposal is obviously to get you through to the Stage 2 Interview. There is a separate Helix note about how to handle the presentation and the interview.

For further information and advice contact your University's EU Research Office or Gavin Thomson at <mailto:gavin.thomson@helix.eu.com>

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Updated 14 June 2012

Gavin Thomson

GT/FC Helix Advisory Services

Annex to Helix Guidance note

Extract from ERC A Starting Grant the Guide for Proposers 2012 version.

Application of criteria

Panels and referees will evaluate and mark numerically the proposals under the criteria of Heading 1: *Principal Investigator* and Heading 2: *Research project*. The evaluation panels will review the level of the requested grant and, as appropriate, suggest adjustments.

Each proposal will receive a mark on a scale of 1 to 4 for each of the 2 evaluation criteria (Heading 1 and 2):

4: Outstanding

3: Excellent

2: Very Good

1: Non-competitive

At the end of each evaluation step, the proposals will be ranked by the panels on the basis of the marks they have received and an overall appreciation of their strengths and weaknesses.

If at the end of step 1 of the evaluation, a proposal is marked below the quality threshold of **2** on either of the two headings, it will not be further evaluated and will not be funded.

If at the end of step 2 of the evaluation, a proposal is marked below the quality threshold of **2** on either of the two headings, it will not be funded.

IMPORTANT

Read these evaluation criteria carefully several times before you start writing.

The main criteria are essentially the same as they have been since the launch of the ERC Starting Grants.

There was one significant change in ERC 2012 in that the phrase “to what extent” has been inserted in several places. This implies that the reviewers are being pushed to be more explicit in some of their judgments and also more quantitative in some aspects.

The following is the extract from the ERC 2012 Guide.

1.3.5 Evaluation criteria

Excellence is the sole criterion of evaluation. It will be applied to the evaluation of both the Principal Investigator and the research project.

The detailed elements applying to the 2 sections of the proposal are specified in the ERC Work Programme 2012 – section 3.10, and reproduced here below:

1. Principal Investigator***Intellectual capacity and creativity:***

To what extent are the achievements and publications of the Principal Investigator ground-breaking and demonstrative of independent creative thinking and capacity to go significantly beyond the state of the art?

To what extent will an ERC Starting Grant make a significant contribution to the establishment or consolidation of independence?

Commitment:

Is the Principal Investigator strongly committed to the project and willing to devote a significant amount of time to it (they will be expected to devote at least 50% of their total working time to the ERC-funded project and spend at least 50% of their total working time in an EU Member State or associated country)? (assessed at step 2)

2. Research project

Ground-breaking nature and potential impact of the research: *To what extent does the proposed research address important challenges at the frontiers of the field(s) addressed?*

To what extent does it have suitably ambitious objectives, which go substantially beyond the current state of the art (e.g. including inter- and trans-disciplinary developments and novel or unconventional concepts and/or approaches)?

Methodology:

To what extent does the possibility of a major breakthrough with an impact beyond a specific research domain/discipline justify any highly novel and/or unconventional methodologies ("high-gain/high-risk balance")?

To what extent is the outlined scientific approach feasible? (assessed at step 1)

To what extent is the proposed research methodology (including the proposed timescales and resources) appropriate to achieve the goals of the project? To what extent are the resources requested necessary and properly justified? (assessed at step 2)

If it is proposed that team members engaged by another host institution participate in the project is their participation fully justified by the scientific added value they bring to the project? (assessed at step 2)

Other key points**Supporting Documentation**

A scanned copy of the following supporting documentation needs to be submitted with the proposal by uploading electronically on EPSS in PDF format using the corresponding template available on EPSS (see Annex 3 of this guide).

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successful. This document needs to be originally signed, stamped and dated by the institution's legal representative.

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For further information about how we work with ERC applicants, please contact us at any of the following: -

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