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Guidelines - Application for industrial postdoc 2012, spring, concerning call of 23 January 2012

In its call of 23 January 2012, the Danish National Advanced Technology Foundation calls for applications from industrial postdoc candidates that, in cooperation with companies and public sector research institutions, apply for funding for industrial postdoc projects. This document describes the guidelines and formal requirements for an industrial postdoc application, spring 2012.

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1. The industrial postdoc program

The Danish National Advanced Technology Foundation launches the first round of the industrial postdoc 2012, which aims at strengthening the cooperation and exchange of technology between companies and public research institutions. The industrial postdoc program is intended to strengthen researchers' abilities to work in different environments across different cultures. The idea is, that an individual with a research background spends part of his/her time working in the company and part of his/her time working at the research institution on specific research and development tasks.

The industrial postdoc program is targeting talented researchers in the beginning of their career, i.e. within a maximum of three years (excl. maternity/paternity leave) after obtaining the PhD degree. Industrial postdoc projects are individual projects of 1-3 years duration applied for by the postdoc candidate. The project is financed by the parties according to the Foundation's 1-2-3 model based on the principle that all parties contribute their own share of co-funding. In addition to this, the company and the research institution each provide a mentor, who acts as a sparringpartner for the industrial postdoc.

2. Selection criteria

An overall assessment of the project idea, the working environment, as well as the candidate's qualifications is carried out. The following minimum requirements must be fulfilled:

- Company mentor The company assigns one person from the company, who will act as company mentor for the industrial postdoc. If two companies are participating, each company will assign one mentor.
- University mentor: The university assigns one person, who will act as research mentor for the industrial postdoc.
- Scientific/technical environment: There must be an appropriate scientific and/or technical environment as well as the right competences supporting the industrial postdoc project. This means, among other things, that there must be access to relevant facilities and equipment for the project.
- The partnership in the project must be new: With regard to the postdoc-candidate's expected increase in competence level through the project, emphasis is put on projects where the postdoc-candidate and the partners have not been working together prior to the project to any large extent. It is thus not the intention to fund projects, which can be considered a direct extension of an existing project.

In addition to this, the Foundation puts emphasis on the following key issues in correspondence with the Foundations' three overall criteria:

Market: Obvious business potential

The Foundation supports projects in which the results may be commercialised and generate profit for the participating companies.

The Foundation emphasises among other things:

- The project's expected results have an effect on the participating company's business development.
- The project's expected results have value for the end user.
- The content of an overall plan for the use and commercialisation of the results.

Technology: Internationally recognised high quality research and innovation

The Foundation supports industrial postdoc projects that require research and innovation of high international standard to be realised.

The Foundation emphasises among other things:

- Research qualifications of the postdoc candidate are of international standard.



- Research qualifications of the postdoc candidate and the mentors match the project idea.
- The proposed research/innovation-work is original and of high international standard.

Entrepreneurship: Well functioning interaction

The Foundation supports industrial postdoc projects that build bridges between private companies and public sector research institutions. To achieve the shared objectives the industrial postdoc should facilitate the exchange of technology, knowledge, expertise, facilities, personnel, etc. The interaction between the parties and the project's management structure are of crucial importance for the outcome of the project.

The Foundation emphasises among other things:

- The application presents a clear vision with goals and success criteria for the project.
- Roles, contributions, and expected output for the postdoc and mentors are clearly defined from the outset.
- The postdoc must be able to create momentum in the project, keep the project on track, and make the most of having access to different organisational cultures.
- The application presents a clear project plan with milestones for the project.

3. Parties

As a rule one company and one public research institution can participate. It is, however, possible that two companies participate as parties. This can for example be one company and one GTS-institute or two companies. The companies must co-finance the 2/6 of the budget together (see section on appendix 5, the project budget).

Public sector research institutions are defined as universities, sector research institutions, research-performing hospitals, research institutions under the Danish Ministry of Culture, and other public sector research institutions within the public administration. In addition, the Danish Centres for Higher Education may take part.

Small, medium, and large companies, as well as foreign companies, may participate, if registered in Denmark with a Central Business Register number (CVR no.).

Approved Technological Service Institutes (GTS institutes) have the status of companies.

4. Preparation of an application

Applications should be submitted on the appropriate forms, which are found on the Foundation's website www.hoejteknologifonden.dk.

The application is submitted electronically to the Foundation from 1 March 2012 and onwards.

When submitting the application the background information for the project must be filled in online and the relevant appendices uploaded. Further information can be found at www.hoejteknologifonden.dk from 1 March 2012 and onwards.

Remember to be in good time so you are fully informed about the process.

An application consists of:

- Appendix 1: Project description.
- Appendix 2: The parties' contribution and expected outcome.
- Appendix 3: CVs and publication lists for postdoc candidate and mentors.
- Appendix 4: Supplementary information about the company.
- Appendix 5: Project budget.
- Appendix 6: Declaration of participation in the industrial postdoc project



Applications may be submitted in Danish or English.

It is not necessary to sign the application when submitting it to the Foundation. However, appendix 4.2 (V) or 4.3 (SMV) as well as appendix 6 needs to be signed by the participating companies.

The application may include relevant illustrations, tables, etc. Please note that a maximum number of pages is indicated for each appendix.

Guidelines for the cover page and each of the appendices of the application are given below.

A page contains 3000 characters including spaces, Verdana, size 10.

The Foundation reserves the right to reject applications that do not meet formal requirements.

Online filling of background information

Background information is submitted online when uploading the application. It is the postdoc-candidate who applies in person.

The following information is required:

Project title

The industrial postdoc-candidate (who also serves as contact person on the project):

- Name, address, telephone number, possibly mobile number, email is filled in.

The mentors:

- Name, address, telephone number, possibly mobile number, email is filled in.

For all parties, both companies and public sector research institutions:

- Name, address, municipality ('kommune'), cvr-number, possibly EAN number and homepage is provided.

For companies:

- State whether the company is a large company (V) or an Small and Medium sized Enterprise (SME). Moreover, provide Number of employees and NACE-kode¹.

For public sector research institutions:

- University, Faculty, Department, Center, Hospital, Section, etc.

Estimated start date and project duration:

- Estimated start date and project duration in years is given. The duration is 1-3 years. The funding period should commence no later than 150 days from the commitment to funding is given.

The total budget of the project and amount applied for:

- The numbers are retrieved from the budget (Appendix 5).

Short summary of the project's core idea:

- A short summary of the project's core idea is given (max. 900 characters). The summary should be in Danish, even when the application is submitted in English.

¹ http://ec.europa.eu/eurostat/ramon/nomenclatures/index.cfm?TargetUrl=LST_NOM_DTL&StrNom=NACE_REV2&StrLanguageCode=EN&IntPckKey=&StrLayoutCode=HIERARCHIC&CFID=11394468&CFTOKEN=606b3466a4faa6fa-37E28BB7-EEE3-B964-8A14617769AFC471&jsessionId=f900ae5c0ec4374e6338



Idea previously submitted to the Advanced Technology Foundation:

- Please indicate whether the project has been submitted to the Advanced Technology Foundation in previous competitions. If so, please indicate previous file number.

Appendix 1: Project objectives and content

Appendix 1 gives a description of objectives and content, including the project's business potential. It may include relevant figures, pictures, tables, etc. Appendix 1 contains the following sections:

- 1.1 Project idea and overall success criteria.
- 1.2 Market: Obvious business potential
- 1.3 Technology: Results and project content
- 1.4 Entrepreneurship: Management and interaction
- 1.5 The projects' structure

Section 1.1 gives a short summary of the project's overall vision, objectives and success criterion for the funding period, including a brief description of the expected results as related to the overall vision.

Section 1.2 is a specific and realistic description of the project's business potential taking into consideration the possible options available to the participating companies. Subsections A-D are described with possible inspiration from the questions listed below:

A. Business potential (value proposition):

- What is the business potential of the project?
- Which problem is solved by the project?
- Which customer need is met by the project?
- Which values would the product create for the customer?
- What is unique about the product/technology compared to competing products/technologies?

B. Market and customers:

- How big is the market?
- What share of the market is relevant for the company before and after the completion of the project?
- Key figures and trends in the market?
- Product maturity of the market?
- The company's position in the market with regard to the product's value chain?

C. Competing companies and ideas:

- What are the existing alternative solutions and competition, including turnover, market spread, strengths, and weaknesses of competing products?
- How does the project differ from competing projects?
- How does the company differ from competitors, e.g. patents, licenses, property rights?
- The project's positioning compared to competing companies and technologies – state-of-the-art?

D. Business strategy and plan for the commercialisation of project results:

- Overall plan of action including time schedule and milestones as well as the parties' possibility of realising the plan and creating profits?
- Which are the available distribution channels?
- How can the business model be up- or down-scaled – in-house production/outsourcing?
- External factors as for example politics, raw material, prices (e.g. energy prices)?

Section 1.3 is a detailed description of the project's scientific and/or innovation-related content. Section 1.3 describes:



- Scientific/technological ideas and hypotheses in the project.
- Research and/or innovation-related content and the applied methods, including how to approach the most important scientific challenges.
- Expected scientific/technological results.
- Existing knowledge within the field (state-of-the-art) and the project's positioning compared to national and international initiatives within the field.

Section 1.4 is a description of how the postdoc candidate considers handling the issue of cooperation between the parties. Section 1.4 should therefore relate to:

- Which technical/scientific environments and facilities at the host institutions will play a key role in the project.
- Explain the phases in the project where there is a particular critical need for cooperation between company and public sector research institution.
- Explain how the postdoc candidate intends to facilitate work and cooperation between the parties.

Section 1.5 is a description of the project structure in form of work packages and time frames. It is stipulated how many man-months that are used for the different parts of the project. The projects milestones and related success-criteria are described in order to be able to monitor progress of the project. Milestones and success-criteria can be both of a technical and business-like nature. The description of the project is supplemented with a Gantt-chart.

Appendix 1 must in total be limited to a maximum of 6 pages.

Appendix 2: The parties' contributions and expected outcome

Appendix 2 is a table with information on each party's contributions, expected outcome, and other issues likely to be relevant for the application.

Company:

Provide a brief outline in bullet points of the company's:

- Contribution in terms of supporting the industrial postdoc project
- Expected outcome from participating in the project
- General expertise in the company in terms of core business, primary markets, description of the R&D department, laboratory or production facilities, etc.

Research institution:

Provide a brief outline in bullet points of the research institutions:

- Contribution in terms of supporting the industrial postdoc project
- Expected outcome from participating in the project
- General expertise in the research institution, e.g. description of research activities, experience, partners and international positioning, laboratory facilities, etc.

Appendix 2 must be limited to a maximum of 2 pages in total.

Appendix 3: CVs and publication lists for the industrial postdoc candidate and mentors

Appendix 3 contains CVs and publication lists for the project participants. Both professional as well as management qualifications should be included. Emphasis should be on information and publications relevant for the application.

For the industrial postdoc candidate, appendix 3 shall include information on:

- Name and age.



- Education and year of graduation.
- The grade obtained for the master thesis as well as the average grades obtained at the master education (after the 12-grade scale).
- Present and former relevant employment.
- Research area/technical profile.
- Complete list of publications divided into actual publications and conference-proceedings as well as the number of each of these types of publications.
- Patents, if any.
- Letter of recommendation, if any.

For each company mentor, appendix 3 shall include information on:

- Name and age.
- Education and year of graduation.
- Present and former relevant employment.
- Key qualifications and primary work responsibilities.
- Other relevant information, such as e.g. patents or scientific papers.

For the research mentor, appendix 3 shall include information on:

- Name and age.
- Education and year of graduation.
- Present and former relevant employment.
- Scientific qualifications and field of research.
- Relevant publications and patents within the project's field of research.
- Other relevant information.

Appendix 3 takes up a maximum of 1 page pr. person.

Appendix 4: Supplementary information about the private company

Appendix 4 includes three elements:

- Appendix 4.1: Financial key figures
- Appendix 4.2: Declaration on state support (for large companies)
- Appendix 4.3: Declaration on SME-status as well as declaration on state support (for SMEs)

Appendix 4.1: Financial key figures

Appendix 4.1 includes a table with information on financial key figures. The table is found in the application form. The participating company must fill out the table with information on financial key figures in DKK for the latest two financial years available:

- Revenue
- Operating profit
- Profit before tax
- Profit after tax
- Total assets

Appendix 4.2 and 4.3: Declaration concerning state aid

The Danish National Advanced Technology Foundation is financed by the state through an annual contribution on the Annual Budget. As the Advanced Technology Foundation provides aid to private companies, its funds and support profile have been approved by the EU Commission. This means, that payments concerning aid from the Advanced Technology Foundation are done in accordance with the regulations in the General Block Exemption Regulation², among others article 8 and 31. This also means, that all companies must sign a declaration acknowledging that they are aware of this regulation.

² <http://eur-lex.europa.eu/LexUriServ/LexUriServ.do?uri=OJ:L:2008:214:0003:0047:en:PDF>



For large companies participating in the application it is necessary to submit a form on the incentive effect a grant from the Advanced Technology Foundation will have in the company, in accordance with appendix 4.2.

Large companies must therefore indicate whether receiving funding from the Advanced Technology Foundation, in comparison with a situation without funding, will result in:

1. The project's size will increase significantly because of the aid granted.
2. The project's scope will increase significantly because of the aid granted.
3. The total amount, which the receiver of the aid has used for the project, will increase significantly because of the aid granted.
4. The project will be implemented considerably faster.

Large companies must fill out a form concerning declaration on state aid and indication of incentive effect, in accordance with appendix 4.2.

Small and medium sized companies (SMV³) must fill out a form concerning declaration on SMV-status as well as declaration on state aid, appendix 4.3.

The forms for appendix 4.2 and/or 4.3 must be signed and attached to the application as a pdf-file. The forms for appendix 4.2 and 4.3 can be found on the website of the Foundation: www.hoejteknologifonden.dk

Appendix 5: Project budget

Appendix 5 contains an overview of the project budget for the entire funding period.

The total project budget is financed according to the 1-2-3 model of the Foundation. This means that the public sector research institution must finance 1/6 of the budget, 2/6 of the budget must be financed by the companies, and 3/6 is financed by the Foundation. EU state aid rules must always be complied with.

As for salary levels, the collective agreement³ between the Danish Confederation of Professional Associations (AC) and the Danish Ministry of Finance applies to scientific staff, and are paid under the same terms as under the Independent Research Council. Salary expenses must be calculated on the basis of the actual salary level that the employee currently has/will be given at his/her place of employment, and including any increments that are anticipated during the project period. The postdoc candidate should thus contact the institution where employment takes place to get a calculation of the salary. It is the research institution that holds responsibility for correct placement on the pay scale.

In addition to the postdoc salary, the industrial postdoc budget includes a standard fee of DKK 150.000 per year (excl. overhead) to cover expenses for conferences, traveling, cost for materials, consumables, etc. It is possible to use part of the grant for competence development of "entrepreneurship"-skills by participating in relevant courses, e.g. within (research-) management, innovation, business development, etc.

An example of a budget for one industrial postdoc man-year based on a postdoc salary at DKK 550.000 per year will be as follows:

Salary	DKK 500.000
Standard fee for public sector research institution	DKK 150.000
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Total (excl. overhead)	DKK 650.000

³ For a detailed definition of SME, see <http://eur-lex.europa.eu/LexUriServ/LexUriServ.do?uri=OJ:L:2003:124:0036:0041:EN:PDF>



A maximum of 44% overhead is paid to the public sector research institutions, that follow the rules on funded research activities as described in the Budget Instructions of the Ministry of Finance (Regler om tilskudsfinansieret virksomhed i Finansministeriets Budgetvejledning).

For other Danish, publicly owned institutions, only 3,1% administrative fee can be paid.

Below examples of different financing according to the 1-2-3 model are given for projects including a large company, an SME and different research institutions with 44% overhead (university) and 3.1% administrative fee (hospitals).

Cooperation between company and university (overhead = 44 %)

Public sector research institution finances 1/6	DKK 156.000
Company finances 2/6	DKK 312.000
The Foundation finances 3/6	DKK 468.000
<hr/>	
Total (incl. overhead)	DKK 936.000

Cooperation between SMV and university (overhead = 44 %)

Public sector research institution finances 1/6	DKK 156.000
SMV finances 1,6/6	DKK 250.000
The Foundation finances 3,4/6	DKK 530.000
<hr/>	
Total (incl. overhead)	DKK 936.000

Cooperation between company and hospital (adm. fee = 3,1 %)

Hospitalet finances 1/6	DKK 112.000
Company finances 2/6	DKK 223.000
The Foundation finances 3/6	DKK 335.000
<hr/>	
Total (incl. adm. fee)	DKK 670.000

Concerning appendix 5, the budget-format is downloaded from the Foundations website. The budget-format is pasted into the application under section "appendix 5". **Only the cells marked with YELLOW are filled in the budget-table** (see Figure 1).

In the *insert information* area insert the following information:

- Number of man-years for the industrial postdoc.
- The salary for each year.
- If the public research institution is a hospital then the overhead-rate is changed to 3,1%.

In the *calculation area* only insert the following information:

- The name of the company/companies and the name of the university/hospital.
- The co-financing shares need to be calculated and inserted in accordance with the 1-2-3 model as described above. If two companies participate, they share the company contribution.



Appendix 5: The projects budget						
Budget for the whole grant period						
The project's title:						
Insert information on man-years and salary expenses						
	Number of years	Salary exp. Year 1	Salary exp. Year 2	Salary exp. Year 3	Total	
Industrial postdoc candidate, salary expenses		500.000	515.000	525.000	1.540.000	
Expenses for standard fee*	3,0				450.000	
Salary in all incl. standard fee and excl. overhead					1.990.000	
Overhead 44% (hospitaler max. 3,1%)					875.600	
Total budget in DKK for the project period					2.865.600	
Calculation of self-finance shares						
	Partner, name	XXX	DTU	HTF		
	Partner, status**	V	O	HTF		
Total budget in DKK	2.865.600					
Self-financing shares per partner, DKK		955.200	477.600	1.432.800		
Any comments - here it is mentioned which salary level is used for the first year of the industrial postdoc:						
*Standard fee per year, DKK: 150.000						
**Status: Public research institution = O, company = V, small and medium sized enterprises = SMV						

Figure 1: Example of a project budget

Appendix 6: Declaration on participation in the industrial postdoc project

For the participating company and the participating public research institution a declaration is signed, which declares that the party wishes to participate in the industrial postdoc project in case the application receives funding from the Advanced Technology Foundation.

5. Submission, deadlines, etc.

A single-step application applies. For the application the Foundation's template for industrial postdocs must be used. As described under Section 4, it will be possible to submit the application electronically to the Foundation from 1 March 2012 and onwards.

When submitting the application the background information for the project must be filled in online and the relevant appendices uploaded. Further information can be found at www.hojteknologifonden.dk from 1 March 2012. Remember to be in good time so you are fully informed about the process.

The application deadline is:

Tuesday 10 April 2012 at 12:00 noon

Applications, which do not meet the formal conditions or deadlines, may be rejected.

The Foundation will set up a selection committee to assess the research content of the applications. The selection committee makes a recommendation for the Foundations' Board, that will make the final decision on which project ideas the Foundation should invest in.



Time frame for industrial postdoc, spring 2012:

- 10 April 2012 – deadline for electronic applications to the Foundation.
- Ultimo May 2012 – applicants receive notification of the Boards' decision.

Funding will be conditional upon the fact that a cooperation agreement between the partners and the Foundation has been made within 60 days after grant approval.

The funding period and thereby the start-up of the project's activities will commence no later than 150 days after commitment to funding is given.

6. Questions and additional information

For questions concerning the notice, guidelines and the preparation of an application, please contact project manager Jeppe Lundbæk at the Advanced Technology Foundation on telephone +45 3363 7289 or email jl@hoejteknologifonden.dk. Further information is available on the Foundation's website at www.hoejteknologifonden.dk.

The Guidelines are available in Danish and in English. In the event of disagreement between the two versions, the Danish version shall prevail.