

Guidelines for Industrial PhD

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1. What is an Industrial PhD?

An Industrial PhD is an industrially focused research project and PhD education, conducted jointly by a private sector company, an Industrial PhD candidate and a university. The Industrial PhD candidate is employed by the company and at the same time enrolled at the university, and works on the same project at both places. The candidate spends all her/his working time on the project and education, and divides the working time between the company and university. The project length corresponds to the length of the education, which is three years in Denmark. Non-Danish PhD educations can last longer.

Industrial PhD and Industrial Postdoc together comprise the Industrial Researcher Programme. The Industrial Researcher Programme has the purpose of educating and developing research talents into industrial researchers specialised in creating growth and employment in Denmark's business sector through research, development and innovation.

Significant changes since last edition of the guidelines:No set requirements on time allocation

It is no longer required that the Industrial PhD student spends a set minimum amount of time at the university and company. There is also no longer any limit on how long the student can be at the company's non-Danish divisions. Instead it will be the requirements of the project and the education that decide the time allocation.

Applications with candidates are now always prioritised above applications without candidates

A company and a university can apply without a candidate who is then found later. However, qualified applications with a candidate will now always be prioritised above qualified applications without a candidate. Read more about prioritisation in section 5.

Conditional approvals must now be fulfilled within four months

An Industrial PhD application can receive a conditional approval where a number of conditions have to be met before the project can commence. These conditions must now be met within four months of the decision. Read more in section 5.

Temporary access for Greenland and the Faroe Islands

In 2015-2017, 1.7 mill DKK in subsidy will be available each year for qualified applications from Greenlandic or Faroese companies. Read more in section 3.

Adjustment of private sector definition

The definition for categorising a company as part of the private or public sector has been adjusted by removal of the criterion about the board composition if public subsidy comprises 25-50% of the revenue. Find the definition in section 3.

Company supervisors now need general experience with the project subject

It is required that company supervisors have knowledge and insight about the business sector and a bachelor's degree level education. Now, general experience with the project subject is also a requirement. Research experience is still not a requirement. Read more in section 3.

Industrial PhD candidate requirements adjusted, pre-approval now possible

Instead of a weighted grade average of 8.2 for both the bachelor's and master's degrees, it is now possible to be approved as an Industrial PhD candidate if you have an average of 9.5 for the master's degree alone. In addition, significant business experience within the project subject can now compensate for a lower average than required. Non-Danish educations are now to be compared to the general grade level of the education. Finally, it is now possible to be pre-approved as an Industrial PhD candidate. Read more in section 3.

Limit on university supervisors' number of ongoing PhD projects replaced by success rate requirement

The requirement that the university supervisor cannot already supervise too many PhD students has been replaced by a requirement that at least 80 % of the PhD students for which

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the supervisor has been the main supervisor have obtained the PhD degree. Read more in section 3.

Third party subsidy no longer available

It has previously been possible for public sector research institutions to receive a subsidy of up to DKK 45,000 as a third party in the project. This is no longer a possibility.

Adjusted subsidies

The monthly wage subsidy of DKK 14,500 for companies has been increased to DKK 17,000; but no more than 50 % of the total gross salary over a financial project report period. The travel subsidy has been reduced to DKK 100,000. Read more in section 6.

Exemption from information meetings due to several successful Industrial PhD projects now a possibility

It is now possible for supervisors of at least three successful Industrial PhD projects to be exempted from participating in the mandatory information meeting. Read more in section 8.

Status meeting in every project

Project participants are now to hold a status meeting with Innovation Fund Denmark 1-1½ years into the education. Read more in section 8.

2. General conditions

Application

The first step when commencing an Industrial PhD is to send an application to Innovation Fund Denmark (the Fund). In the application the Industrial PhD project and the people and organisations that participate in the project must be described. The application must be of a high quality to be approved.

A company and a university can apply without an Industrial PhD candidate. If the application is approved, a qualified candidate must be found within four months. However, qualified applications with a candidate will always be given higher priority than qualified applications without a candidate.

The application is assessed by the Industrial Researcher Committee (the Committee) in Innovation Fund Denmark. Unless the Committee decides to ask for additional information from the applicants for use in the assessment, processing time is max. two months.

Decision and commencement

The application can be either approved, conditionally approved or rejected.

If the application is approved, the project can start from the date of approval. After the approval the Fund will send a letter of commitment to the company and the university. The letter of commitment must be signed and the project initiated no later than half a year after the approval. The project officially starts from the date of the Industrial PhD candidate's enrolment at the university as a PhD student.

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If the application is conditionally approved, applicants will receive a letter detailing the conditions for final approval. The conditions must be met within four months of the decision.

If the application is rejected, applicants will be given reasons for the rejection, and it will be possible to revise the application and reapply at the next application deadline.

The Fund will make public the title, abstract and participants of approved and conditionally approved applications at www.innovationsfonden.dk. For this reason applicants should make sure that the title and abstract do not contain any confidential information. If the conditional approval is for an application without a candidate, this is also made public.

During the project

During the project, the candidate is employed in a Danish division of the company and simultaneously enrolled at the university. The candidate spends all his/her working time on the project and PhD education, and is not allowed to have other work tasks.

The company pays the candidate's salary and receives a salary subsidy from the Fund as well as a subsidy for the candidate's travel expenses. The university receives a subsidy for supervision, equipment and other expenses for the candidate's education.

The candidate has a supervisor at both the university and the company, in addition to a co-supervisor at the company. It is also possible to attach more co-supervisors and third parties.

3. Entry requirements

The company, the university, supervisors and the Industrial PhD candidate must meet certain requirements when jointly applying for an Industrial PhD.

The company must:

- have a division geographically located in Denmark where the candidate is to be employed,
- be able to provide facilities and financial support for the project for the entire project duration,
- attach a company supervisor and co-supervisor to the project, and
- be part of the private sector.

Private sector

In the Industrial Researcher Programme, an organisation is either part of the private or public sector. In order to be part of the private sector the company must meet these two requirements:

1. It is neither part of a larger public sector organisation nor an interest group for other public sector organisations.
2. Less than half its revenue is public subsidy (incl. citizen payment as compelled by law).

If in doubt about whether an organisation is part of the private sector, it is possible to have the Fund assess the organisation by sending its articles of association (DK: vedtægter) and the latest annual financial report to erhvervsforsker@innofond.dk.

Several companies in one Industrial PhD project

It is possible for several companies to collaborate on an Industrial PhD project. The Committee will then assess if the companies can support the project together. One of the companies must be the designated co-ordinator for the project and accordingly be the official applicant, employ the candidate, pay out salary and receive subsidy from the Fund.

Employment in Greenlandic or Faroese division

Normally, the Industrial PhD candidate must be employed in one of the company's Danish divisions. In 2015-2017 it will be possible to have the candidate employed in a division geographically located on Greenland or the Faroe Islands. DKK 1.7 mill. is allocated annually for qualified applications from Greenlandic or Faroese companies.

The company supervisor and co-supervisor must:

- have general experience with the project subject (research experience is not necessary)
- have extensive knowledge about the business sector, and
- at least have a bachelor's degree level education.

The company supervisor and co-supervisor do not have to be employed in the company, but must work in the private sector on a daily basis.

The university must:

- be a university or institution of higher learning in Denmark or abroad which is officially authorised to conduct PhD training, and
- attach a university supervisor to the project.

Additionally, the university cannot be too closely connected to the company financially.

The university supervisor must:

- be an acknowledged researcher within the project field,
- be in an academic professional working environment on a daily basis,
- meet any other demands as determined by the university's national authorities. In Denmark, these demands are that the supervisor is employed at the university and attached to its PhD programme.
- At least 80 % of ended PhD educations in which the university supervisor was the main supervisor must have been finished with a PhD degree.
 - It is possible to be exempted from this requirement if a lower success rate is because of factors evidently not due to the university supervisor, or in case of no documented

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experience. To apply for an exemption one must describe in detail the circumstances for the discontinuations.

The Industrial PhD candidate must:

- have a project relevant education at a master's degree level,
- either have, for the master's and bachelor's degrees put together;
 - a weighted average of at least 8.2 on the Danish 7-step scale or 9 on the Danish 13 scale,or for the master's degree alone, if it has a nominal duration of at least 120 ECTS (two full-time equivalents);
 - a weighted average of at least 9.5 on the Danish 7-step scale or 9.4 on the Danish 13 scale.
- have attained at least the grade 10 (Danish scale) for any final thesis/examination project.
 - It is possible to apply with a candidate whose final thesis has not yet been graded. If the candidate meets all other requirements, an approval is given on the condition that the candidate receives at least 10 for the thesis.
 - Non-graded applicants must submit a written statement or assessment of the final examination project.

About grades

A candidate with a slightly lower grade average or thesis grade than required can be approved if the candidate has other relevant qualifications. These can be (sorted in diminishing importance – the higher, the more important):

- peer-reviewed articles published in acknowledged scientific journals,
- research based patenting,
- other relevant research experience, e.g. as a research assistant,
- significant professional experience with the project subject,
- progress in grades during the education,
- high grades in project relevant subjects, and
- relevant independent references on the candidate's research ability.

The qualifications are assessed relative to how far the candidate is from the required grade levels and how relevant the qualifications are to the project.

If a candidate does not meet the grade requirements but might have compensating qualifications, it is possible to ask Innovation Fund Denmark to conduct a preliminary assessment by emailing a CV, complete exam diplomas and a filled-out grade calculation form to erhvervsforsker@innofond.dk. The grade calculation form is available at www.erhvervsforsker.dk. A pre-approval is always given on the condition that the qualifications match the project applied for.

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Non-Danish education

A candidate with a non-Danish education must have a grade average which corresponds to the requirements for a Danish education relative to the general level of the education.

Accordingly, the application must contain:

- a weighted grade point average calculation on the non-Danish scale, and
- documentation for the average grade level and dispersion for completed educations within the field. The documentation must be certified by the educational institution.

Third parties:

The project can also include other relevant organisations in Denmark as third parties. Each third party must attach a third party supervisor to the project. It is possible to apply for attachment of a third party during the project. Third parties do not receive subsidy from the Fund.

4. Application

There are three yearly application deadlines. The application deadlines are continuously determined and announced at www.erhvervsforsker.dk. The Fund must receive the application no later than 12 noon on the closing date for applications. The application and any other communication must be in Danish or English.

The application is submitted via www.e-grant.dk to the Fund and is assessed by the Committee. Read more on www.erhvervsforsker.dk on how to submit an application and what information and appendices it must contain. If information is missing or the wrong appendix templates have been used, the Fund can administratively reject the application.

The processing time is max. two months. The committee may however decide to ask for additional information from the applicant for the assessment. If so, the processing time may be more than two months.

Scientific requirements

The application must contain a project description of a high scientific standard that accounts for:

- The project's objectives and success criteria
- The project's commercial potential for the company
- The research field's state-of-the-art and theoretical background, incl. references to relevant research literature
- The project's hypotheses and/or research questions
- The project's research methods and empirical data
- The project's allocation of roles as well as a phase and time schedule, incl. significant milestones in the project
- Publication plan
- Dissemination plan

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Commercial potential

An Industrial PhD project in a private sector company must have a significant commercial potential for the company, and it is important that the project has been conceived from the perspective of strengthening or supporting the company's business activities.

The project can be within all research fields as long as the project's direct or indirect commercial potential, in the short or long term, can be convincingly argued.

The project description template contains the precise demands for the description of the project's commercial potential.

Assessment and prioritisation

On the basis of this information the Committee assesses whether all requirements and criteria have been met, and if it is likely that the project can be completed as planned.

If the Fund receives more qualified applications than it has means to fund, the Committee will prioritise applications by the standard assessment criteria as well as the vision and objectives of the programme. Qualified applications with a candidate are always prioritised higher than qualified applications without a candidate.

5. Decision on applications

An Industrial PhD application can either be approved, conditionally approved or rejected. An approved Industrial PhD project officially begins at the date of the candidate's enrolment into the host university's PhD programme. The date of enrolment must be on or after the date of approval.

Conditional approval

If a project is conditionally approved, the Fund will send the applicants a letter detailing the conditions. For applications without a named candidate, a condition will be to find a qualified candidate. Documentation for meeting the conditions is submitted to the Fund. If the Fund finds that the conditions have been met, the project can begin.

The conditions must be met within four months of the decision. The Fund can extend this deadline in special circumstances.

Rejection

If a project is rejected, the Fund sends the applicants a letter stating the reasons for rejection. A rejected Industrial PhD project cannot be initiated even if it has the university's approval. It is possible to reapply. At reapplying, changes in the project description must be clearly indicated, and it must be described how the reasons for the previous rejection have been addressed. All application material incl. new signatures must be resubmitted when reapplying.

6. Subsidy

Innovation Fund Denmark pays out subsidy separately to the project's company and university.

Subsidy for the company:

The company receives 17,000 á month for three years for the Industrial PhD candidate's salary, but no more than 50 % of gross salary expenses. This is calculated for every entire financial project reporting period. If the project lasts longer than three years, e.g. for a non-Danish PhD education, the company receives salary subsidy for the last three years in the project.

The company can also receive subsidies to cover documented expenses for the following of the Industrial PhD candidate's activities:

- Stays in Denmark and abroad: Up to DKK 100,000 for:
 - participation in project relevant conferences,
 - participation in PhD courses not offered by the host university, and
 - project relevant stays at non-Danish universities, research institutions and companies not in the same country as the host university or the host company (stays at the company's non-Danish divisions are not subsidised).

This includes a single round trip to the destination, visa, travelling insurance, lodging and university fees. Food, daily/local transportation, books etc. are not covered.

Of the DKK 100,000, up to DKK 5,000 can be used for the company supervisor's project relevant travel expenses. An additional DKK 5,000 can be used for the university supervisor's project relevant travel expenses.

- Stays at non-Danish host universities: Up to DKK 122,000 for stays at non-Danish host universities where the candidate is enrolled for the entire project period; which issue the PhD degree upon the education's completion; and which are not in the same country as the host company. DKK 32,000 is granted to cover travel expenses for the entire period and DKK 90,000 for stays. This includes round trips to the destination, visa, travelling insurance and lodging. Food, daily/local transportation, books etc. are not covered.

The company must pay for all other expenses for the project. This includes the candidate's personal equipment, e.g. laptop computer, mobile phone, etc.

Payment of subsidy and auditing

The company receives subsidy in arrears from the Fund for every financial project reporting period. The company must submit a financial project report every sixth or twelfth month. If the company has less than 250 employees it can also submit financial project reports every third month.

If the Fund can approve the financial project report, the earned subsidy for the period is paid out to the Nemkonto ("Easy Account") registered for the company's CVR number.

At the final financial project report, an auditor's statement verifying that the receipts declared in the financial report exist, and that the terms for subsidy have been kept, must be included.

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Forms for financial project reports and auditor's statement are available at www.erhvervsforsker.dk.

Subsidy to the university

The university receives a subsidy from the Fund covering:

- the university's supervision of the Industrial PhD candidate,
- the university's dialogue with the company,
- the Industrial PhD candidate's work facilities at the host university,
 - This includes acquisition and/or use of equipment necessary for carrying out the university part of the project.
- the Industrial PhD candidate's participation in relevant PhD courses at the university,
 - If the host university does not offer relevant courses in the project field, the host university may use part of its subsidy to pay for the candidate's participation in PhD courses at other universities.
- assessment of the PhD thesis.

University subsidy (incl. overhead) for Danish universities:

- DKK 360,000 for projects within the fields of natural, technical, agricultural, veterinary and health sciences
- DKK 252,000 for projects within the fields of social science and the humanities.

The above amounts also apply to subsidy to non-Danish host universities in applications submitted before 1 April 2014.

University subsidy (incl. overhead) for non-Danish host universities in applications submitted after 1 April 2014:

- DKK 450,000 for projects within the fields of natural, technical, agricultural, veterinary and health sciences
- DKK 315,000 for projects within the fields of social science and the humanities.

85 % of the university subsidy is paid out at the project's commencement. The remaining 15 % is paid out when the Fund has received documentation for the candidate's obtainment of the PhD degree. If the candidate does not obtain the PhD degree, the final 15 % are annulled.

7. Employment, salary, IPR and leave

Employment

The company hires the Industrial PhD candidate as a full-time employee for the entire nominal duration of the PhD education. The candidate's work tasks and time must be devoted exclusively to the Industrial PhD project and education, and the candidate's employment contract must explicitly free up the candidate from any other work during the project. As a minimum, the employment must be on ordinary terms for salaried employees. Other terms follow any collective agreement or individual settlement.

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Any non-compete clauses or similar in the employment contract must not limit possibilities of employment elsewhere. Likewise, the contract must not contain educational clauses or similar requiring the candidate to reimburse the company's expenses for the education if the education is discontinued or if the candidate changes employment after completing the Industrial PhD education.

Salary

The candidate's gross annual salary must at least correspond to the current gross annual pay rate of the collective agreement for PhD fellows employed in the Danish state. Questions regarding salary levels can be made to the HR department at the university.

IPR

Industrial PhD candidates are subject to the provisions of the Danish act on employee inventions while supervisors at Danish universities and other Danish public research institutions are subject to the provisions of the Danish act on inventions at public research institutions. Questions regarding intellectual property rights should be resolved before signing the employment contract.

Leave

The company may request a leave of absence for the Industrial PhD candidate from the Fund. The Fund must approve the request before the leave can commence. The Fund does not provide subsidy during periods of leave, incl. paternal and sick leave.

The request must:

- state the project's reference number,
- state the reason for the request,
- state the start and end date of the leave requested,
- state the new end date of the project – the end date is extended by the period of leave,
- be signed by the company, the university and the candidate.

The request is emailed as a PDF file to erhvervsforsker@innofond.dk.

8. Other obligations

Information meeting

After application approval, the company supervisor, the university supervisor and the candidate must participate in a joint information meeting. The information meetings are held after every application round in Copenhagen and Aarhus. The parties must participate in a meeting no later than half a year after approval. The Fund cannot pay out subsidy to the company before the company supervisor has participated in the meeting or to the university before the university supervisor has participated in the meeting. The candidate will be in non-compliance of his or her obligations if not attending.

Read more about the information meetings at www.erhvervsforsker.dk.

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Supervisors who have participated in an information meeting within the past three years do not have to participate again if supervising a new project.

It is possible for supervisors to be exempted from participating in an information meeting if they have been the main supervisor (not co-supervisor) for at least three Industrial PhD projects that have resulted in a PhD degree. To apply for an exemption one must send an email to erhvervsforsker@innofond.dk with information about the successful projects.

Status meeting and status reporting

The Fund will arrange a status meeting with the candidate, the company supervisor and the university supervisor 1-1½ year into the project. As a starting point, the university will host the meeting.

The candidate must submit a short status report to the Fund no later than two weeks before the status meeting. At the meeting, the candidate will give a presentation on the project's status for the other participants. The purpose with the meeting is to see how the project and education is progressing and to initiate a dialogue about how the results are incorporated into the company's business development.

The Fund is not to receive any other status reports during the project. The Industrial PhD candidate's attainment of the PhD degree will document that the project has fulfilled the academic requirements of a PhD education.

Knowledge dissemination requirement

All Danish PhD programmes require students to gain experience in knowledge dissemination related to their PhD project, cf. the Danish PhD Executive Order part 3, § 7. The knowledge dissemination can consist of articles, presentations, teaching and other ways of exchanging knowledge at the company, university or elsewhere. The company, the candidate and the university determine the extent, type and period of knowledge dissemination.

As a part of their collective agreement, regular PhD fellows are obliged to teach when employed at Danish universities. But since Industrial PhD candidates are not employed at a university they do not have this obligation. However, if all project parties agree, teaching at the university can still be part of their knowledge dissemination.

RRI and Danish Code of Conduct for Research Integrity

Innovation Fund Denmark emphasises Responsible Research and Innovation (RRI) which aims to strengthen the connection between research and innovation processes and results, and the values and needs of society. The Fund promotes RRI in its overall strategies and via projects, and the Fund follows the EU Commission's definition and implementation of RRI.

The Fund also supports the principles described in the Danish Code of Conduct for Research Integrity. The Fund expects that the projects it invests in follow the guidelines in the RRI and the code of conduct.

Read the code of conduct here: [The Danish Code of Conduct for Research Integrity](#)

Open Access

Innovation Fund Denmark has agreed to the regulations in the "Open Access policy for public research councils and foundations". This means that publicised scientific articles that are the result of complete or partial funding from the Fund must be made publicly available for everyone via Open Access, if so permitted by the journal.

Read the entire policy here: [Open Access policy for public research councils and foundations](#)

Duty to disclose all material facts and approval of changes

As recipients of subsidy, the company and the university must uphold their duty to disclose all material facts to the Fund. The Fund must be informed as soon as possible in case of changes in the basis for payment of subsidy. This would include supervisor changes, leave, major disruptions and delays, and significant project changes.

It is not possible to objectively define what constitutes a significant project change. But as a main rule these are changes of a magnitude that make the project not immediately recognisable as the one originally approved.

The project can continue only if and when the Fund approves the changes. If the duty to disclose all material facts is not upheld, the Fund has the option to cancel subsidy and require repayment of any paid out subsidies.

To have the changes approved one must send a formal request to the Fund. The request must:

- state the project's reference number,
- state the reasons for the request,
- for supervisor changes: include CV and contact information for the new supervisor.
 - The CV for a new company supervisor must contain a list of educations.
 - The CV for a new university supervisor must contain a list of selected publications.
- for changes of company or university: include name, address and CVR number, and a description of the professional working environment and facilities in the new project party that the candidate will have access to.
- for project changes: include a description of the project changes.
- state a date for when the changes will come into force, and
- be signed by the company, the university and the candidate.
 - For changes of company or university, both the new and the old project party must sign.

The request is sent as a PDF file to erhvervsforsker@innofond.dk.

9. Finishing an Industrial PhD

The host university approves the entire PhD education and confers the PhD degree once the PhD thesis has been accepted and defended at a public thesis defense. If the candidate is enrolled at a non-Danish university, this university must confer the PhD degree in accordance with its national provisions.

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The university appoints the PhD Assessment Committee. For a Danish host university the PhD Assessment Committee must include at least one person with industry relevant research experience within the field of research, cf. the Danish Executive Order on PhD Programmes, Part 11, § 27.

Any questions about confidentiality must be resolved in advance between the parties to the education and should not cause any delays in the PhD thesis defense.

Upon a successful defense, the Fund will issue an Industrial PhD certificate to the candidate. To issue the certificate, the Fund must receive a copy of the final PhD degree at erhvervsforsker@innofond.dk.

If the education is discontinued

If an Industrial PhD education is discontinued, the participants must jointly provide a written account for the course of the education and the reasons for its discontinuation. The account must be signed by the company, the university and the candidate, and must be delivered to the Fund within three months after the date of discontinuation. In special cases this deadline can be extended.

The company may be required to repay any subsidy received if it breaks off or prevents the planned execution of an Industrial PhD education which the host university and the candidate are still interested in and capable of continuing. However, the candidate is likewise obligated to carry out the research and employment activities agreed upon in the application.

10. Legal basis and right to information

Industrial PhD is authorised by the Danish Act no. 306 of 29 March 2014 on Denmark's Innovation Fund. Regulations on PhD education in Denmark are established in the Danish Executive order regarding PhD programmes at universities and certain higher educational institutions of art (the PhD Executive Order).

Applicants should be aware that information can be passed on to other parties if they apply for right of access in accordance with the Danish Act on public information (DK: offentlighedsloven). Right of access can for instance be given in the form of lists of who has applied, and for what (applicant names, application titles and amounts applied for). With regard to the applications themselves, the Fund will ensure in consultation with the applicant (incl. companies etc.) that business sensitive information is not passed on, nor any other information which cannot be passed on according to the law.