
CALL FOR PROPOSALS

Industrial Graduate Programme 14

The Knowledge Foundation invites Sweden's new higher education institutions (HEIs) to apply for funding of Industrial Graduate Schools. The programme aims to strengthen the research environments of the new HEIs and, through education of PhDs and licentiates, develop expertise in the business sector and strengthen long-term competitiveness.

If you have questions about the call, please contact:

Mats Waltré, Programme Manager
mats.waltre@kks.se 08-56 64 81 58

Linda Gustavsson
linda.gustavsson@kks.se 08-56 64 81 17

Åsa Ödling
asa.odling@kks.se 08-56 64 81 45

We require your notification
of interest no later than
22 May 2014.

We require your application
no later than 3 p.m. (15:00)
on 11 September 2013

For Technical support, contact:

support.ansokan@kks.se

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About the Knowledge Foundation

The Knowledge Foundation finances research at Sweden's 16 new universities and HEIs¹ for the purpose of strengthening Sweden's competitiveness. We provide funding when research is conducted in collaboration between academic researchers and business sector partners.

Background of the programme

Since 1995, the Knowledge Foundation has funded nearly 30 Industrial Graduate Schools of which 21 have been completed. The Foundation's evaluation shows that the individual Industrial Graduate Schools have largely met the Foundation's objectives for the programme, i.e. they have achieved good results as measured by PhDs awarded, and have contributed to the development of the HEIs as well as the business partners.

The Knowledge Foundation invites Sweden's new HEIs to apply for financing of Industrial Graduate Schools in co-production with companies and research institutes. Through this programme, the Knowledge Foundation provides funding to HEIs to organise and implement a graduate programme with a well-defined focus, where business partners are actively involved and gain access to research expertise in a relevant area. Industrial Graduate Schools should strengthen the HEIs by integrating higher education with a research environment while further contributing to knowledge development in Business sector.

The programme is intended to provide HEIs with the opportunity to strengthen their doctoral level education. In recent years, the Swedish National Agency for Higher Education has given several new HEIs the right to award postgraduate degrees, which increases the need for resources in postgraduate education. HEIs that have received financing from the Knowledge Foundation for Industrial Graduate Schools generally report positive experiences with this approach. However, the Foundation's experience from its calls for proposals in recent years is that the HEIs' capacity for starting an Industrial Graduate School has been relatively limited. During the autumn of 2012 we joined with representatives from the HEIs and companies in an effort to identify programme designs that would be well suited to all interested parties. To better enable the HEIs to establish Industrial

¹ Blekinge Institute of Technology, Dalarna University, University of Borås, University of Gävle, University of Halmstad, Jönköping University, Kristianstad University, University of Skövde, University West, Karlstad University, Linnaeus University, Malmö University, Mid Sweden University, Mälardalen University, Södertörn University, Örebro University

Graduate Schools we are now offering greater flexibility in design, mainly through the possibility to develop the Graduate School in stages and to more clearly open the programme for licentiate students.

Purpose and objective of the programme

Purpose

The programme aims to provide new HEIs with opportunities to establish research training programmes that help strengthen the HEI's profile and develop the research and education environment at the HEI.

Another purpose is to meet the business sector's needs for research expertise in relevant and well-defined areas via co-produced research training programmes. Hence, the initiative will help strengthen the long-term competitiveness of the business sector and the HEIs.

Industrial Graduate Schools are also intended to improve the conditions for long-term relationships and collaboration between HEIs and companies by increasing the mobility of personnel.

Industrial Graduate Schools are expected to show long-term results and effects for the HEI by enhancing the profile of research training programmes and strengthening the relationship between companies and the HEI's research environment.

Objective

The objective of the programme is that graduate schools, in collaboration with business partners at new HEIs are professionally designed, quality assured, and well established, and operate:

- in line with the HEI's long-term strategic plan for education and research
- to provide doctoral students with research training that is integrated with the participating business sector
- to provide added value for the researchers, research students, and companies involved
- so that all research students complete their degree within the time allocated.

Programme design

Under certain conditions it might be advantageous to develop an Industrial Graduate School in two stages, with two separate admission periods for doctoral students. In Stage 1, no fewer than 6 and no more than 15 doctoral

students should be admitted. After two years, and under the condition that the graduate school is found to be well established, the HEI would have the opportunity to apply for funding for a group of at least four additional students in Stage 2. For the two stages combined, applicants may request funding for a maximum of 20 doctoral students. A “doctoral student” should in this context be understood as a student going all the way to a doctoral degree or as two students exiting with a licentiate degree. Example: 10 doctoral students may consist of 6 students exiting with a doctoral degree and 8 students exiting with a licentiate degree.

The Industrial Graduate School should be implemented as a unified graduate school, and the admission of doctoral students must be consolidated within a reasonably short period after financing is awarded. In those instances where two stages are used in developing the graduate school, the admission of doctoral students in Stage 2 should also be consolidated. In general, the HEIs and business partners decide jointly whether the actual student should be employed by the company or the HEI.

Recruitment of doctoral students for the Industrial Graduate School should comply with the HEI’s existing rules. It is possible for doctoral students to be employed either at the HEI or the company/research institute. However, every doctoral student must be connected with a company and should conduct their research activities at the HEI and at the company.

The pace of study for the individual doctoral student will be planned to 80 %. The remaining 20 % will consist of work at the contributing company. A minimum of 20 % of the students’ time must be located both at the company and at the HEI.

Each doctoral student must have an advisor from the HEI and a mentor and/or advisor from the company.

The Industrial Graduate School must be implemented in co-production with business partners. All participating companies are expected to be actively involved and well integrated in the graduate school’s implementation. A problem-oriented approach that is relevant for the business sector should contribute towards a successful Industrial Graduate School.

The objectives of a graduate school cannot be achieved unless it builds on, and is integrated with, one or more developed research environments and operates in close collaboration with other graduate education. It is important for a graduate school to have a unified and focused direction to enable close collaboration between the academic and business partners.

Who may apply?

Only Sweden's new higher education institutions authorised to award doctoral degrees in the field addressed by the graduate school are eligible to apply for funding. The vice chancellor is responsible for the application, not the individual researcher or research group.

A graduate school may be operated in collaboration with other HEIs, even HEIs not included in the Knowledge Foundation's target group. In the latter case, an HEI may contribute towards implementation and be included in financing from the Knowledge Foundation provided that the main activities are conducted at the new HEI (the applicant) and that the application clearly shows that the Industrial Graduate School benefits from the collaboration.

How should the funds be used?

Budgeting of funds must be in accordance with the instructions presented in the document *Guidelines on Approved Expenditures* (see www.kks.se).

The funds applied for should not include overhead. This will be calculated and included in the proposed contract upon approval of the application.

The Knowledge Foundation contributes towards the financing of the Industrial Graduate School by covering costs for each doctoral student who is awarded a degree from the graduate school. Maximum funding is SEK 1.5 million for a PhD and SEK 750 000 for a licentiate, or a maximum of SEK 375 000 per year for full-time studies (4 years or 2 years respectively). Stage 1 of the Industrial Graduate School may include 6 to 15 doctoral students, i.e. maximum funding of SEK 22.5 million from the Foundation.

Funding from the Knowledge Foundation

The Knowledge Foundation's funds should be used to finance doctoral students and their work in the Industrial Graduate School and to cover certain operational costs, e.g. management and administrative functions or shared activities within the framework of the graduate school. Of the funds requested from the Knowledge Foundation, no more than one third may be used for the operation of the graduate school, and no more than two thirds may (regardless of the type of employment) be used for doctoral salaries, for supervisors, and to cover other direct costs for doctoral students. The Knowledge Foundation provides funding only to doctoral students who are awarded a degree from the new HEI. It is possible to transfer part of the Foundation's funding to the

participating companies to contribute towards covering the salaries of doctoral students.

Funding from the Knowledge Foundation is disbursed over a 6-year period (for Stage 1).

The Graduate Schools' project period for graduate students admitted during the stage in question should be planned to cover a maximum of 6 years.

Please note that costs incurred before the Knowledge Foundation signs the contract cannot be accepted.

The application must present the total budget, including all planned costs for the Graduate School and all financing commitments by the parties involved. The budget must present all direct costs of the Graduate School.

HEI involvement

The Knowledge Foundation requires the HEI to co-finance the Graduate Schools. This applies to the research environment of which the Graduate School is a part and any costs related to enhancing the Graduate School, e.g. post docs, visiting professors, and international exchange. The HEI itself determines what comprises its planned co-financing.

Business sector involvement

By “business sector”, the Knowledge Foundation refers primarily to private companies. The concept, however, may include companies under public ownership that are active in competitive markets and where the company finances its operations in the same manner as private companies. Hence, public subsidies or fees may not constitute a significant part of the company's revenues. None of the organisations may be solely administrative enterprises. Primarily they must produce goods or services. The companies must operate in Sweden to the extent that their input provides value for co-production and they have the potential to integrate the results from co-production into their organisation here.

For information on co-production, see www.kks.se.

The application must describe and explain the contributions from the business sector. In companies with fewer than 10 employees or less than SEK 10 million in annual turnover (based on the most recent annual report), the conditions for co-production in the project must be very clearly described.

If any economic or personal links exist between the involved companies, between any company and HEI, or between any company and individual researcher(s), this must be disclosed. The project plan must clearly indicate any personal conflicts of interest, and the individual's various roles in the company or HEI must be fully described.

The business sector's total commitments of in-kind contributions and/or direct financing should at least match the sum contributed by the Knowledge Foundation.

Contributions by companies may include salary costs for doctoral students in cases where they are employed at the company, or cash to the HEI for doctoral students employed there. In addition to that, the in-kind contributions from the company may include e.g. mentoring costs, reimbursement for educational contributions to course programmes, and other inputs which are anticipated to be of value to the doctoral students and the development of Graduate School.

General rules are described in the document *Guidelines on Approved Expenditures* (see www.kks.se).

Summary of programme design and business sector involvement

Alternative development of Industrial Graduate Schools	
One stage:	6 to 15 doctoral students*
Two stages:	Total 10 to 20 doctoral students
• Stage 1	6 to 15 doctoral students
• Stage 2, after 2 years.	Minimum 4 doctoral students
Companies participate by	
• Covering salary costs for doctoral students	
• Supervising/mentoring doctoral students	
• Active participation in own research project/doctoral project, as well as Industrial Graduate School teaching, and other activities	
Companies' joint contribution	
• In-kind and/or cash contribution	
• Total contribution must match the funding from the Knowledge Foundation.	

* A doctoral student corresponds to either one (1) doctoral degree or two licentiate degrees.

Formal requirements

An application must meet the following requirements before the Knowledge Foundation will consider it for evaluation. If the application does not meet the following requirements, it will be rejected without further evaluation.

- The project must be in line with the purpose and objective of the call.
- The applicant HEIs must be authorised to award postgraduate degrees in the field addressed by the Graduate School.
- If any economic or personal links exists between the involved companies, between any company and HEI, or between any company and individual researcher(s), this must be disclosed on the application form. For example, ownership of shares, board memberships, employment/consultant work should be specified.
- Budgeting of funds must be in accordance with the instructions presented in the document *Guidelines on Approved Expenditures* (see www.kks.se).
- Of the funds requested from the Knowledge Foundation, no more than one third (max SEK 500 000 per doctoral student) can be used for the operation of the graduate school, and no more than two thirds (max SEK 1 million per doctoral student) can be used for doctoral salaries, for advisors, and to cover other direct costs for doctoral students.
- The Industrial Graduate School must include a contribution from the business sector of at least the same amount as that requested in the application to the Knowledge Foundation.
- The application must clearly describe the involvement of the companies.
- The application should include pledges from companies to contribute. The sum of the pledges must correspond to at least 60 % of the doctoral students.
- The vice-chancellor must sign the application.
- The earliest starting date for the project: 2015-03-01. The latest starting date for the project: 2015-10-01.

No additions or modifications to the application will be approved after submission of the application.

Evaluation

Funding decisions are made by the board of the Knowledge Foundation, based on recommendations from the external evaluation panel and the CEO.

The secretariat of the Knowledge Foundation reviews the applications to determine if the application complies with the formal requirements.

International experts will review the scientific quality of the Graduate School in question. The Knowledge Foundation's external evaluation panel will meet representatives of the proposed Graduate School at a hearing. After the meeting the panel will submit its recommendation to the Foundation's CEO.

The external evaluation panel makes an overall assessment of the proposed doctoral school based on the following aspects and criteria:

Evaluation criteria

Scientific quality:

- How strong is the research environment in this area at the HEI(s) applying?
- What is the scientific level of the researchers/research environment?
- To what extent is the proposed research agenda for the Graduate School realistic, clear, and relevant in relation to the state of the art?

Benefits to the business partners:

- What are the needs of the business sector for greater research expertise and new knowledge in the area in focus by the Graduate School?
- How well do the business partners describe their reasons for participating?

Expected results and effects:

- How important is the direction and implementation of the Industrial Graduate School to the HEI's:
 - Postgraduate education in the area?
 - Basic education, at both the basic and advanced levels?
- To what extent will the Industrial Graduate School have an impact on strengthening the research environment?
- How is the Industrial Graduate School expected to contribute towards strengthening the research expertise of the business sector in the field?

Implementation:

- Quality as regards co-production, i.e. the HEI's and business partners' commitment, motives, and qualifications for participating?
- How well does the application describe company participation in the Industrial Graduate School?
- To what extent do participating companies actively contribute to the implementation of the Industrial Graduate School (e.g. supervising, course development, teaching)?
- Is the management and organisation of the Graduate School well described?
- Is the plan for the Graduate School realistic in relation to available resources?

Notification of interest

Higher education institutions (HEIs) that intend to submit an application for funding for an Industrial Graduate School must notify the Knowledge Foundation via a *notification of interest*. The notification of interest is a prerequisite for submitting a full application.

- The notification of interest must not exceed 3 pages and must be submitted to info@kks.se no later than 2014-05-22.
- The notification of interest should be written in English.
- Attached to the notification of interest must be the CV for the main applicant or project manager.
- The vice-chancellor must sign the notification of interest.

The notification of interest provides the basis for the Knowledge Foundation's applications review process. This is particularly important when recruiting international experts to evaluate the applications. To facilitate peer recruitment, the applicant is requested to suggest two international (non-Swedish) experts qualified to evaluate the final application.

A notification of interest does not serve as any basis for evaluating a project.

Application

The Knowledge Foundation uses an online application process. Applications are submitted via the Foundation's website, www.kks.se.

To use the online application service, applicants must create a user account or use a pre-existing account with the Knowledge Foundation.

Application documents consist of electronic forms and appendices that can be uploaded online. Special forms must be used for some appendices. The forms can be downloaded from the Foundation's website, www.kks.se, or from the application portal.

Applications should be written in English to enable international peer review.

The appendices must include the following:

1. Description of background, needs profile, and prerequisites for the Graduate School (max 20 pages)

- Describe the orientation of the Graduate School based on a needs analysis from a national and international perspective.
- Describe the research in the area of relevance for the Graduate School.
- Describe, from a national and international perspective, the position held by the HEI as regards research in the area.
- Describe the co-production between the academic and business sectors and how it will enrich the research environment.
- Describe the business sector's needs and benefits regarding the Graduate School and the companies' reasons for participating.
- Describe the Graduate School's significance regarding the HEI's development of research and doctoral education.
- Describe the Graduate School's collaboration with education.
- Describe the HEI's, business sector's, and Knowledge Foundation's contributions in funding the Graduate School.

Appendix 1 should include a table of contents.

2. Operational plan (model, max 6 pages)

A summary of the operational plan to implement the Graduate School must be presented based on the structure in the model. If the plan is to develop the Industrial Graduate School in two stages, this must be reported. The plan for Stage 1 must be described in detail according to the model, while the plan for Stage 2 only needs to be outlined.

If the Foundation decides to fund the application it may request the HEI to develop and supplement the operational plan.

3. Qualifications

Include CVs from key individuals from both the HEI (project manager and researchers) and the business partners, including a list of the most important publications of relevance for the Graduate School (max 2 pages per person).

4. Project budget (appendix form, only the Foundation's appendix form can be accepted)

The project budget must include a clear and transparent accounting of the total costs of the Graduate School, including the business sector's costs, planned costs presumed to be financed by the Knowledge Foundation.

5. Company appendix with signatures

Companies that have confirmed their participation in the Graduate School must document this with a letter of intent signed by the CEO or official representative of the respective companies. The letter must describe the financial commitment, the company's input, the role of the Graduate School, and the company's reasons for participating. The letter must also specify the number of employees (for companies with fewer than 10 employees or annual turnover below SEK 10 million), the corporate identification number, and the annual turnover based on the annual report for the past 3 years.

6. Signatures from the HEI (appendix form)

The vice chancellor must sign the application. Unsigned applications will not be processed.

Timetable and decisions

- The Knowledge Foundation must receive the notification of interest no later than 3 p.m. (15:00) on 2014-05-22.
- For HEIs that have submitted a notification of interest, the Knowledge Foundation will arrange an informational meeting on 2013-06-12.
- The Knowledge Foundation must receive the application no later than 3 p.m. (15:00) on 2014-09-11.
- Soon thereafter, all applications will be reviewed for compliance with formal requirements. No later than 2014-10-01 the CEO of the Knowledge Foundation will determine whether an application should be rejected due to non-compliance with formal requirements.
- International experts will review the scientific quality of applications during October.
- A hearing with applicants will be held at the end of October or in the beginning of November 2014.
- Thereafter, the external evaluation panel will submit its final recommendation to the CEO of the Knowledge Foundation.
- In December 2014, the Knowledge Foundation's Board of Directors will render its decision regarding funding.