

Revised work programme for the Programme for User-driven Research-based Innovation

Adopted by the Research Board of the Division for Innovation on 10 April 2014

Programme User-driven Research based Innovation – BIA



Revised work programme for the Programme for User-driven Research-based Innovation (BIA)

Adopted by the Research Board of the Division for Innovation on 10 April 2014 © The Research Council of Norway 2014

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The report can be ordered at: www.forskningsradet.no/publikasjoner

or green number telefax: +47 800 83 001

English translation: Carol B. Eckmann Design cover: Design et cetera Photo/illustration: Shutterstock

Oslo, September 2014

ISBN 978-82-12-03360-3 (pdf)

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Work programme for the BIA programme

1. Summary

The Programme for User-driven Research-based Innovation (BIA) promotes the capacity and willingness of Norwegian trade and industry to innovate by providing support for R&D projects based on companies' own strategies and challenges, independent of field or topic. The BIA programme comprises an open competitive arena for grants to Innovation Projects for the Industrial Sector, where the key criteria for awarding funding are research content, level of innovation, potential for value creation, and relevance and benefit to society. The programme is the Research Council of Norway's primary instrument for ensuring that funding is available to all segments of Norwegian trade and industry seeking to become more innovative, competitive and internationally oriented through R&D. The BIA programme coordinates its activities with the SkatteFUNN tax incentive scheme and other programmes and instruments targeted towards R&D-based innovation within and outside the Research Council.

The BIA programme's most important activity is organising calls for proposals for research-based innovation projects. The programme will also employ project types and support schemes that can lay the foundation for future innovation and value creation in both the short and the long term. The programme seeks to award funding to ambitious, resource-intensive projects in which project participants demonstrate a major commitment to achieving good results. The programme actively promotes collaboration between companies and research groups and among companies, both nationally and internationally. The programme will implement creative and experimental work methods to help to develop optimal instruments for realising the value creation potential of intensified investment in research by Norwegian trade and industry. The programme also emphasises the need to disseminate research findings and boost understanding of the importance of industry-oriented research.

2. Background

Strategic perspectives

Since its launch in 2005, the BIA programme has become a key funding instrument for industryoriented research used by the Research Council of Norway. The programme was established as part of the follow-up to the government white paper *Commitment to Research* (Report No. 20 (2004–2005) to the Storting), which emphasised that Norwegian trade and industry needed to increase R&D investment in order to fulfil the potential for value creation inherent in research-based innovation. An analysis carried out in connection with the preparation of the white paper concluded that a large portion of the R&D conducted by industry did not lie within the thematic priority areas defined in the existing Research Council programmes. A decision was therefore taken in 2005 to launch a new programme concept termed the Programme for User-driven Research-based Innovation (BIA). The BIA programme was to provide an open competitive arena for project funding, in which no thematic areas or branches of industry were to be assigned priority in advance, and in which funding was to be granted based on an assessment of the proposed projects' research content, level of innovation, potential for value creation, and relevance and benefit to society. Companies were to be given the freedom to design projects based on their own strategies and R&D needs and were not to be confined to specific thematic priority areas or topics. The BIA programme would thus complement existing thematic and sector-oriented programmes and strengthen the Research Council's role in promoting innovation and competitiveness in Norwegian trade and industry. The BIA programme was also intended to complement the new SkatteFUNN tax incentive scheme by making it possible to realise more ambitious projects and carry out more comprehensive R&D activities.

After eight years of activity, it is clear that the BIA programme concept is successful in terms of fulfilling its main purpose. Ongoing analysis by the Møreforskning research institute of the userdriven research funded by the BIA programme shows that the project portfolio is at the forefront in terms of project quality, financial and socio-economic returns as well as the mobilisation of private capital to fund R&D investments within companies. The programme has developed a diversified portfolio of projects in a wide range of areas and with highly varied scientific content. There is a broad spectrum of companies participating in the programme, ranging from well-established firms to research-based start-up enterprises and companies with little R&D experience. The programme's open arena – with no thematic restrictions – is highly valued by trade and industry, and has made it much easier for companies to find the relevant funding sources available at the Research Council.

New challenges

Over the years, the BIA programme has evolved from being considered a supplement to the Research Council's thematically-oriented programmes to being recognised as the Council's primary instrument for user-driven research. A further refinement of the BIA programme must be coordinated with other programmes and funding instruments at the Research Council, not least when considering the launch of new initiatives. The BIA programme provides an excellent starting point for promoting innovation in areas of trade and industry where societal challenges and changes are opening up new market opportunities, and particularly in areas where research needs extend across disciplinary boundaries and the key to value creation lies in new types of collaboration.

The diversity of the BIA project portfolio and the broad range of the programme's target group present an ongoing challenge to continuously adapt the working methods and means for mobilisation, applicant guidance, project selection and project follow-up.

3. Objectives of the programme

The BIA programme is designed to help Norwegian trade and industry to promote innovation and value creation in a competitive framework that is increasingly being shaped by international markets and global societal challenges.

The BIA programme is targeted towards Norwegian companies that are motivated to carry out resource-intensive R&D projects to generate innovation. The programme supports both the development of new, knowledge-based trade and industry and the renewal of established trade and industry. The programme's support schemes are subject to international regulations for public R&D funding. These entail limits on the percentage of funding that can be awarded as well as a requirement that funding from the Research Council is to facilitate R&D activity and lead to R&D results that companies could not otherwise be expected to achieve on their own. The BIA programme is to provide

funding for companies in areas not covered by the Research Council's overall portfolio of programmes and instruments.

Primary objective

Within the scope of its responsibility, the BIA programme seeks to promote the greatest possible value creation in Norwegian trade and industry through research-based innovation in companies and the R&D groups with which they cooperate.

To reach this objective, the activities of the programme will be focused on achieving the following outcomes::

- Increased investment in research-based innovation in trade and industry;
- A higher level of aspiration and expertise in the companies' own R&D activity;
- Higher quality in the national R&D groups¹ used to generate innovation in trade and industry.

Secondary objectives

Through project funding and other measures, the programme will promote:

- New or greatly improved processes, products, services and business models;
- Greater cooperation on innovation between companies and R&D institutions and among companies;
- New international partnerships and more internationally competitive trade and industry;
- New participants and collaborators in R&D projects;
- Increased awareness among companies and investors about R&D as a competitive advantage;
- Use of private capital to generate innovation in companies;
- Development of innovation-oriented R&D expertise in Norwegian trade and industry;
- Development of industry-relevant expertise in Norwegian R&D institutions.

The success of the BIA programme depends not only on the results achieved by the projects receiving funding, but also on the impact of project participation, project implementation and other programme measures and on the capacity of companies and R&D groups to innovate, build competence and cultivate valuable partnerships. The programme will define success indicators that will be followed up through the administration of the programme as well as in annual action plans.

4. Priority research tasks

The BIA programme is one of the largest programmes at the Research Council. It is important to the allocating authorities and the Research Council alike that the programme is an effective and crucial funding instrument for mobilising Norwegian trade and industry to increase investment in R&D as well as for demonstrating the significance of R&D for innovation and competitiveness.

¹ R&D groups at higher education institutions and independent research institutes.

The BIA programme's open competitive arena for innovation projects is its most important activity and its trademark. This arena must be further developed to ensure that the programme continues to attract high-quality grant proposals from applicants across the entire breadth of its target group and is able to recognise R&D project concepts that have been defined by the companies' specific needs and new possibilities for value creation. To succeed, the BIA programme must provide attractive and stable funding to Norwegian trade and industry. It is vital that the programme receives adequate allocations to be able to issue annual calls for proposals for innovation projects with a budget framework that is large enough to mobilise companies to seek funding. The programme will therefore award most of its available funding to research-based innovation projects in trade and industry and attaches importance to:

- Funding projects that require the mobilisation of expertise and resources beyond those possessed by the companies on their own and that entail a higher level of risk than the companies may be expected to take on alone;
- Making use of funding criteria and application requirements that allow companies to focus on their own strategies and priorities when designing projects;
- Employing a selection process in which the best quality projects are selected, independent of thematic area or branch of industry;
- Ensuring that projects that have received funding continue to maintain focus on value creation and serve as good examples of research-based innovation.

The BIA programme will typically award funding to ambitious projects that place extraordinary demands on the project participants, such as projects that require binding R&D cooperation over a period of several years. The content and cooperative relationships involved in this type of project take time to develop. The programme will therefore seek to encourage such processes, for example by providing support for applicant conferences and further development of project concepts. As the programme does not have a specific industrial or technological focus, it is important to establish meeting places that promote the exchange of experiences, network-building and collaboration. Industry organisations and clusters can play a vital role in this context. This will be particularly relevant for new areas with great potential for industrial development and areas that require more extensive collaboration and more integrated approaches than can be expected to be established in an ordinary project application process. These activities will enable the BIA programme to build a balanced project portfolio in relation to its broad target group and thematically neutral framework. The methods used for project selection will be reviewed on a continual basis to ensure a fair competition for funding among the various categories of applicants, project participants and subject areas.

In addition to innovation projects, the BIA programme will employ project types that can lay the foundation for future innovation and value creation in both the short and the long term. In particular, the programme will experiment with new working methods and forms of support that can help to trigger innovation in areas which thus far have limited realisation of industrial potential or little tradition for research-based innovation. Knowledge-building projects will be employed to generate new competency and promote collaborative relationships between trade and industry and R&D groups, thereby paving the way for future R&D activity in companies. However, the knowledge needs of the BIA programme's target group are too extensive and diverse for the programme to operate the same type of open arena for funding of knowledge-building projects as it does for innovation projects. Other funding instruments and support schemes at the Research Council, such as the thematic research

programmes and the Centres for Research-based Innovation (SFI) scheme, will be more significant for long-term competence-building in many relevant disciplines than the BIA programme itself.

The programme will continue to refine processes and working methods to ensure that applicants and project participants achieve optimal results from their involvement in various phases under the programme. This will include:

- Providing advice on project concepts and project outlines to help to qualify the companies' R&D processes;
- Arranging contract negotiation and start-up meetings to help to reinforce the strategic basis for the R&D projects within the companies and to facilitate effective cooperation between project participants;
- Following projects up closely via milestone meetings to help to maintain focus on innovation potential and realisation of value creation and to incorporate these as the basis for prioritising R&D activities;
- Funding networking measures to create meeting places for projects and project participants to exchange experience and disseminate research results and best practice, thereby laying the foundation for new initiatives and collaborative relationships.

The programme will also look into how the various types of project funding can be further developed or supplemented with specific measures to promote more rapid commercial implementation of project results and/or optimal use of resources.

5. International cooperation

The task of the BIA programme is to support companies in performing R&D activities that will lead to value creation and increased competitiveness in international markets. These R&D activities must therefore have an international dimension. The programme will emphasise this dimension when prioritising projects under its own calls for proposals. Companies whose R&D challenges require collaboration with international research groups are to benefit from incorporating such cooperation into their projects. The programme will make active use of the EUREKA scheme and bilateral R&D cooperation schemes to provide companies with a wide array of opportunities to establish binding project collaboration with strong international partners. The programme will also provide project funding to create favourable conditions for Norwegian companies to participate in international R&D programmes that can enhance their internationalisation capability, innovation capacity and competitiveness.

The BIA programme will focus special effort on helping Norwegian R&D-intensive SMEs to benefit optimally from the Eurostars Programme, under which project financing is shared by the Research Council and the EU. The BIA programme will announce Eurostars calls for proposals alongside its own calls, and will allocate funding to Eurostars projects on the basis of an overall prioritisation in which project quality and anticipated benefits will be assessed on a par with corresponding criteria under ordinary BIA programme calls. The BIA programme may also award funding for Norwegian companies' participation in projects established under other international or bilateral funding arrangements.

Horizon 2020 is the most comprehensive international R&D arena for the BIA programme's target group. The criteria, competitive focus and project follow-up used under the programme will be designed to qualify BIA-funded projects for participation in relevant areas of Horizon 2020. In cooperation with the Research Council's advisory services for Horizon 2020, the BIA programme administration will implement information and mobilisation measures to enable the target group to take advantage of opportunities for international project funding and network-building. The programme will also provide support to enable Norwegian players to become involved and position themselves in international networks that participate actively in international R&D arenas.

6. Communication and dissemination activities

Communication activities under the BIA programme must be an integral part of the Research Council's general strategy for disseminating information about and profiling user-driven R&D and research-based innovation. The BIA programme will therefore actively contribute to the Research Council's communication strategy targeting industry organisations, the government ministries, politicians, the media, public opinion and the like.

The BIA programme also has a great need for effective, targeted communication activities to mobilise R&D investment and awareness about R&D-based innovation within its diverse target group. These communication activities must be differentiated and tailored to the various recipients, such as:

- Companies that are already in a position to generate world-class R&D-based innovation;
- Small, relatively new, research-intensive companies;
- Established companies that need motivation to invest greater resources in R&D in order to realise their potential for innovation;
- Norwegian research groups that are currently involved as or could potentially become strategic R&D partners for companies.

The primary message to be conveyed to all segments of the BIA programme's target group is:

- The BIA programme awards funding to high-quality projects with high value creation led by ambitious companies, i.e. companies with the ability, willingness and motivation to innovate. This will ensure that BIA project funding gives high socio-economic returns. "The BIA programme creates value."
- The BIA programme administers an open competitive arena for innovation projects, in which importance is attached to high-quality research together with unambiguous relevance for project participants. Participation in a BIA-funded project is a mark of quality. "The BIA programme is quality-conscious."
- The BIA programme has effective processes for project selection across disciplines and sectors. The programme has good routines for project follow-up. "The BIA programme is professional."
- The BIA programme is proactive and has an outward focus, offering more than financial support, for example by creating meeting places and serving as a think tank and test laboratory for industry-oriented research. "The BIA programme is progressive."

Although the BIA programme does not have a specific thematic focus, its size dictates that it will have a large concentration of projects that would typically be viewed as part of a specific industry or technology. It will therefore be relevant to profile BIA-funded projects in these contexts as well, so that the projects can inspire investment in research-based innovation among players that identify themselves as being part of a certain industry or technology area.

7. Budget

By its design and mission the BIA programme must have basic funding on a large enough scale to provide a permanent incentive for increased R&D investment within its comprehensive sphere of responsibility. If the BIA programme is to be considered a relevant partner for realising R&D projects that involve significantly higher risk and greater complexity than companies would be capable of handling on their own, it must be in a position to issue calls for proposals with substantial funding on a regular basis. A budget at the level of the 2014 budget (NOK 480 million) will allow the programme to issue one major funding announcement for innovation projects each year. This provides a stability that is essential for trade and industry. The budget must also be of a magnitude sufficient to prevent a situation in which the programme is forced to reject a high proportion of good project proposals. Continued budget growth is required if the programme is to respond to the need for increased R&D activity, i.e. if the scope of the programme is extended to encompass more innovation across established industries or disciplines, or to deal with pressing societal challenges. In keeping with the Solberg Government's policy platform and the Research Council's input to the Government's long-term plan for research, the BIA programme proposes to increase the budget to NOK 800 million by 2019.

Given sufficient budgetary parameters, the BIA programme would be able to carry out tasks beyond maintaining an open competitive arena for innovation projects. For example, a relevant task in this context would be to provide project funding enabling Norwegian companies to participate actively in international R&D programmes such as the Eurostars Programme.

With extra allocations, in addition to the necessary basic funding, the BIA programme can undertake specific tasks such as time-limited initiatives to build a portfolio of innovation-oriented activities in new areas with major industrial potential.

8. Coordination with other related instruments

When it was launched, the BIA programme was defined as a complementary initiative to existing thematic research programmes at the Research Council and to the SkatteFUNN tax incentive scheme. In many ways, this is still the role of the BIA programme, but its complementarity is managed in an increasingly dynamic way. This is evident in the continually shifting interface between the BIA programme and other programmes, as existing thematic programmes are concluded and new ones are planned. Interaction between the BIA programme and other programmes is also becoming more extensive. In the past, most interaction was related to advising applicants and directing grant applications to the correct programme. Now, more effort is being invested in joint information and mobilisation activities and in coordinated planning with respect to the timing and delimitation of calls for proposals.

This development has been reinforced by the Research Council's ambition to make the opportunities available for trade and industry accessible via a common web portal through which the Research Council administration and systems can give applicants more comprehensive guidance to help them to choose the proper funding announcements and funding instruments. In connection with this, the BIA programme will continue to develop its funding instruments and cooperation with other programmes in order to provide a better service to companies during their initial contact with the Research Council. This may include rapid feedback on project concepts, as well as professional advice and financial assistance for the development of more comprehensive project initiatives.

On several occasions, the BIA programme has offered the use of its procedures for application processing and prioritisation in connection with special funding announcements (which were not part of the programme's ordinary budget), thereby facilitating the effective handling and quality assured processing of grant applications submitted under more specific initiatives. This experience has equipped the BIA programme to take general responsibility for preparing and implementing time-limited and thematically-restricted industry-oriented research initiatives. The BIA programme has a collaboration agreement with the Biotechnology for Innovation programme (BIOTEK2021) to administer BIOTEK2021 funding for Innovation Projects for the Industrial Sector. The BIA programme can enter into similar types of cooperation with other programmes as well.

Many of the companies participating in BIA-funded projects can also benefit from support schemes under Innovation Norway (e.g. equity capital, establishment support, support for internationalisation activities) to ensure utilisation of project results. On an international level, the BIA programme will focus on collaboration with EU-funded programmes.

9. Organisation

The breadth of the BIA programme's target group and project portfolio must be reflected in the composition of the programme board and programme administration. The BIA programme board consists of seven appointed members and two permanent deputies, who attend all meetings and in practice take equal part in the programme board's work. With nine members, the programme board can provide the desired scientific and industrial diversity.

The BIA programme administration must be also comprised of members that can manage the diversity of grant applications and projects as well as facilitate interaction with a large, highly diverse target group. The programme administration is required to ensure coordination with other relevant programmes and activities within and outside the Research Council. The programme administration should therefore include members who also have other responsibilities at the Research Council. The programme administration has a special responsibility for finding working methods that facilitate the BIA programme's function as an open arena. Key challenges in this context will be to:

- Mobilise wide-ranging participation in grant applications, project concepts and cooperation forums;
- Encourage R&D based innovation in areas in which there is little tradition for this;
- Ensure that the competition for funding is managed in a reasonable and fair way;
- Succeed in actively following up projects with a focus on the contribution of the R&D activity to achieving value creation and innovation.

Administering a programme with the size and scope of the BIA programme is resource-intensive, both with regard to capacity and expertise. It is therefore necessary to develop smart, efficient working methods and to make the most of the resources possessed by the target group. This will require allocating funding for network-building, project initiatives and exchange of experience.

The management model used by the BIA programme is based on the primary objective, main outcomes and secondary objectives defined for the programme. A set of success indicators will be developed to indicate directly or indirectly the degree to which the programme is achieving its objectives as well as how results are influenced by the activities of the programme.

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Published by: © The Research Council of Norway User-driven Research based Innovation – BIA www.rcn.no/BIA

Cover design: Design et cetera AS

Oslo, September 2014

ISBN 978-82-12-03360-3 (pdf)