



RISE Research and innovation strategy

Part 2 Strategy Landscape, Research and Innovation
Processes

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1 Introduction

RISE's Research and Innovation Strategy consists of two parts:

- Part 1 – Strategic Initiatives for Knowledge Development
- Part 2 – Strategy Landscape, Research and Innovation Processes

This document is Part 2 of the RISE Research and Innovation Strategy, and it focuses on the collective strategy landscape for our research and innovation processes.

1.1 A holistic strategy

The Research and Innovation Strategy has been formulated with the objective of facilitating a proactive approach to research and innovation. Our mission and vision are the foundation of our business and operations. In line with this, the strategy was formulated with the following objectives:

- A strategy for RISE to achieve its vision of being:
A leading international innovation partner
- A strategy for RISE to contribute to:
Knowledge building and innovation for a sustainable and competitive society and trade and industry
- A strategy for us to strengthen our:
Identity as a research institute and innovation partner

The long-term strategic direction is for us – based on our role as **Research and Innovation Leader for Sweden** – to be able to strengthen competitiveness, innovation and sustainable growth, create an impact in the innovation system, and support societal development from a broader perspective. **RISE can make a difference.**

In order for us to work proactively, our R&I strategy establishes the framework for Group-wide priorities and approaches. Since R&I permeate our entire business and operations, all strategies in the organisation are included within the R&I strategy. It defines the structure of how we jointly manage and respond to research and innovation needs, and how we develop our interdisciplinary skills. It provides an overview of our strategies and support functions directly related to research and innovation. It describes our most important present and future initiatives. It concerns our *ENTIRE* business, i.e. both commercial and non-commercial assignments and research.

1.2 Our mission and vision

“The industrial research institutes shall be internationally competitive and facilitate sustainable growth in Sweden by strengthening competitiveness and reform in the business community.”

Excerpt from the Swedish Research Bill 2016/17:50 (Knowledge in Collaboration)

Our interpretation of the mission is that competitiveness is based on capacity for innovation and reform, and that we, as a research institute, must serve as innovation partner to society and trade and industry (refer to Owner Directives in Appendix 1). Trade and industry constitute a section of society and, in order to work towards sustainable growth, society as a whole needs to participate in the reform process and in strengthening the competitiveness of trade and industry. Research can help resolve societal challenges if new knowledge is translated into new products and services in industry and the public sector. The transition in industry is interlinked with the transition in society, and both must be resolved from a systemic perspective where various solutions in trade and industry and the public sector interact with each other. By actively promoting reform within trade and industry, RISE also strengthens reform within the public sector, and vice versa.

We strive to be a reliable research and innovation partner, build long-term knowledge, and strengthen the expertise that will be required for trade and industry and the public sector in the future. In order to strengthen the competitiveness of trade and industry in today's global economy, we must employ an international perspective. To fulfil our mission, we work according to our vision:

RISE an internationally leading innovation partner

What does it mean to be an innovation partner?

One definition of the concept of innovation partner entails playing an active role in innovation processes and providing innovation infrastructure for social and business innovators. Being an innovation partner means that we can assume different roles in the innovation system: researchers, advisors, networkers, entrepreneurs, infrastructure developers, etc. to drive key innovation processes¹, see Figure 1. As an institute, we have the ability to combine roles as well as create new ones, which strengthens our capacity to address new challenges. Various kinds of changes result in new challenges and thus new needs for solutions for customers and partners, both explicit and implied. The question then posed governs the form the solution will take, along with the roles needed in the specific case. For more information on the innovation system and technological innovation systems (CIS), see Appendix 2.

¹ Bergek, A., Jacobsson, S., Carlsson, B., Lindmark, S. and Rickne, A. (2008a) 'Analyzing the functional dynamics of technological innovation systems: a scheme of analysis', *Research Policy*, 37, pp.407–29.

Andersson, J. and Vargas, C. (2010) Potential Roles of Technical Research Institutes for Promoting Innovation, Chalmers University of Technology.



Figure 1. As an innovation partner, we take on the roles required for resolving the challenge.

Our main focus is on application-oriented research and innovation, but we also conduct curiosity-driven research as well as market-adapted and application-based development, by assuming roles in collaborations with society, trade and industry and academia. A more detailed description of RISE's role in relation to other operators in the research system is provided in Appendix 3.

In order to support trade and industry in its development to meet future needs, we strive to be a reliable research partner in collaboration with universities and operators in trade and industry, build long-term knowledge, and strengthen skills that will be required by trade and industry in the future. To be a good innovation partner, we must also be a good research partner, which in itself means carrying out activities with different timeframes, all geared towards meeting the needs of trade and industry in the short and long terms. RISE's strategic direction involves ensuring basic knowledge development across the value chain and having a good ability to support trade and industry in implementing research results and knowledge in competitive applications in the form of new products, manufacturing processes and services.

The Research and Innovation Strategy (R&I Strategy) describes the context in which RISE serves as a research and innovation partner and how we build knowledge and innovation-supporting expertise, along with our ability to respond to the accelerating pace of global change and the challenges facing trade and industry and society.

RISE is ready to serve as Research and Innovation Leader for Sweden and to lead the way in the transition to a sustainable society for future generations.

Value proposition, differentiated within knowledge-based business

RISE collaborates as a research and innovation partner with different operators and where knowledge development and innovation-supporting activities are two fundamental elements. A common denominator in a majority of the endeavours in which RISE participates is that there is an expectation for the provision of knowledge and capabilities to support innovation. In our commercial business, our knowledge and capabilities are transformed into revenue. It can be said that RISE's business model constitutes knowledge-based business.

The provision of knowledge-based business is often complex, subtle, and abstract, while the sales and supply of services, software or hardware have a significantly higher degree of specificity.

The term ‘value proposition’ is used widely in commercialisation and product and business development. In the R&I strategy, the term relates to the fundamental reason why customers, funders, owners, etc. believe that RISE’s offers satisfy their needs. The value proposition is thus not the same as service or product offers, but is a response to the question of why a customer chooses a product or service. Our proficiency at communication and persuasion with regard to this is the reason customers entrust RISE – and not other operators – to meet their needs.

A model that illustrates how the value proposition relates to other offers, such as service and product offers, is shown in Figure 2 below.

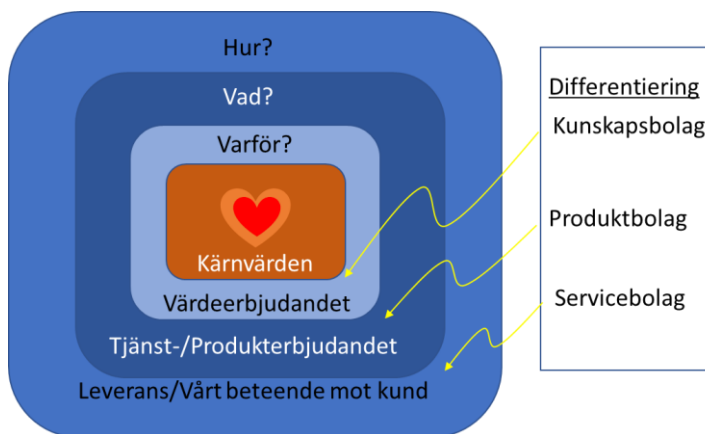


Figure 2. A model illustrating hoe the value proposition relates to other offers

The model is simplistic, but shows how knowledge-based business can be clearly differentiated from value propositions, mainly due to its provision, which is highly complex and abstract.

By communicating the value of knowledge, using customer needs as a starting point, and providing an answer to the question of “why” customers should use a technical research institute, instead of building capacity themselves, or approaching a consulting firm or university, RISE’s value is actualised and positioned in relation to competing alternatives, which differentiates RISE.

At a detailed level, value propositions look different to different stakeholders and customer groups and must be defined and quantified. At an overall level, however, RISE’s value propositions are as follows:

- Research capacities interpret and actualise opportunities in complex societal challenges and technology trends for **swifter** resolution
- RISE’s breadth **interconnects** industries, domain knowledge and relationships for **deeper** understanding of societal challenges and **greater creativity** in solutions
- **Faster** time to market, greater precision in product development and **less tied-up capital** through the use of RISE experiment and scale

Our desired position

Our mission and desired position in 2025 (approved by RISE's Board of Directors in June 2017) entail that we shall be:

- The Preferred Partner – we shall communicate that we, as an innovation partner with considerable breadth and unique expertise, can help to solve the major challenges
- The Preferred Institute – we shall consolidate our position as Sweden's Research Institute, with all that it entails regarding participation in the social dialogue and serving as a strategic dialogue partner
- The Preferred Workplace – we shall describe how we are an innovative workplace with committed and talented employees

1.3 Structure of the R&I strategy

This is the second edition of the RISE Research and Innovation Strategy. The starting point for the first edition in 2019 was to include and describe what we do and why. This edition has the additional objective of describing our strategic direction going forward and what is required to achieve our desired position in terms of the future we wish to see. The basis for this has been the ongoing work on a new strategic platform and the description of RISE's role going forward in our ambition to make a difference concerning the societal challenges Sweden faces.

Research and Innovation Strategy 2020 consists of two parts:

Part 1 – Strategic Initiatives for Knowledge Development. Describes the initiatives, organisation and structure for research and innovation-supporting offers and the choice of initiatives as an engine in our strategic work.

Part 2 – Strategy Landscape, Research and Innovation Processes maps out our different strategies. It also includes Planning and Analysis, which describes how we ascertain needs by means of intelligence studies and our own planning, and how we analyse the benefits of our work.

Target audience

The strategy is aimed at all employees working with research and innovation. It is designed to be used as a basis for strategic choices in the development of operations, e.g. in internal business planning, in the Board's annual strategy work, in dialogue with RISE Research Council, and as support when deciding on Group-wide strategic initiatives and work methods. It can also be used to support dialogue with policymakers and other stakeholder groups of importance to RISE.

2 Planning and Analysis

Planning and strategy work within the Group follow a clear annual wheel. The annual wheel is based on the annual planning for RISE's Board, RISE Research Council and research boards. As illustrated in Figure 3, the annual wheel is divided into several stages in order to plan operations at appropriate times. In this section, we describe the work involved with intelligence studies, operational planning, and strategically outlining benefits so as to generate the right support and advance in research and innovation activities.

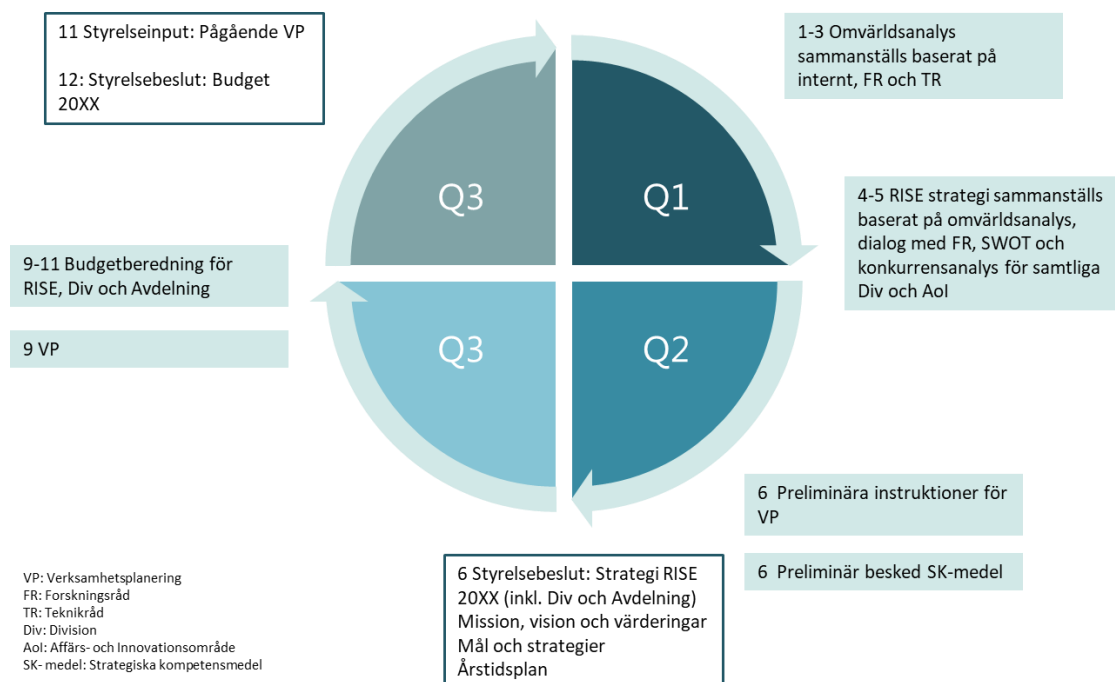


Figure 3 Annual wheel for operational planning and intelligence studies within RISE.

2.1 Intelligence studies

In order to be a strong operator in research and innovation, it is important to work in a structured manner to collect and analyse information from the world around us. RISE works actively to evaluate and analyse global trends to be able to identify and predict the needs of relevant target groups. As part of our strategy work, RISE Group Management annually produces an intelligence study that provides an overview of important trends and conditions that can be

expected to affect the business in the short and long terms. The goal is to structure the business and operations according to systematic intelligence studies and insight into what needs exist, i.e. a process where we jointly collect and analyse global information and draw strategic conclusions from it.

The intelligence study is used to:

- Validate chosen Focus Areas and prevailing truths – ensure that the areas we focus on remain relevant to our customers and research investments.
- Develop our customers and their business – through foresight and insight help our customers to make the right choices together with us and grow their business.
- Identify the future – identify, at an early stage, new ideas, streams, and trends that affect us and our partners in order to analyse and clarify the direction going forward.
- Expand expertise – continuously bolster existing skills and competences, identify new relevant skills and competences, and guide academia and trade and industry with regard to what they should focus on.

The Group-wide intelligence study comprises PESTEL perspectives (political, economic, social, technological and environmental) and is complemented by subject-specific intelligence studies carried out within the Divisions and Business and Innovation Areas. In addition to this, future scenarios are developed.

2.2 Planning

Planning work in the operations is aimed at clarifying/delineating goals and strategies at all organisational levels. This is carried out annually in the divisions and Group-wide functions and summarised for RISE's Board of Directors as a basis for prioritisation during the year. The starting point is the Group's vision, business concept, desired position and goals, which are then broken down into key areas and key activities, both Group-wide and according to division/function.

The business plan is a consolidated plan for the management and development of research and innovation operations, skills development, communication, sustainability work, etc. i.e. the business as a whole. The plan shall include strategic choices and priorities to help RISE reach the desired position for 2025.

2.3 Impact evaluation

By following up on and clarifying our results and impact, we can stimulate increased utilisation of our research results and highlight the impact that operations produce and contribute to from

short and long-term perspectives. Furthermore, by better understanding the dynamic relationships between operators and factors affecting the innovation process, we can better evaluate and prioritise our efforts and initiatives. To fulfil our mission, we work with impact measurement in several ways owing to our multifaceted business.

Strong competitiveness and reform in trade and industry and the public sector

An important objective for us is to contribute to the competitiveness and reform of Swedish trade and industry and society. The extent to which offers produced by RISE are used by companies serves as a measure of their appeal to trade and industry. By measuring revenue from trade and industry and how much research we conduct together with customers, we obtain an idea of this and can compare it with historical results. In revenue measurements, we distinguish between SMEs, international companies and national companies in order to gauge developments in these three areas.

We have specific initiatives geared towards SMEs along with regional initiatives. Every year, we measure the number of SMEs that we help – categorised according to their current development phase: Start-Up, High-Tech, Fast Grower, Established and Stable SME, and SME in Transition. Revenue from regional initiatives is also measured. There is demand for our participation in these initiatives.

By understanding our strategic initiatives and the needs of the outside world, we can reform our business, establish new initiatives, and decommission areas for which global needs have changed.

Internationally competitive institute

One of the goals is for the business to be internationally competitive. International operations at RISE are mainly conducted along two lines. One relates to our participation in international research programmes, notably the EU's Horizon 2020 framework programme. The second is through assignments for foreign companies carried out both in Sweden and at the companies' subsidiaries abroad. By measuring our revenues from the EU framework programme and assignments from foreign companies, we get an idea of our development.

Publications to disseminate research results

An indirect effect of our work is that others can utilise our research results. To disseminate our results and to enable others to utilise them, we publish our articles in DiVA (Digital Scientific Archive). DiVA is a publishing and archiving platform for research publications and student papers used by 40 publicly funded universities and government agencies in Sweden and the other Nordic countries. We publish our results regularly and, each year, we collate the quantity and type of publications.

We have also worked with benchmarking regarding the impact of our publishing according to the CWTS model through a Collaborative Initiative within EARTO. The results clearly show that co-publishing with industry has the greatest impact in the form of references, i.e. the use of published results.

Patents

RISE institutes aim to, as far as possible, transfer patents arising from R&D projects with industry to the companies involved, thereby enabling them to strengthen their competitiveness and have full control over their knowledge. This differentiates RISE from many other research institutes (e.g. Fraunhofer, for which the process of creating new patents is an important aspect of their business model) and is perceived as positive by many of our customers.

Our ambition to enable customers to own joint patents notwithstanding, RISE institutes utilise opportunities to take out patents for results in research projects where companies abstain or in cases where knowledge is generic and important to us in the further development of our business. For this reason, we collate our patent activities annually, i.e. the number in which we participate and the number for which we have applied. We have established a Technology Transfer Office (TTO) to develop the existing patent portfolio and to offer professional support in the transfer of knowledge through start-ups, incubators and similar (for more information on this, see below and Appendix 2).

Innovation Partner Capacity and Customer Satisfaction Index.

Through our annual customer surveys, we measure our “Innovation Partner Capacity” and Customer Satisfaction Index. The index serves as a quantification of the responses to questions about RISE’s customer promise as well as responses to the question “Consider an innovation/development partner that is perfect in all respects – how close to or far from this perfect partner is RISE?”.

Sustainability

RISE’s sustainability work is well rooted in the organisation and is conducted with a focus on both internal and external aspects. The work is based on the RISE Sustainability Strategy comprising two strategic areas called “Our Offer is Sustainable” and “A Sustainable RISE”. The sustainable offer means that we will engage in sustainable business with our customers and partners and continue our work to establish the organisation as an important operator in society and trade and industry. Together with our most important stakeholders and focusing on innovation, we can create offers to achieve a more sustainable society and be an arena for social development and cooperation. “A Sustainable RISE” focuses on our ambition to be an attractive workplace where our employees thrive. At the same time, we will continue to incorporate sustainability issues into our operations and show that sustainability is a success factor for a modern research institute. To measure our sustainability work, we engage in dialogue with stakeholders and work with sustainability certification. In addition, we calculate our own carbon footprint.

3 Strategy landscape

3.1 RISE Group strategies

The Research and Innovation Strategy is the superordinate strategy for the entirety of RISE's business and operations. This means that several of our business and operational strategies are included in the Research and Innovation Strategy. Appendix 4 contains an overview of RISE's strategies and the table below (Table 1) summarises the Group-wide strategies and their individual objectives. For detailed descriptions of our strategies, please refer to the respective documents.

Table 1. RISE's Group strategies.

Strategy	Description	Areas/Activities
Customer Strategy	<p>RISE's customer strategy is primarily geared towards achieving our goals in the commercial business, and it is based on RISE's overarching goals and strategies.</p> <p>The customer strategy aims to ensure that we can effectively meet customer needs within the framework of the services RISE provides or can provide, through active market segmentation and prioritisation of customers and resources to cultivate customer relationships.</p>	<p>The four parts of the customer strategy:</p> <ul style="list-style-type: none"> I. Market communication II. Market segmentation III. Sales organisation IV. Customer and market prioritisation
Strategy for International Research and Innovation Collaboration	<p>The strategy provides a focus for RISE's international position. International collaborations shall effectively contribute to achieving RISE's vision and further strengthen our relevance to customers and partners. It shall strengthen our knowledge development and innovation infrastructure in the long term, creating the right conditions for new offers and more knowledge-based business. Through the strategy, we develop our role for Sweden as an innovation nation on the global stage.</p>	<p>Guiding principles</p> <p>Work methods and processes</p> <p><i>Specific policy for collaboration in sensitive markets (under development)</i></p>
International Sales	<p>International sales enable us to be active in business areas where foreign customers are a prerequisite, to scale</p>	<p>Selective customer platform</p> <p>Strategic networks</p> <p>Key Account Management</p>

	up profitable business and foster international innovation partnerships. We strengthen our capabilities, customer relationships and finances when we sell to select international customers and segments.	Efficient Processes
EU Strategy	The EU strategy aims to fulfil the mission assigned by the State and meet expectations from trade and industry with regard to increasing opportunities to participate in and benefit from EU collaborations. Also included are diverse activities geared towards producing impact and strengthening the RISE brand in Europe as an attractive R&I collaboration partner, for which our Brussels office has an important role to play. In addition, to use EU participation for strategic knowledge development and innovation-supporting activities and to establish leverage between the EU arena and the national arena.	<p>Influence the EU's various R&I-related programmes</p> <p>Strengthen the RISE brand as an attractive research operator in the EU</p> <p>Policy development at EU level</p> <p>EU projects as part of the strategic R&I portfolio</p> <p>EU-national interaction</p> <p>Mobilisation in strategically selected areas</p> <p>Strengthen internal collaboration on EU-related issues and activities</p>
Regional	The regional strategy aims to support our vision as a world-class innovation partner, as well as our overarching goals. It aims to strengthen our main strategies and increase our regional participation and presence in order for us to become a natural part of regional innovation systems. The strategy is a tool for developing innovation infrastructure and providing the right conditions to produce impact. RISE is a national operator with a proactive regional presence.	<p>Coordination and organisation within regions</p> <p>Development of relationships and strategic roles including positioning in regional development strategies</p> <p>Brand strengthening</p> <p>Communication and visibility</p> <p>RISE localisation and infrastructure</p> <p>Employer branding</p>
SME	RISE shall be an obvious innovation partner for SMEs. We want to promote ourselves to SMEs more cohesively, achieve a well-established market position, integrate RISE more clearly into the Swedish innovation system linked to SMEs, work to lower	<p>Marketing strategy</p> <p>Regional anchoring and partnerships, developing models for collaboration</p>

	entry thresholds into the institute, and create a strong SME culture and capacity within RISE. Furthermore, increase the number of SME projects including the utilisation of our test and demo facilities by SMEs, and strengthen the innovation power of SMEs nationally and internationally.	Customer relationships – clear business segments and plans RISE generated value for SMEs – development of new offers Teamwork and experience exchange
Test and Demo (T&D)	Increase the utilisation and strategic benefits of the innovation infrastructure that testbeds represent in Sweden, with the goal of producing faster solutions for societal challenges. RISE's T&D offices coordinate T&D-related activities, develop the existing T&D facilities for increased sales, increased profitability, and strategic positioning for RISE nationally and internationally.	Strategic development Customer relevance and market offers Establishment of new T&D facilities
Technology Transfer	RISE enables the utilisation of knowledge by companies and society through what is referred to as Technology Transfer. This is accomplished through licensing deals, transferal or sales of intangible assets to spin-offs and existing companies. Much of the project results are transferred to RISE's customers and the assets that may be transferred are only those for which RISE has full rights.	IPR guidelines Developing IPR to IP and greater professional management Management responsibility for spin-offs Commercialisation model: <ul style="list-style-type: none"> • Licensing deals • Spin-offs
universities	Maintain and build relationships with tertiary education institutes. Tertiary education institutes are some of RISE's most important partners in strategic knowledge development and the main source of staff recruitment. Work is also carried out to reduce what is sometimes perceived as a competitive situation between universities and research institutes in terms of competition for the same funds in grants. When universities and	Selection criteria Selection process Letters of intent at RISE level Collaboration structures Collaboration areas Research infrastructure and testbeds

	research institutes complement each other instead, we can strengthen Sweden together.	
Intelligence studies	The strategy describes RISE's objectives and work methods related to systemic intelligence studies and analyses. The purpose of intelligence studies is to validate selected Focus Areas and prevailing truths, identify the future, develop our customers and their business and expand expertise.	<i>Under development</i>
Research Funders	The strategy describes RISE's work methods to persuade research funders to offer RISE transparent participation conditions including full cost recovery and grants in line with RISE's mission and R&I strategy.	<i>RISE's participation conditions in the research programmes/grants</i> <i>Content of research programmes</i> <i>Work to ensure compliance</i> <i>Work methods at operator and management level, govern communication between RISE and the research funders</i> <i>(under development)</i>
Communication	The main objective of Communication is to support RISE's business and mission. We accomplish this by demonstrating our ability to create customer value and the way we contribute to solutions to societal challenges. Communication shall facilitate cross-functional work methods, strengthen the brand, and develop employeeship and leadership.	TBD

3.2 B&I strategies

We have brought together elements of our expertise and innovation infrastructure in six challenge-driven Business and Innovation Areas: Digitalisation, Energy & Bioeconomy, Health & Life Science, Sustainable Cities & Communities, Mobility and, since 2019, Material Transition. In turn, each area is divided into different Focus Areas. For each business area including Focus Areas, a roadmap is established annually. The B&I Roadmap includes intelligence studies (Stakeholder Analysis and Trend Analysis (PESTEL)), and RISE's business opportunities and priorities.

3.3 Divisional strategies

Our five divisions carry out their own strategy work every year within the framework of RISE Group Strategy. Compared to this R&I strategy, the divisional strategies are subject- and industry-specific. They are based on intelligence studies, (Stakeholder Analysis and Trend Analysis (PESTEL)), our mission, and RISE's business opportunities and priorities.

4 Initiatives

In order to facilitate research and innovation activities within RISE, we have opted to invest in Group-wide support and strategic initiatives. To increase collaboration and interdisciplinarity, we work with Collaborative Initiatives and projects in our B&I Areas. In addition, we offer our customers access to sophisticated testing and demo facilities and continuous identification of future needs.

The strategic research portfolio exists in multiple organisational dimensions, i.e. strategic knowledge development in the Divisions and Group-wide in, for example, B&I Areas, Reinforcement Areas, Knowledge Platforms and Development Projects.

Part 1 of the R&I strategy, Strategic Initiatives for Knowledge Development, presents detailed descriptions of the content of strategic initiatives and how the different portfolios are linked in order to fulfil RISE's mission in the short and long terms.

4.1 Group-wide research and innovation-supporting offers

To ensure that our research and innovation staff receive good support in diverse issues, access is provided to a number of Group-wide support functions and networks, including:

- Strategic Research
- Strategic Initiatives
- Strategy and Intelligence Studies
- Grants Office
- Information Centre
- Public Affairs
- SME Office
- Innovation Office
- Test and Demo Office
- Tech Transfer Office
- Professional education
- Group-wide networks and forums

The support functions above are described in Appendix 5.

4.2 Offers and expertise

4.2.1 Strategic initiatives

An internationally leading innovation partner needs to be proactive when it comes to selecting areas of research. We need to be able to make predictions about the future and initiate research and innovation in order to prepare ourselves in areas that have not yet been recognised by research funders. We also need to have agility in research and innovation. New knowledge can suddenly change conditions in trade and industry and society. Therefore, in our role to promote a sustainable and competitive society and trade and industry, we need to have an agile and progressive research organisation.

RISE has chosen to strategically implement diverse Group-wide initiatives in order to achieve proactivity and agility. We invest in Business and Innovation Areas, Focus Areas and Collaborative Initiatives. Other initiatives include Strategic Reinforcement Areas, Knowledge Platforms and Development Projects. All these initiatives are independent of the line structure of the divisional organisation. The initiatives are governed by the field/subject and the benefits to society and trade and industry, and not the organisational affiliation. Charts of the relationship between Group-wide research areas and the strategic initiatives are provided in Appendix 6.

Business and Innovation Areas

We currently have six Business and Innovation Areas: Digitalisation, Energy and Bioeconomy, Sustainable Cities and Communities, Health and Life Science, Mobility, and the recently established Material Transition. These are areas that RISE invests in long term and each business area is run by a business area manager. Since the selected B&I Areas are large, each area is divided into 4-6 Focus Areas.

It is within the Focus Areas that the B&I Areas' activities are carried out. The Focus Areas are selected as part of B&I Roadmap work and are evaluated annually in conjunction with the Roadmap update. This means that the Focus Areas can be modified depending on the changes in the world around us. The Focus Areas are linked to the divisions through the project portfolio within Collaborative Initiatives, and the fact that it is the divisions' employees who form the skills base.

Collaborative Initiatives form the project portfolio within Business and Innovation Areas and shall create value for RISE's customers and partners through a focus on developing new offers in projects with an interdisciplinary approach. In terms of project development within the Collaborative Initiatives, the focus is on collaboration between the different subject areas in RISE's organisation, either directly or after initial preliminary work. This interconnection creates both capacity and agility to respond to new needs, and produces innovation power. These initiatives are usually short-term (1-3 years), since the subject areas that are selected to become Collaborative Initiatives are considered to have a short way to go before new projects can be

developed that strengthen society and trade and industry. There are 3 main types of collaboration projects:

1. Focus Areas B&I: These Collaborative Initiatives bear the cost for the work carried out within the respective B&I Focus Areas.
2. Feasibility studies: Shorter projects (<1 year) to investigate the potential for collaboration and interdisciplinary development in an area.
3. Collaborative Initiatives: Longer projects (2-3 years) to foster collaboration in 2 or more areas.

The Collaborative Initiatives are evaluated both quarterly and in the annual report. Collaborative Initiatives that do not meet requirements are discontinued and replaced.

RISE Centre

One strategic initiative recently decided on is a RISE Centre, which can be seen as a powerful ramp up of other strategic initiatives, with regard to both the scope of the budget and length of time. A RISE Centre constitutes the mobilisation of a research and innovation platform able to respond to needs from a larger societal perspective with the aim of facilitating acceleration in an area to strengthen Sweden's competitiveness and position. A RISE Centre is based on something that already exists but which requires mobilisation and coordination at an overall strategic and tactical level. For example, it can be formed from a Strategic Reinforcement Area which, in that case, becomes integrated. A RISE Centre covers a wide scope, from basic knowledge development to applied research, and, in addition to funding from internal SC funds, there are also requirements for external private funds from trade and industry at the corresponding level. A Centre is evaluated in quarterly reports and in the annual report.

Reinforcement areas

Reinforcement areas are areas in which we focus on strengthened knowledge development and R&I activities in order to better meet the challenges and needs of industry. The aim of these areas is to speed up the development of new knowledge and research results produced in the areas in order to enable implementation in trade and industry within 3 years. They shall strengthen the Group-wide research areas as well as B&I Areas and complement ongoing initiatives with a clear view to application. The area managers responsible for each reinforcement area have a half-time assignment for 3 years and report to their respective division or department manager. Reinforcement areas are evaluated in quarterly reports and in the annual report.

Knowledge Platforms

The purpose of a Knowledge Platform is to build new knowledge in the long term or strengthen existing research and innovation operations. The starting point is that the Knowledge Platform will become nationally leading and internationally competitive in its provision of innovative services to society and trade and industry. Each Knowledge Platform is appointed a manager, who plans the work in consultation with a steering group consisting of specialists in the Group.

The research conducted in Knowledge Platforms is to be seen as a form of strategic, long-term knowledge development since the Group-wide funding extends over 7 years. Decisions regarding continuation and direction are revisited every three years. This is done in order to respond to the accelerating pace of change as regards the need for new knowledge and technology. The basic approach, however, is long-term, since many areas of knowledge need time to develop, especially when development is linked to collaboration with universities and PhD students.

The Knowledge Platforms are continuously evaluated through proactive follow-up by a person appointed by management to lead the strategic initiatives in the form of coaching and to supervise the platform work. In addition, quarterly reporting is carried out along with an annual written evaluation. Platforms that do not fit with the Knowledge Platform initiative are discontinued and replaced.

Development Projects

Development Projects are projects that address research issues and challenges requiring development, testing and analysis. The projects focus on increasing capacity to apply research in trade and industry and society. For example, projects that link knowledge development with infrastructure, or think-and-do tanks. The projects' clients should preferably be involved. The projects run for 3 years. Development Projects are evaluated in quarterly reports and in the annual report.

4.2.2 Skills and competence

Attracting talent

The role of research and innovation partner requires the right skills and competence at the right time. RISE's success is contingent on our ability to attract, recruit, develop and retain the right people. We therefore work to create an attractive experience throughout the employee life cycle. The perception of RISE as an employer is shaped at every point of contact, whether through a recruitment advertisement, an interview, during induction, or in dialogue between managers and employees. The image of RISE as an employer is also shaped through articles in the daily press, research reports, social media posts and in conversations around the dinner table.

When it comes to attracting talent, we work both in the short and long terms to support our ongoing recruitment needs and the needs we foresee for 5-15 years in the future. For this reason, we work actively with different ages in this area, from primary school up to university level. We work with younger target groups on a broad front to increase interest in technology and engineering, and, for students at university/college, we offer opportunities to make contacts. Attracting working professionals necessitates clear offers for attractive positions, opportunities for development, and favourable employee conditions. Foreign-born academics are a target group that plays a major role with respect to both current and future needs. To attract this target group, we engage in initiatives such as the Jobbsprånget internship programme and Global Talent/Move To Gothenburg.

Much of the communication with the talent market today takes place through digital channels. Digital channels afford us opportunities to reach out widely to identified target groups, but it is in encounters between our employees and our future colleagues that we create the best conditions for attracting people with the right skills to RISE. We do this by:

- supervising thesis students and interns,
- serving as mentors to students or foreign-born candidates,
- offering summer jobs,
- participating at external events as RISE ambassadors,
- welcoming study visits from different interest groups and,
- sharing articles or posting in social media.

Development

An important role for RISE is to build long-term knowledge that responds to the future needs of trade and industry with respect to challenging areas of knowledge and technology development. In order to support trade and industry in the pursuit of global competitiveness, RISE must be able to offer expertise in select strategic areas. Another important role for RISE is to run large and complex projects, often in collaboration with customers and partners. Performing this role requires a high level of expertise in leading projects and major programmes, as well as in process management.

Approximately one third of RISE's employees are postgraduates. We currently have 80 adjunct professors and associate professors, as well as 145 employees who are conducting postgraduate studies, which ensures good competence in the represented subject areas. The direction going forward will be on ensuring a good balance between the need for a high level of expertise and the selected strategic research areas.

Leadership that facilitates development, collaboration and an innovative climate is crucial to achieving RISE's ambitious goals. In 2019, a common leadership profile was introduced for the entire organisation. Development initiatives are underway (and established as needed) to create suitable conditions for managers at RISE to lead in line with the leadership profile.

4.2.3 Sustainable business

As early as 2015, RISE's Board of Directors articulated the importance of sustainability issues by establishing RISE Sustainability Goals. In the latest business plan, sustainability goals (all achievable by 2020) have been formulated as follows: 100% of our customer assignments will be sustainability-certified and linked to one of the global development goals; 1/3 of our turnover will have been generated as a direct result of sustainability work; and we shall be one of the 20 most attractive employers in the category relating to engineering students, and among the top five in the category relating to young professional engineers.

A method for the sustainability certification of our project portfolio was implemented early on, with the successive goal of having 100% sustainability-certified projects by 2020. Among other things, the aim of certification is show how the projects support UN sustainable development goals. Implementation is an important part of the research strategy as it creates a drive for more sustainable projects at the same time as certification takes place.

As early as 2017, sustainability certification was implemented by projects in the RISE Bioeconomy Research Programme, the single largest research initiative fully led and developed by the Group together with partners from the trade and industry.

Linked to sustainable business, we have also implemented an Ethics Policy and Codes of Conduct based on, among other things, the UN's ten general principles for social responsibility in the business community, the UN Global Compact. The principles are based on international conventions on human rights, labour law, the environment and anti-corruption, and safeguard, among other things, the privacy of customers, good research practice and our objectivity. The Ethics Policy forms the foundation for all research activities. To support employees in interpreting our governing policy documents in the subject of ethics, there exists an Ethics Council made up of established researchers and representatives from Group-wide functions.

4.2.4 Commercialisation and upscaling

Numerous international comparisons show that Sweden is a world leader in inventions and new, creative technical solutions, but falls short when it comes to commercialising and getting startups and small and medium-sized enterprises (SMEs) to scale up their operations. This is known as the Swedish innovation paradox.

RISE's capacity in terms of infrastructure, customer relationships and commercialisation capabilities are important components for finding solutions to how the innovation paradox can be resolved. RISE's contribution to the solution:

- Close customer relationships with large international companies provide opportunities for access and structured commercial relationships between SMEs and large companies
- Well-developed test and demo infrastructure facilitates swifter responses and verification, as well as creates meeting spaces for SMEs and large companies

- Good routines, structure and expertise in terms of coordinating consortium projects with both large and small operators also provide structures for collaboration
- Range, proprietary services, and tools for assessing business potential and relationships with Swedish and international private equity ensure faster access to investments

4.2.5 Testbeds

Testbeds, demonstration facilities and pilot plants are a very important part of the innovation infrastructure in Sweden. The RISE Group has around 100 testbeds where new products, services and processes can be tested in real-world conditions at full scale before they are introduced onto the market. No other individual operator in Sweden possesses such large and valuable test and demonstration resources. RISE's expertise in combination with these testing facilities is unique and something needed by many companies, particularly SMEs.

With the ambition to increase the interchange of this valuable resource through increased profitability and enhanced positioning of Sweden as a leading innovation operator, a strategy to further develop existing and new test and demo facilities is outlined in the Test and Demo Strategy.

APPENDIX 1: Owner Directives for RISE

OWNER DIRECTIVES FOR RISE RESEARCH INSTITUTES OF SWEDEN AB

Organisation/VAT number: 556464-6874

Section 1 – Mission of the Company

RISE Research Institutes of Sweden AB (hereinafter RISE or the Company) shall, according to the objective of the Company's operations, directly or indirectly by owning associated companies or subsidiaries, conduct (i) industrial research in institute form, (ii) testing, (iii) certification, and (iv) training, and (v) create conditions for developing the business so that, with a focus on research, development, innovation and related services, it contributes significantly to strengthening the competitiveness of Swedish trade and industry and advances sustainable growth. Moreover, the Company may own and manage movable property and administer pertinent activities.

To achieve the business objective, RISE shall, inter alia:

- a) promote and develop cooperation, mobility and collaboration between academia, industry and the public sector as well as within RISE, and advance the capability of trade and industry and its own capacity to participate in and benefit from EU collaborations and other international collaborations;
- b) contribute to the implementation of national innovation programmes, regional structural fund programmes, interregional programmes, and other regional programmes, as well as to the development of regional innovation;
- c) support innovative development, sustainable growth and reform in SMEs, and, in particular, develop methodology and knowledge support for medium-sized enterprises;
- d) establish and maintain a Substitution Centre, the main task of which is to provide support to companies, including SMEs and the public sector, in endeavours to substitute hazardous chemicals in their products, goods and services or in the use non-chemical methods and techniques;
- e) establish and operate an electromobility centre to promote the development of fleet electrification;
- f) contribute to the Swedish government's work with Testbed Sweden by, for example, promoting the increased utilisation of environments for testing, demonstration and pilot production, and participating in national and international collaborations in connection with testbeds.

Section 2 – Mission objectives

In relation to the Company's mission pursuant to § 1, the following objectives apply:

1. **Turnover from competitively acquired research funding**
The sum of turnover stemming from research funds for competitive

research in RISE (i.e. revenue from public research funders, excluding Strategic Competence funds pursuant to § 3) shall, in relation to RISE's total turnover, excluding Strategic Competence funds pursuant to § 3 (i.e. the sum of revenue from the Company's customers in trade and industry and revenue from public research funders, excluding Strategic Competence funds pursuant to § 3), amount to at least 30 percent.

2. **Turnover from trade and industry revenue from SMEs**

RISE's total turnover from trade and industry revenue from SMEs (i.e. revenue from the Company's customers in trade and industry that conform to EU-established criteria to be defined as SMEs¹) shall, in relation to RISE's total turnover in trade and industry revenue (i.e. revenue from the Company's customers in trade and industry), amount to at least 35 percent.

3. **Collaboration through interdisciplinary projects**

RISE's total turnover from interdisciplinary projects (i.e. revenue from projects that include at least two business areas within RISE and are carried out in collaboration with industry or the public sector) shall, in relation to the total turnover from RISE's project portfolio (i.e. the sum of revenue from the Company's customers in trade and industry and revenue from public research funders) amount to a specific minimum level in percent². 1) Companies with fewer than 250 employees and an annual turnover of less than EUR 50 million or a balance sheet of less than EUR 43 million. For purposes of measurement, this definition differs from the EU definition with regard to possible ownership of larger groups. 2) The owner will determine the target level at the 2021 Annual General Meeting. The Company shall measure a reliable value for the current proportion by 31 December 2020.

4. **Utilisation of testbeds and demonstration facilities**

The total capacity utilisation of all of RISE's testbeds and demonstration facilities for which RISE is wholly or partly responsible for the operation of the facility (i.e. the total number of capacity hours in relation to the total number of hours available in RISE's testbeds and demonstration facilities) shall be in the range of 60-80%, calculated as an average weighted for new acquisition value.

5. **Innovation partner capacity**

The result of the Company's annual customer surveys for the index "Innovation Partner Capacity" shall achieve positive responses of at least 78 percent (i.e. the weighted responses from RISE's innovation/development partners regarding the fulfilment of the customer promises to provide "Value-creating solutions" and "Expertise" and responses to the question: "Consider an innovation/development partner that is perfect in all respects – how close to or far from this perfect partner is RISE?", where responses assigned a value of 4-5 are considered to be positive on a five-point scale and a value of 7-10 on a ten-point scale).

6. **Customer Satisfaction Index (CSI)**

The result of the Company's annual customer surveys for the index

“Customer Satisfaction Index” shall achieve positive responses of at least 75 percent (i.e. the weighted responses from all of RISE’s customers regarding the questions: (i) “Consider all the experience you have had with RISE – how satisfied are you with that experience?”, (ii) “How well does RISE meet your expectations?”, and (iii) “Consider a provider of certification, testing and/or an innovation/development partner that is perfect in all respects – how close to or far from this perfect provider/partner is RISE?”, where responses assigned a value of 7-10 are considered to be positive on a ten-point scale).

APPENDIX 2: Innovation System and Technological Innovation Systems

An innovation system encompasses technologies, operators, networks, and institutions as illustrated in Figure 6. It is only when these areas function together in a system that innovation or growth can be achieved.

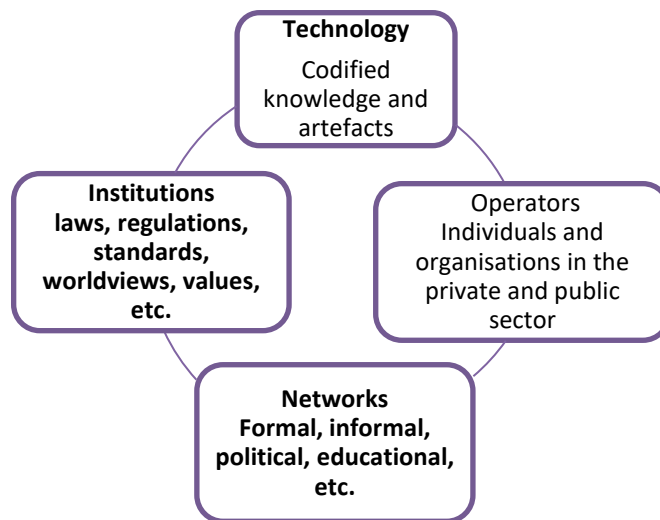


Figure 2. The innovation system and its constituent areas.

Technical Innovation System (TIS) is a methodological framework through which the emergence of new technological sectors is analysed. It is used to identify opportunities for and obstacles to innovation and growth processes in the innovation system. The different parts of the innovation system are analysed based on the dynamics of a number of key processes (see Figure 7). The method requires good knowledge of the technology in question.

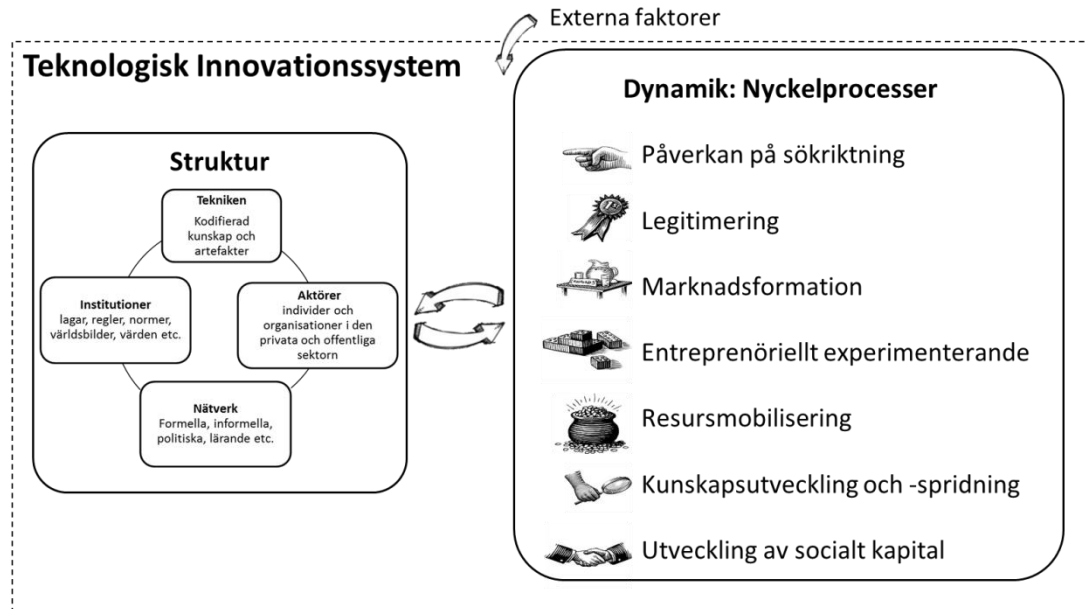


Figure 3. Framework for Technological Innovation System Analysis (TIS).

APPENDIX 3a: The role of the institutes in relation to other operators

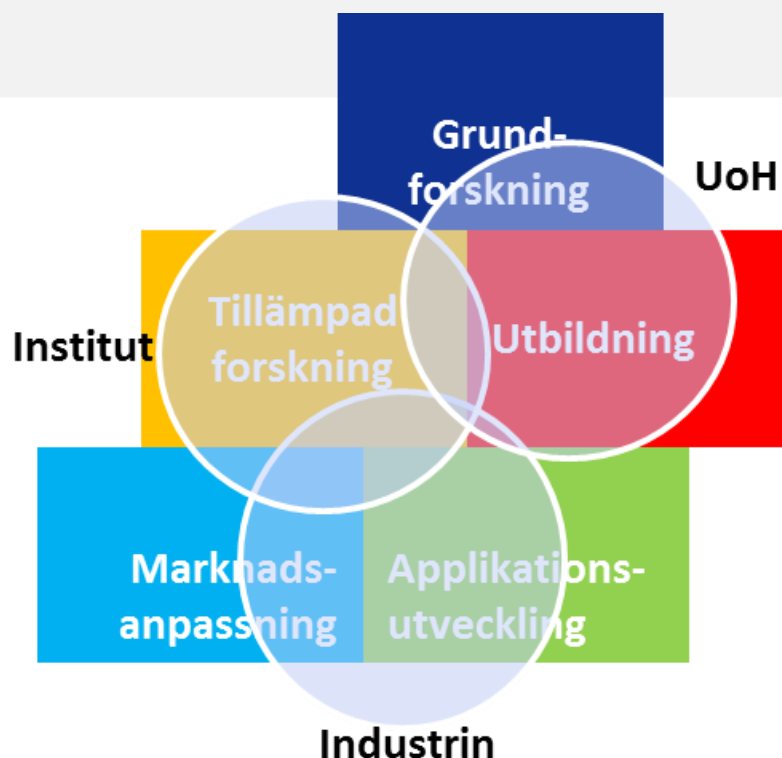
The position of the institutes in relation to other research organisations

Research institutes are an important part of the innovation infrastructure owing to the fact that they occupy a unique position in the innovation system.

universities mainly conduct education and government-funded research with timeframes of 10 years or longer, with an emphasis on basic research, i.e. research that does not necessarily have a specific commercial application in the near future. The industry funds its own research and development, which usually constitutes the final steps before market introduction within a timeframe of one to two years.

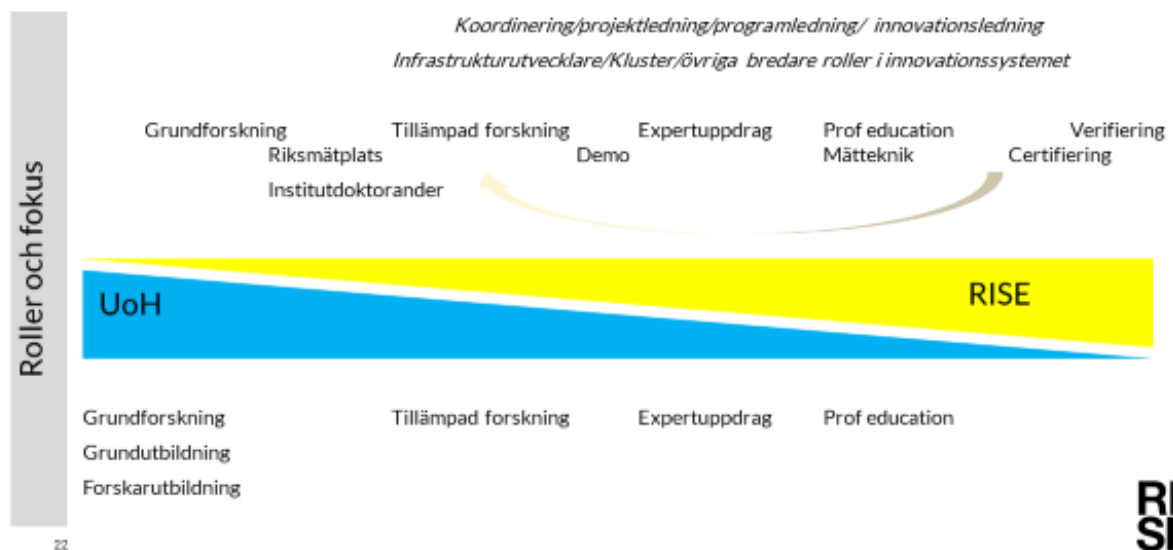
Applied research falls in between and is frequently conducted with combined state and private funding over timeframes of 2-10 years. This is a segment in which research institutes play an important role through the application of research-based knowledge aimed at creating direct benefits for industry.

The institutes are not alone in conducting applied research, but are uniquely structured to do so and it is a starting point in their business concept.

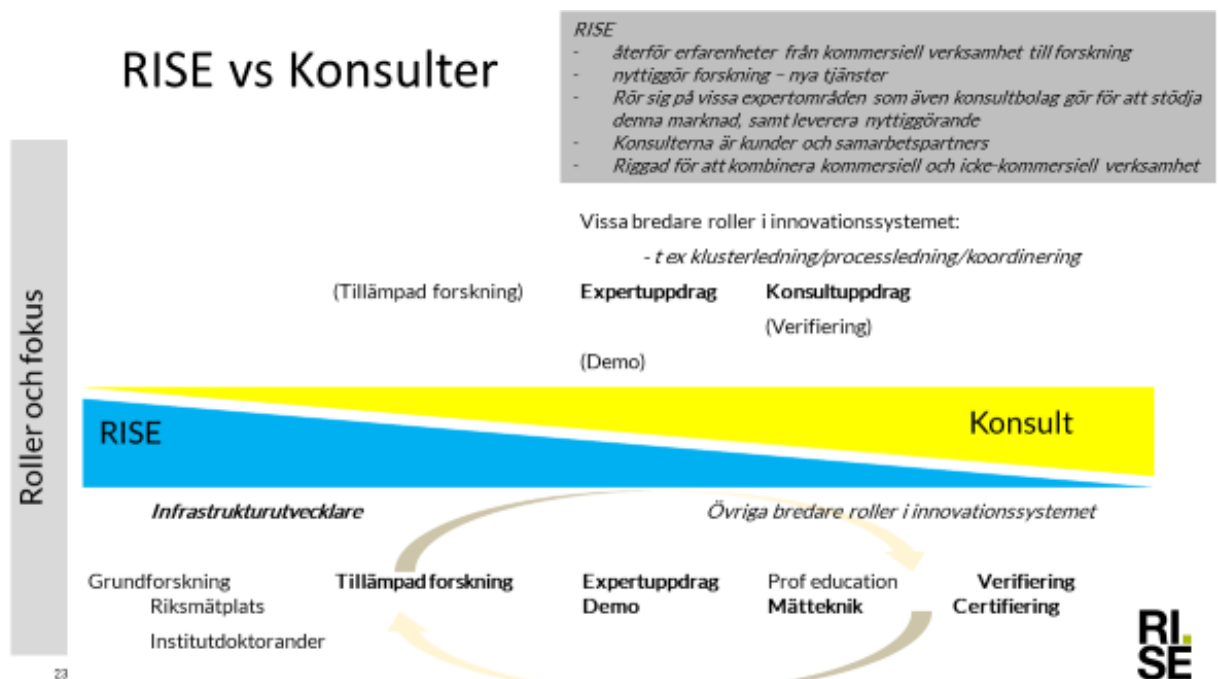


APPENDIX 3b: RISE cf. Universities and RISE cf. Consultants

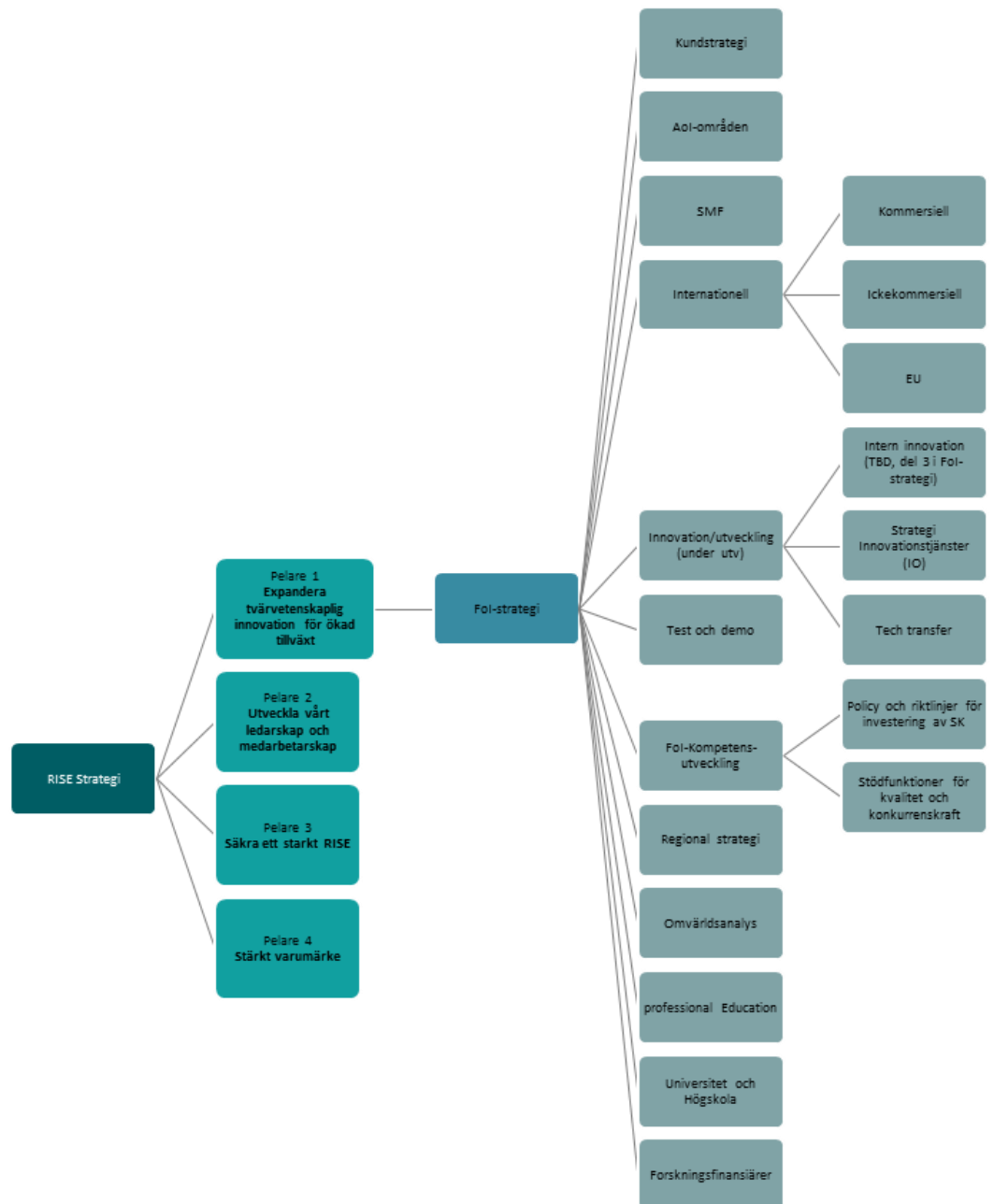
RISE vs UoH



RISE vs Konsulter



APPENDIX 4: Overview of RISE's strategies



APPENDIX 5: Group-wide R&I support

Strategic Research

Strategic Research is responsible for leading the Group's research strategy in collaboration with divisional management teams, and is responsible for the dialogue with RISE Research Council and external research boards. Refer to Appendix 7 for information on RISE Research Council.

The responsibility also includes leading the Group's strategy process and business planning, as well as providing follow-ups, reports and impact evaluations to the Swedish Ministry of Enterprise and Innovation, together with Group management.

The function is ultimately responsible for developing RISE's Group-wide research priorities together with Group management and other managers in the Group, which also includes responsibility for intelligence studies and trend monitoring, as well as responsibility for the allocation and follow-up of Strategic Competence funds (SC funds) including Group Strategic Initiatives. The function also oversees RISE Technology Council, which includes the divisional Research and Business Development managers and others.

In general, the function has many points of contact with government agencies, trade and industry, universities and other institutes. Areas of responsibility include Group-wide responsibility for framework agreements with universities, contractual matters relating to external research boards and programme councils, strategic management of funders such as Vinnova, the Swedish Energy Agency, etc. and dialogue concerning terms and conditions.

Strategic Research consists of the following functions: Strategic Initiatives, Grants Office, Information Centre, Strategy Process and Intelligence Studies, and the Brussels Office.

Strategic Initiatives

In general, SC funds are used for investments in the strategic research portfolio as relates to skills and competence development and strategic collaborations. The strategic research portfolio exists in two organisational dimensions: the strategic knowledge development in the Divisions and Group-wide initiatives.

Strategic Initiatives is responsible for the allocation and follow-up of Strategic Competence funds (SC funds) including Group Strategic Initiatives. This includes, for example, the overall coordination of Reinforcement Areas, Knowledge Platforms, Development Projects, Long-term Research Projects and responsibility for a coordinated strategic initiative process. The function is also responsible for yearly reporting to the Swedish Ministry of Enterprise and Innovation (as stipulated in the Owner Directives, Appendix 1) and for serving as a point of contact for Swerim with regard to questions related to SC funds.

The function establishes a strategy for collaboration with universities and government agencies and ministries in order to facilitate collaborations. Furthermore, the function leads the work involved with establishing Group-wide agreements with specific universities in cooperation with the divisions. In these general agreements, ground rules are regulated at an overall level. Division participation in the establishment and follow-up of the agreements is then transferred to the active researchers.

The function is part of RISE's external Research Councils and RISE Technology Council, and develops Group-wide RISE research priorities.

Strategy Process and Intelligence Studies

Strategy Process and Intelligence Studies is responsible for leading, planning and implementing the Group's strategy process, business plan and intelligence studies.

The Group's strategic process includes work related to the current year's strategic work, Group-wide strategies and divisional strategies, SWOT analysis, value-creating models and SMT days, as well as management systems and processes. The Group's strategy is used as a basis for strategic choices in the development of operations, e.g. in Group management work, internal business planning, in the Board's annual strategy work, in dialogue with RISE Research Council, and as support when deciding on Group-wide strategic initiatives and work methods. Every three years, the function is responsible for leading the development of RISE's Strategic Platforms.

Planning work in the operations is aimed at clarifying/delineating goals and strategies at all organisational levels. This is carried out annually in the divisions and Group-wide functions and summarised for RISE's Board of Directors as a basis for prioritisation during the year.

As part of our strategy work, systematic intelligence studies are carried out. A comprehensive annual intelligence study elucidates important trends and conditions that can be expected to affect the business in the short and long terms. The goal is to structure the business and operations according to systematic intelligence studies and insight into what needs exist, i.e. a process where we jointly collect and analyse global information and draw strategic conclusions from it. The function is also responsible for implementing systems and work methods in the organisation linked to intelligence studies and analysis.

Grants Office (GO)

The Grants Office is the RISE Group's source of research aid. GO works with issues related to research funding from both national and European research funders. The research funders we focus on are the ongoing European Framework Programme Horizon 2020 and the upcoming Horizon Europe, the Eurostars SME programme, Vinnova, the Swedish Energy Agency and Formas. We are responsible for engaging in dialogue with the funders concerning participation conditions and tariffs, and for providing support for proposal applications and projects. Subject to time constraints, we also provide support for proposal applications and projects to research funders other than those mentioned above. GO also disseminates knowledge about the policies

pertaining to research funders, provides support for proposal application formulation and reporting of deliverables and finances in active projects, and maintains its own website and FAQ on the Employee Portal. We arrange courses in funding-specific requirements, provide tips for proposal application formulation and project reporting (together with RISE Finance). For grants, we have purchased the Research Professional grant database for RISE so that all researchers can easily search for grants tailored to their needs. We act as a sounding board for research ideas and interact with individual researchers, units or departments in the divisions as needed. Together with RISE Finance, we maintain budget calculation templates for different funders and explain participation rules and remuneration models for researchers.

GO also runs an open network, Researcher Forum, through which researchers in the organisation can exchange information. We invite research funders and others to Researcher Forum through regular digital meetings. In addition, GO participates in a network for project controllers and publishes its own monthly newsletter internally in RISE with around 350 recipients. GO also coordinates the Vinnova and TVV-funded EU SME Support project and is responsible for RISE's internal proposal application process.

Information Centre

Information Centre supports and streamlines research by providing specialist expertise linked to relevant information sources, information searches, and by offering support to publishing staff with regard to publication accessibility, and by increasing awareness about Open Science (Open Access and Open Data). Information Centre also works with bibliometrics to show the impact of published research and innovation.

Information Centre bears the cost of several large databases or digital journal packages in order to avoid duplicate expenses in the Group and to increase accessibility to these databases. However, individual journal titles and journals desired by a division/unit/project are paid for in the line.

Public Affairs

Public Affairs manages and coordinates RISE's dialogue with a number of prioritised social operators in order to generate increased awareness of the societal benefits that RISE creates and to further develop RISE's role. The prioritised social operators are the Government Offices of Sweden, the Riksdag, the European Commission and the European Parliament, as well as authorities and trade associations with regard to policy issues related to the role of institutes (i.e. not projects or client assignments).

SME Office

Swedish small and medium-sized enterprises (SMEs) are important for industrial transition owing to their innovation power and relative mobility in a changing world. Over the next few years, we will bolster RISE's ability to contribute to the industry's transition by increasing our capacity to strengthen important high-tech companies as well as promising fast-growing companies. Furthermore, we make RISE more accessible to the multitude of SMEs and strengthen our commercial capacity for this customer group.

SME Office, which embodies how RISE works with small and medium-sized enterprises (SMEs) and further develops this capability, is a function that falls under Strategic Business Development. SME Office also includes SME Support, SME Forum and associated initiatives. SME Support is an operational support function for RISE's internal SME work and externally with our customers and partners. SME Forum is a group made up of Research and Business Development managers – including a Research and Business Development manager appointed as the SME Manager per division – as well as a Strategic Business Development Communications Manager. The group provides support in strategic development issues, and is instrumental in leading the divisions' internal SME forums and the work to implement RISE's common SME Strategy and business plans in the respective divisions. RISE External SME Council is a council comprising representatives from important partners, who provide advice and feedback on the initiatives we run to further develop RISE's work with SMEs.

Innovation Office

As an innovation partner, it is important to be able to assist companies and society in developing innovations, i.e. introducing products and services to the market or implementing them in operations. This is accomplished through RISE Innovation Office.

RISE Innovation Office works both internally and externally. Within RISE, the office works to generate increased understanding among employees of what innovation is, and assists our own employees in the innovation process. RISE Innovation Office also leads internal training in innovation management in accordance with ISO 56002, with the goal of building a RISE network of individually certified innovation leaders in accordance with ISO 17024 – a role for which demand is increasing from customers both in companies and the public sector. Externally, the Innovation Office works to ensure that RISE's customers see us as a natural partner in innovation management and interdisciplinary innovation, and that we enable capacity for solutions to complex challenges. The most important offer today is the fully funded Innovation Partnership, which is mainly offered to large companies, but SMEs and government agencies have also expressed interest. Examples of other customer offers from the Innovation Office include: Translucent Innovation, Beyond, Innovation Due Diligence (IDD) and CoCreation workshops. Operationally, most of these innovation offers are carried out within the divisions and B&I Areas, while the Innovation Office coordinates, provides support and funds the further development of the shared innovation toolbox.

Test & Demo

The aim of RISE Test and Demo Office is for RISE to adopt a unified approach to the shared resources within Test and Demonstration (T&D). This creates the right conditions for increased collaboration between different T&D facilities and enhanced expertise and understanding of how we use these facilities to accelerate the pace of innovation in Sweden and in Swedish trade and industry and the public sector. As the market changes from Research & Development (R&D) to a more swift-footed Experiment & Scale (E&S) strategy, needs increase in all organisations to find the right skills and infrastructure to conduct more market-oriented experiments. Testbeds/T&D facilities have a key role to play in **accelerating innovation** in Sweden.

RISE owns and operates approximately 50-60% of the total T&D resources in Sweden, some of which are unique. Most have a strong connection to trade and industry, and there is an increasing need to make T&D facilities available to SMEs and academia in particular. There is also growing need in other parts of trade and industry and the public sector for T&D facilities that are more specialised and complex. RISE's T&D resources are a great asset to RISE with the potential to increase RISE's profitability and thereby increase the degree of financial freedom and improve conditions for proprietary investments in the monetised final stage of the innovation process: commercialisation.

Tech Transfer Office

RISE's mission to increase the utility of knowledge through the transfer and sale of intangible assets necessitates having business sense and the ability to define the assets to be sold and transferred. The RISE Tech Transfer Office (TTO) is tasked with coordinating and overseeing the divisions' management of intangible assets. This is accomplished by means of various patent committees that, for example, adapt patenting to the respective division's conditions and business logic. Additionally, TTO manages the company portfolio with partly owned spin-offs and works to develop RISE's ability to commercialise and monetise its broad and deep knowledge. Intangible assets owned by RISE can be utilised by trade and industry and society through licensing or sales. When no interested recipient exists or if RISE deems that the developed technology can be better commercialised through a startup, TTO provides expertise and structural capital and facilitates decision-making for RISE's Board Of Directors, which decides on the establishment of independent companies based on RISE's intangible assets, referred to as spin-off companies.

Professional education

The provision of skills through lifelong learning is imperative for meeting the need for innovation and development in trade and industry and the public sector. Professional Education in RISE contributes to the development and implementation of education based on RISE research. It involves providing both

longer and shorter training courses and education, in physical and digital formats, to a wide range of customers. Professional Education assists with the management and provision of long-term practical training and skills development, analysis and quality assurance of training initiatives, and supports RISE's other activities in their educational production. Professional Education provides Group-wide infrastructure to enable the production of high-quality education based on the specific needs of its target groups. Professional Education also provides skills development related to education in RISE.

Group-wide networks and forums

In order to support research and innovation, several internal networks and forums have been established. The networks coordinate functions and exchange information.

Market and Business Development Forum (MBF): Consists of the marketing managers of each division, Head of Sales, SME Manager and Business and Innovation Managers. MBF is led by CBDO.

Technology Council (TC): Consists of the Research and Business Development managers of each division as well as Strategic Initiatives and Strategic Research, which also lead the work in TC. An expanded TC with the involvement of B&I managers and GO is used for certain strategic issues. The task of the Technology Council is to lead and manage Group-wide strategic research questions in accordance with the R&I strategy, and to identify strategic collaborations with a focus on publicly funded research.

GO Research Forum: Group-wide network of employees who apply for and work in publicly funded research projects. The network is used for experience exchange and information dissemination, for example, information about proposal application opportunities, RISE's autogrant rates and feedback from GO meetings with research funders, etc.

Sustainability Team: Provides support for implementing sustainability initiatives in the Group. The team works specifically with the implementation and follow-up of RISE's Sustainability Goals, the Sustainability Fund and the development of sustainability certifications.

KIC Coordination: Is a Group-wide network of contact persons for the various EIT KICs in which RISE participates; 6 at present: Raw Materials, Health, Digital, Climate, Energy, Added Value Manufacturing. Coordination is carried out under the leadership of the Innovation Office in collaboration with Strategic Research.

APPENDIX 6. Chart of SC fund initiatives

Chart showing the relationship between Group-wide research areas and the strategic initiatives.

	Korta projekt					
AI och Data Science	AI BIND	Computer vision	Digitala tvillingar	Pålitligt värdefull data	Öppna och delade data	
Blå tillväxt	Industrial Water Management					
Byggd miljö	Bygg 4.0	Energipositiva stadsdelar	Komfort och trygghet	Stad och land		
Cirkulär omställning	Batterisystem för cirkulär ekonomi	Digitalisering och cirkulär ekonomi	Industriell symbios	Spårbara material för en cirkulär ekonomi	Hållbar livsstil	
Digital säkerhet						
Energi	Bioolja	Flexibilitet i energisystemet	SunRISE	Vind	Vätgas	Samverkan för ett hållbart samhälle och industri genom genom BECCS/CCU och PtX
Hälsa	Hälsa - Nutrition	Pharma Office	Prevention Impact Lab Skåne	Regulatory	Social and Health Impact Center	Storskaligt inf. inom vård och omsorg
Innovationssystem	Städers/samhällets omställning	Värdeberäkningsmodeller				
Komponenttillverkning	RISE2AM – II					
Livsmedel	Digilivs					
Material	Biokemiska processer och molekylärbiologi	Förpackningsvärdecykel	Materialomställning för högvolumkomposit	Materialraff		
Processtillverkning	Smart Chemistry and Materials	Testbed TOX	Textil	Demo upcycling		
Risk, säkerhet och resiliens	Totalförsvar	ClimAdapt				
Tjänsteforskning och Digitalisering av processer	3D geometrimätningar	Flexibel automation för industriell transformation	Pilotparken FENIX	RFID TASK FORCE		
Transporter och mobilitet	Uppkopplad transportautomatik	Electric Flight Systems	Elektromobilitet			
Transportsystem	Infrastruktur för framtidens mobilitet	Samverkan för fossilfria transporter	Policy och regelverksinnovation inom transportsektorn			
	Urban logistik	First/Last Mile Personal Mobility	Rail			

Chart showing the relationship between Group-wide research areas and Focus Areas (white), Development Projects (green), Reinforcement Areas (blue), EU Projects (red) and other projects (yellow).

	Medellånga projekt					
AI och Data Science	AITox	RISE AI	7 EU-projekt			
Blå tillväxt	RISE Maritimt	2 EU-projekt				
Byggd miljö	Hållbara livskraftiga stadsdelar	Städer och samhällen i förändring	Integrerad Infrastruktur	6 EU-projekt		
Cirkulär omställning	Cirkulär omställning	Validering av cirkulerat material	Värdeskapande systemdesign	Mätning för hållbar transformation	9 EU-projekt	
Digital säkerhet	Cybersäkerhet	7 EU-projekt				
Energi	Fossil Free Transport	Future Energy System	Industrial Transformation	BECCS/CCU för ett hållbart samhälle och industri		
	Robust och flexibelt energisystem	10 EU-projekt				
Hälsa	E-hälsa	Infection management	HLS Prevention	New Therapies	Preventiv hälsa	9 EU-projekt
	Evidens och Implementeringsstöd för Digital Metodologi inom Vård och Omsorg					
Komponenttillverkning	Framtida Produktion för Materialomställning	Roterande riggar	Process 4.0			
Innovationssystem	Mobilisering för ett Governance Innovation Center GIC	9 EU-projekt				
Livsmedel	HLS Växthus	6 EU-projekt				
Material	MaterialEkosystem	Substitutionscentrum	Max IV	Pronano	18 EU-projekt	
Processtillverkning	3 EU-projekt					
Risk, säkerhet och resiliens	Resilienta städer och samhällen	7 EU-projekt				
Tjänsteforskning och Digitalisering av processer	Digitalisering av Offentlig verksamhet	Digitalisering internt RISE	Uppkopplade städer	Den uppkopplade staden	Den uppkopplade individen	
	Digitalisering inom industrin	Digitalt lärande	Green Deal for Sweden	Cocreation projektet Scharinska	RISE Tjänsteinnovation	7 EU-projekt
Transporter och mobilitet	Transportautomation och säkerhet	Tillverkning	Automatiserade trp	Batterisäkerhet	1 EU-projekt	
Transportsystem	Urban Mobilitet	Tjänstefiering	Energi och miljö för mobilitet	IKT för mobilitet	8 EU-projekt	

Chart showing the relationship between Group-wide research areas and Knowledge Platforms (white), Centres (green) and Long-term Research Projects (blue).

	Långa projekt	
AI och Data Science	Data Science Centre	Tillämpad AI
Blå tillväxt	Offshore	
Byggd miljö	Infrastruktur och byggd miljö 2.0	
Cirkulär omställning	Cirkulär ekonomi	Climate Opportunity Accelerator
	Industriell Vattenhantering	Centrum för Kategoriskt baserade mätningar
Digital säkerhet	Cyber security	
Energi	Energy Markets and Systems	Biomassa
Hälsa	Perform	Innovation för minskad antibiotika resistens
		Additiv tillverkning
Innovationssystem	Big Science	
Komponenttillverkning	Det digitaliserade produktionssystemet	
Livsmedel		
Material	Digital cellulos	Ecobuild
Processtillverkning	BISC	Nanocellulosa
		Computational Modeling and Validation
Risk, säkerhet och resiliens	Robusta byggnadsverk	
Tjänsteforskning och Digitalisering av processer	Digital learning	
Transporter och mobilitet	Validering av automatiserad körning	
Transportsystem		

APPENDIX 7: RISE Research Council

RISE Research Council was established in 2016 in order to ensure the engagement and influence of trade and industry regarding the RISE Group's research direction and strategy. The Research Council was formed in conjunction with the consolidation of RISE AB when the parties (RISE and the industrial owners) entered into a leverage agreement as compensation for various shareholder agreements that had existed before.

According to the leverage agreement, the responsibility and main tasks of the Research Council shall be to:

- i. Guide RISE's Board of Directors in the establishment of cross-functional investment projects.
- ii. Guide RISE's Board of Directors in the allocation of investment funds (i.e. SC funds earmarked for distribution in investment projects, approximately 10-15% of total SC funds).
- iii. Guide the RISE Group in strategic issues regarding the direction of the research and the issues prioritised by trade and industry.
- iv. In addition, provide advice and support requested by RISE from time to time, or as the Research Council deems necessary.
- v. From time to time, manage specific and current research issues in committee.

Members of RISE Research Council 2020:

First name and surname:	Title:	Company/University:
Mikael Dahlgren (Chair)	Head of Research	ABB Sverige
Magnus Björsne	CEO, BioVentureHub	AstraZeneca
Wictoria Bondesson	Education & Research Expert	LRF
Mats Fägerhag	CEO	CEVT
Pasi Kangas	VP Technology	Sandvik
Per Kristensson	Professor	Karlstad University
Torbjörn Lundahl	Research Director	Ericsson
Michael Persson	Head of Innovation	Nouryon
Andreas Regnell	SVP Strategic Development	Vattenfall
Agneta Wargsjö	Chief Strategist	Swedish Transport Administration
Magnus Wikström	Executive Vice President Innovation	BillerudKorsnäs
Jan Hjelmgren	Senior Vice President Powertrain Engineering	Volvo, VTT
Håkan Herbertsson	Director Manufacturing Strategy	Husqvarna
Cecilia Katzeff	Associate Professor KTH	KTH
Roger Johanson	Managing Partner	Carneo Alternative Solutions
Per Johan Lööv	Innovation Project Manager, Corporate R&D	Lantmännen
Peter Johansson	Deputy Department Manager	Association of Swedish Engineering Industries
Anita Aspegren	CEO the Swedish Centre for Innovation and Quality in the Built Environment	IQS

Henrik Gunnerling	Range & Product Innovation Manager	IKEA
Katarina Björklund	VP – Group Strategy	SAAB
Lars Henrik Jörnving	VP – Head of Global Industrial Development	Scania

Contact at RISE

Date

Designation

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Strategy 2021**

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Strategic Research



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