Ref. no. 1-798/2025

Research Infrastructure Karolinska Institutet (RIKI)

Report from Priority focus area E2: An integrated organisation for KI:s research infrastructure for improved quality and efficiency

E2 working group, June 2025

Karolinska Institutet

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Summary

The priority focus area E2 was initiated by the President and aimed at creating “An integrated organisation for KI’s research infrastructure to improve quality and efficiency”. The goal was to create an attractive and competent organisation that provides optimal support for KI’s research.

The assignment has been carried out as a project for just over a year and has been characterised by broad dialogue. The assignment is reported in the form of this report.

The proposal for an integrated organisation for KI's research infrastructure aims to create an organisational structure within KI called Research Infrastructures Karolinska Institutet, RIKI. RIKI is proposed to include Comparative Medicine (KM) and core facilities funded by the Infrastructure Board. The organisation is proposed to be led by an infrastructure director who reports to the President.

The director's responsibilities include ensuring that KI researchers have access to the most advanced and relevant research infrastructure, that allocated resources are used efficiently, and that staff have good career opportunities and skills development.

The director's responsibilities also include monitoring developments in research infrastructure, KI's participation in national infrastructures, and contacts with Region Stockholm and other external parties.

Researcher influence is ensured at several levels.

The Head of Administration is responsible for administrative support at RIKI. Administrative support is built around the current administrative support at KM and is expanded with a focus on functions related to providing advanced methodological and technical services such as agreements, intellectual property rights and price calculations.

A special function with responsibility for establishing new methods and technologies and making these available to researchers will be established at RIKI.

RIKI is funded through government grants, external grants to research infrastructure and user fees.

Mission

The President of Karolinska Institutet (KI) has formulated priority focus areas based on what KI needs in the short term to develop and fulfil its vision (Prioritised focus areas for achieving KI's vision | Employees).

Focus area E2 aims at "An integrated organisation for KI's research infrastructure for increased quality and efficiency". The mission aims to consolidate and optimise the research infrastructure within KI for increased quality and efficiency. The goal is to create an attractive and competent organisation that optimally supports KI's research. The mission is detailed in the assignment card (Appendix 1 – *in Swedish*).

The assignment focuses on all research infrastructure within KI that currently constitutes distinct organisational units and/or distinct premises.

In this report, the concepts of quality and efficiency have been interpreted as a desire on the part of KI's management to further improve quality and utilise resources efficiently. Quality-enhancing measures include more professional support, improved operational reliability, continuously updated instrument parks, skills development and investments in future methods and technologies. Resource efficiency is not about reducing resources for research infrastructure but about ensuring that resources are continuously allocated where they are most needed. Resource efficiency is also achieved by clarifying responsibility for supporting KI researchers' use of national infrastructures and commercial alternatives where relevant. Research infrastructure is optimised and consolidated through predictability, strengthened management and collaboration between research infrastructures.

Proposal in brief

The proposal for an integrated organisation for KI's research infrastructure to increase quality and efficiency aims to create an organisational unit within KI called Research Infrastructures Karolinska Institutet, RIKI. RIKI is proposed to include Comparative Medicine (KM) and core facilities funded by the Infrastructure Board.

The organisation will be led by an infrastructure director who reports to the President.

The director's responsibilities include ensuring, in dialogue with the directors of the various included units, that KI's researchers have access to the most advanced and relevant research infrastructure, that the resources provided are used efficiently, and that staff have good career opportunities and skills development.

The director's responsibilities include monitoring developments in research infrastructure, including commercial alternatives, KI's hosting of and participation in national infrastructures, and contacts with Region Stockholm on issues relating to research infrastructure.

The faculty's influence is ensured by the Infrastructure Board being assigned tasks related to the allocation of resources for RIKI and for KM, a council corresponding to the board that currently exists for KM.

The director is proposed to create an advisory group drawn from the faculty to support the development of, and prioritisation within, RIKI. Furthermore, included units are encouraged to establish corresponding advisory groups to provide support in the development of their respective activities.

The Head of Administration is responsible for administrative support at RIKI. Administrative support is built around the current administrative support at KM. Administrative support includes what is usually found within a department, including KM, but with an additional focus on functions related to providing advanced methodological and technical services such as contracts, intellectual property rights and price calculations. RIKI has access to well-resourced functions for data and

other operational security. There is also a special function for communication and marketing.

Initially, it is proposed that activities and core facilities will be included in RIKI based on the benefit to KI as a whole, that the activities normally have funding from the President/Infrastructure Board, that there is a clear distinction in that the activities provide highly qualified methodological and technical services, and that the activities have already taken steps towards becoming a separate unit within a department.

A special unit responsible for establishing new methods and technologies and making these available to researchers will be set up at RIKI.

RIKI is funded through government grants, user fees and external grants to research infrastructure.

Background

Research infrastructure at Karolinska Institutet

A well-functioning and shared research infrastructure is essential for KI's research, and KI has over time invested increasing resources in research infrastructure to ensure that research has access to advanced methods and technologies where quality and resource efficiency require consolidation into special units.

The growth of the research infrastructure has partly taken place organically without a predetermined plan, which has led to KI's research infrastructure landscape being complex and difficult to overview. Some research infrastructures have reached such a size that they have a significant impact on the host institution's finances, while others are small and/or have few customers and are very sensitive to changes in the number of users.

Research infrastructure is not clearly classified as a core activity of the university, even though it is currently organised within KI's departments, KM, or the joint operational support. Research infrastructure differs from core research in terms of, among other things its i) deliveries, ii) content, iii) financing, iv) need for support functions, v) contact areas, and vi) positions, career paths and skills development.

The KI President has made decisions that take into account the unique nature of research infrastructures. Decision to revise regulations on employment other than teaching positions, creating a "research infrastructure profile" that includes two new positions: research infrastructure specialist and senior research infrastructure specialist (Ref. No. 1–1011/2022). Decision on criteria for making research infrastructure available at KI, clarifying how research infrastructures should be made available externally (Ref. No. 1–431/2024).

Internal audit review of KI's core facilities

In 2024, the internal audit at Karolinska Institutet conducted an audit of Karolinska Institutet's core facilities (Ref. No. 1–512/2024). The internal audit found that KI does not generally make overall decisions on the types of core facilities that are necessary to conduct high quality research, but

instead responds to proposals from the operations, which results in a lack of coordination of resources and, in some cases, competing activities. Furthermore, the internal audit notes that there is a dual governance structure, with the Infrastructure Board making decisions on allocation principles and the distribution of government grants, while responsibility for operating core facilities lies with the departments. Each department then has its own procedures for governance, support and follow-up, resulting in a lack of uniform KI practice for interpreting the applicable regulations.

Of the internal audit's recommendations to KI, the following are particularly relevant to this assignment: i) Continue the work of formulating more uniform and systematic governance procedures with the aim of utilising the core facilities more efficiently, and ii) Consider developing more coordinated and tailored support for the core facilities.

The Infrastructure Board at Karolinska Institutet

From the Faculty Board's decision and delegation order (Ref. No. 1–824/2022).

The Infrastructure Board is a preparatory and decision-making body for matters concerning research infrastructure. The Board shall take particular account of the fact that investments in research infrastructure are long-term commitments, sometimes involving several national parties. These commitments require KI's departments to build and operate relevant research infrastructures and to manage special conditions, including those arising from the provision of services.

The Board shall:

• prepare proposals for decisions to the Faculty Board regarding overall decisions on research infrastructure,

• prepare proposals for decisions to the President regarding KI's participation in national research infrastructure,

• work to ensure that KI researchers have access to high-quality research infrastructure in a resource-efficient manner,

• work to ensure good conditions for the operation of KI's research infrastructure,

• follow up on investments in research infrastructure

• collaborate with other bodies, units and organisations, especially departments, the Committee for Research, Comparative Medicine and Region Stockholm, with the aim of establishing and creating good conditions for high quality in the management and organisation of infrastructure.

The current situation

KI's research infrastructure provides strong support for KI's research, but KI's management has given a task to further develop the activities.

It should be noted that Sahlgrenska Academy, the Faculty of Medicine at the University of Gothenburg, has since long consolidated its research infrastructure for life science research into a unified organisation (https://www.gu.se/core-facilities). Other Swedish universities have made efforts to coordinate research infrastructure or are discussing such measures. In the spring, the Faculty of Health and Medical Sciences at the University of Copenhagen announced a vacancy for a Director for its new Centre for Core Facilities.

The sections below will be reflected in the goals for an integrated organisation for KI's research infrastructure

Organisation and Leadership

As the internal audit points out, KI does not make overall strategic decisions about the types of core facilities that are necessary to conduct research, but responds to proposals from the operations, which results in a lack of coordination of resources and, in some cases, competing activities. The Infrastructure Board, which is the body that responds to proposals from the operations, does not have the mandate or human resources to continuously optimise the resource efficiency of the resources at its disposal.

It is a divided governance where the Infrastructure Board makes decisions on allocation principles and the distribution of government grants, while responsibility for operating core facilities lies with the departments. Each department then has its own procedures for governance, support and follow-up, resulting in a lack of uniform KI practice for interpreting the applicable regulations.

Directors and Core facility managers do not participate in the strategic development of KI's research infrastructure.

Economy

Some research infrastructures have grown to such a size that they have a significant impact on the host departments finances, while others are

small and/or have few customers and are very sensitive to changes in the number of users.

Core facilities have tended to focus their instrument investments so that they coincide with calls for instrument support rather than working with continuous investment plans to support high-quality and efficient operations.

Employees
Positions, career paths and skills development differ for employees in research infrastructures compared with academic careers. There is a risk that certain smaller core facilities do not have the financial resources or mandate to employ full-time staff, even if this would be desirable from an operational perspective.

It has been difficult to recruit certain categories of staff.

Support functions
The Infrastructure Board's administrative support ends up supporting the management of the core facilities in the absence of its own dedicated competent support organisation. This is not a professional or sustainable situation. In line with this, the internal audit suggests that KI consider developing more coordinated and tailored support for the core facilities.

Furthermore, there is a lack of common principles for prioritising customers, pricing, etc., as well as specific administrative expertise related to the provision of technical services and goods.

System support
Today, the core facility management system is located in the Research Support Department and is mainly used for booking instruments and invoicing, but not for follow-up at an overall level.

Security
Research infrastructure has evolved from often being synonymous with complex and costly physical infrastructure to systems that are fully integrated with and dependent on a complex information management environment.

In recent years, physical security and information security have become increasingly important at KI. KI needs to ensure adequate operational

security with regard to, for example, freezers and various forms of storage of research information. There are constantly new and increasing demands for the secure handling of research information and secure data storage. An integrated organisation is better equipped to achieve a more secure operating environment overall than is currently possible.

Goals for an integrated organisation

The goals were set and established at the beginning of the project. Additional aspects that have been added during the course of the project will be mentioned in connection with the presentation of the proposal below.

Organisation and Leadership

- Supports strategic priorities.
- Management focused on delivering high-quality infrastructure.
- Facilitates synergies[1] between infrastructures.
- Developed work for quality assurance and quality development.

Researcher influence

Economy

- Ensure long-term financial stability.
- Create conditions for investment plans.
- Balance in the economy as a whole without requiring zero results or surpluses for each infrastructure.

Employees

- Promote staff mobility between infrastructures.
- Offer permanent employment and skills development for improved recruitment and retention.

Support functions

- Qualified administrative support with unique expertise in research infrastructures.
- Marketing support for the research infrastructure.

System support

- Coordination of core facility management systems.

Security

- Focus on operational stability.

[1] Meaning collaboration

Project implementation and dialogue

Working group
The work on the priority focus area "E2. An integrated organisation for KI's research infrastructure for increased quality and efficiency" has been led by Karin Dahlman-Wright and Gunnar Gustafsson Wiss and began in spring 2024. The work has been carried out by a working group composed of Johanna Bäckström (HR Director), Jenny Degerholm Langsmo (AC LabMed from October 2024), Carina Hammarström (AC MBB), Lotta Jansson (Head of KM), Mats Olsson (Head of Department CNS), Eva Tegelberg (Chief Financial Officer until October 2024). Lisa Arodin Selenius (Administrator from November 2024), Matti Sällberg (Dean South, representative for core operations from November 2024). Johan Lagerros (Research Infrastructure Specialist, ITA) and Charlotta Kubu (Controller) were co-opted to the group from December 2024.

Three models were developed as a basis for dialogue
Three models were developed and presented and discussed in the autumn of 2024 (Appendix 2) with the departmental groups, the KM Board, the Infrastructure Board and the Committee for Research. Input and how it was handled are reported in Appendix 3. Furthermore, group work was carried out at a management retreat, which is reported in Appendix 4. The President's management team, core facility managers and the Faculty Board were informed of the models.

One model was selected for in-depth analysis and dialogue
The working group chose to proceed with the model that clearly addressed the goals. The model has been revised and developed in dialogue with the operations.

Five departments, CNS, LabMed, MEB, MedH and MTC, were selected for a more in-depth study of how the **financial conditions for the department would be affected** if the core facilities were moved out of the department.

The selected departments were asked to analyse how a possible relocation of the core facilities would affect the department financially and whether a reduced INDI withdrawal and cost base would have a significant impact on the department. In general, those with large core

facilities indicate a major impact on the department's finances. All of them communicate that they will be sufficiently large as independent departments even in a scenario where core facilities leave the department (Appendix 5).

The proposal has been discussed in the departmental groups, with core facility managers, at the President's management retreat, with the Infrastructure Board and with the KM Board. Input and how it has been handled are reported in Appendices 6 and 7. A submission entitled “Researcher influence after centralisation of core facilities at KI” was received after a presentation to core facility managers (Appendix 8). The working group's assessment is that researcher influence can be ensured in the proposed model, but the working group is fully aware of that certain core facilities are best developed with a maintained organisational link to a research group. The working group has consistently presented the proposal in various contexts to which it has been invited.

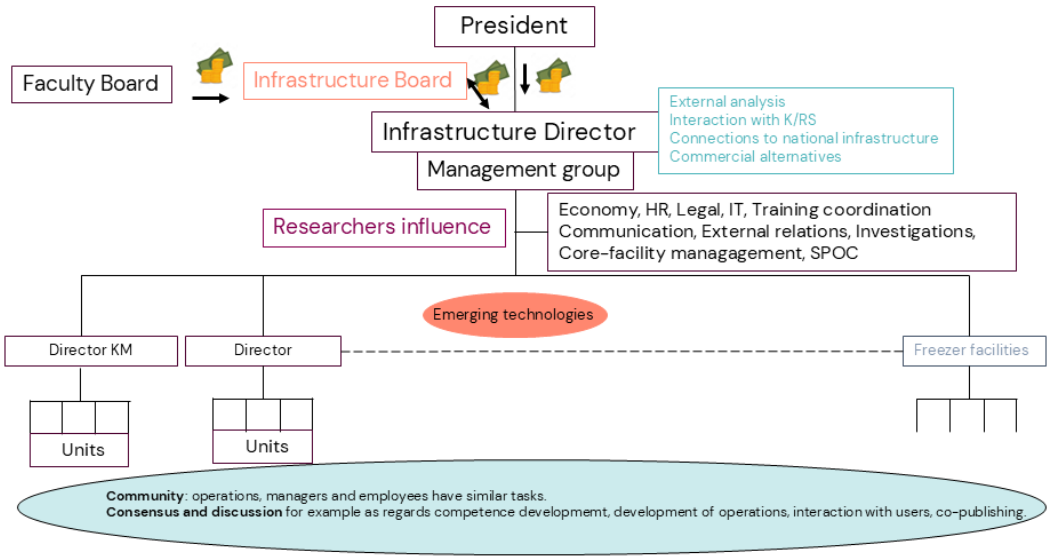
In summary, the proposal has been presented in a large number of contexts. The proposal has been met with significant interest, and the constructive criticism that has been expressed has contributed to the development of the proposal.

Proposal in detail

The proposal is described in more detail below, and is presented under the same headings as the goals. It should be noted that the proposal does not aim to physically relocate activities.

Organisation and Leadership

RIKI will be led by an infrastructure director who reports to the President.



An illustration of RIKI highlighting some of its functions. Resources are allocated to RIKI by the President and the Faculty Board via the Infrastructure Board. Resources from the Infrastructure Board are based on a proposal for activities and associated resources from the Director of Infrastructure, followed by dialogue between the Director of Infrastructure and the Infrastructure Board. The Infrastructure Director will have clear responsibility for external analysis, interaction with Region Stockholm and KI's participation in national infrastructures. Researcher influence is ensured at several levels. The activities are supported by professional operational support that includes functions specific to the provision of services. Emerging technologies is responsible for establishing new methods and technologies and making these available to researchers.

The proposed model makes no distinction between whether the president chooses to establish a position as infrastructure director or whether it should be a time limited assignment. It is assumed that the director will be at professor level and have extensive leadership experience, as well as a clear ambition to establish a high-quality and attractive organisation.

The management of RIKI is responsible for **the strategic development** of the organisation within the given framework.

It is assumed that the directors and core facility managers will participate in the strategic development of the organisation. It is proposed that RIKI establishes an international advisory panel for regular reviews of the overall research infrastructure portfolio. To further support strategic development, it is proposed that an "Emerging Technologies" function be established, focusing on innovation and collaboration with researchers and instrument manufacturers, as well as the continuous development and implementation of state-of-the-art services and research infrastructure. The organisational framework and scope of this function will be developed by RIKI's management.

The management of RIKI is responsible for delivering **high-quality research infrastructure** and ensuring that KI researchers have access to it. This includes interactions with SciLifeLab, national research infrastructures, Region Stockholm and commercial operations. Through the Infrastructure Board, among others, KI invests significant resources in KI's participation in national infrastructures, and it is a priority that KI researchers have sufficient knowledge of and opportunities to use these. In cases where there are commercial alternatives to the research infrastructures provided by KI, the management of RIKI needs to be aware of these and advise KI researchers on the best options.

It is proposed that the various research infrastructures be organised into "platforms" led by a Director. KM and larger research infrastructures constitute separate "platforms", while smaller research infrastructures can be combined into one platform. **Increased cooperation within the "platforms"** is assumed, but the management of RIKI is expected to continuously review opportunities for **cooperation between "platforms".**

The activities to be included in RIKI should be based on what is best for KI as a whole. The activities should normally be funded by the President and/or the Infrastructure Board. There should be a clear distinction in that the activities provide highly qualified methodological and technical services. There are examples where core facilities have already been merged into a separate unit within the department, or where steps have been taken in such a direction. These should be particularly suitable for

inclusion in RIKI in the first phase. The implementation of RIKI does not require that all core facilities be included at the same time. However, the process must not be drawn out over too long a period of time. A few research infrastructures at KI are national infrastructures funded by VR and/or SciLifeLab. Governance structures linked to this funding should remain in place.

RIKI shall manage KI's **quality system for research infrastructure**, which the internal audit recommends that KI describe.

Researcher influence
The Infrastructure Board, as a faculty body, will continue to play a central role in the funding of activities. Researcher influence is an important component in ensuring that research infrastructures are developed in harmony with user needs and in order to obtain input regarding new methods and technologies. It is proposed that the management of RIKI, as well as the management of constituent activities, engage researchers to assist in the development of the activities. In the case of KM, this corresponds to the current KM board. The various research infrastructures may have a scientific director function if this benefits the development of the activities.

Economy and financing
The animal operations, KM, are expected to continue to have a separate resource stream from the President. This resource stream shall be specifically intended for animal operations unless the President decides otherwise. RIKI's other activities are financed by the Infrastructure Board with resources that the Infrastructure Board receives from the Faculty Board. This funding is long-term, while reprioritisation can take place continuously according to the needs of the activities. Other funding for RIKI consists of resources for national research infrastructure (SciLifeLab, the Swedish Research Council), other external grants, user fees and KI's resource allocation.

It is essential that RIKI's management draws up **investment plans** to ensure that the instrument park is continuously upgraded in line with technical and methodological developments and needs, and that a budget is allocated for these investment plans.

Funding for core facilities is currently provided at 3- or 4-year intervals by the Infrastructure Board, with no increase or decrease in the grant during a running grant period. At RIKI, funding can be continuously modulated to ensure that resources are allocated where they are most useful. The Infrastructure Board does not have sufficient insight into the activities it finances to be able to assess precisely where resources are most useful. This requires continuous work with the activities.

Employees

Employees working in the research infrastructures that are being moved to RIKI will be employed by RIKI. Permanent employment is the norm at RIKI. Today, there are a small number of individuals who divide their time between a core facility and a research group. It is possible to be employed by RIKI but also work at a department, and vice versa, to be employed by a department but also work at RIKI. However, it must be clear whether the main responsibility for the employment lies with RIKI or the department.

The management of RIKI is expected to ensure the professional development of employees, which may include rotation between core facilities.

Support functions

Support functions within RIKI will be established by developing KM's current administrative function. KM's administrative function has experience of incorporating new activities from the incorporation of activities at KI's former departmental-affiliated animal activities.

However, it should be noted that KM's specific and legal support for researchers will remain directly linked to KM.

The INDI level is expected to be similar to the current INDI level. KI's core facilities generally have significant salary and operational costs, which is why it is believed that this will create good conditions for an administrative function as stipulated in the proposal.

The current HR and finance functions at KM need to be expanded and broadened in terms of, among other things, pricing and auditable calculations. Contract functions need to be expanded and a dedicated legal function ensured. The current Single Point of Contact Function

(SPOC) for questions regarding KI's research infrastructure should be developed. A key issue for RIKI is data storage, data management and data processing. Here, RIKI's management needs to develop adequate capabilities in dialogue with, and using functions within, KI's IT department.

KM's administrative support is located at Campus Solna. RIKI will have operations at Campus South and Campus North/Solna. It needs to be ensured that all RIKI activities receive similar administrative support.

System support
The system support currently available for research infrastructure in the form of iLab will be transferred to RIKI.

Security
There is a strong security culture within RIKI. The focus is on physical security, information security and sample security. Good documentation promotes quality assurance and quality improvement. Incidents are reported in the incident reporting system and used in systematic quality improvement work.

A consistent and high standard of security work is ensured by establishing common and standardised methods and working practices. IT security is strengthened by striving to use centralised standard solutions.

Core facilities also need technical support for instruments, etc. It must be ensured that the overall RIKI receives strong technical support.

The role of the Infrastructure Board in relation to RIKI

Following the establishment of RIKI, the role of the Infrastructure Board will change. The Infrastructure Board will continue to be responsible for ensuring that KI researchers have access to high-quality research infrastructure in a resource-efficient manner, promoting good conditions for the operation of KI's research infrastructure and following up on investments in research infrastructure.

The Infrastructure Board will continue to allocate government grants to core facilities and national infrastructures. The Infrastructure Director's proposal for RIKI's activities, and the resources associated with this, will be followed by a dialogue between the Director and the Infrastructure Board. In addition, the Infrastructure Board may add and allocate resources to specific assignments linked to research infrastructure at RIKI, such as "Emerging technologies". The Infrastructure Board will independently allocate funds to activities outside RIKI.

Risk and consequence analysis

The link to the academic activities that drive the development and quality of research infrastructure needs to be ensured. This should be manageable, as the proposal does not include the co-localisation of research infrastructures. Research infrastructures will continue to be located in close proximity to research activities and geographically spread across KI. Here, the heads of department have a central responsibility to ensure that employees in core facilities continue to participate in the department's activities.

The departments that currently have research infrastructure may need to adapt their administrative structure.

In a few isolated cases, RIKI may be able to rent premises directly, but in most cases RIKI will need to rent premises through departments. It must be ensured that this can be managed in a way that is both long-term and flexible for the department in question and RIKI. Among other things, RIKI's long-term responsibility for premises needs to be regulated if these cannot be taken over by the department for other purposes. Responsibility for the working environment in RIKI's premises needs to be clarified. Inspiration could be drawn from how this is regulated at SciLifeLab Stockholm.

In cases where RIKI's activities require the use of instruments and other functions within a department, this needs to be regulated.

Individuals with assignments within research infrastructure and research may prefer to have their position at a department. However, it does happen that employees at KI have positions at different departments.