



Project Governance of
the ITM school's overarching
Research Initiative on Sustainable industry and society (IRIS)
- a inter-disciplinary project to contribute to sustainable transformation

Summary

This project governance document describes the organisational structure of the IRIS project as well as the roles and responsibilities of the project's actors and stakeholders. Processes for agreeing on resource allocation and use within the project are also described.

Decisions

The IRIS Steering Committee decided on June 16th 2021 to recommend that the ITM School's Dean approve it) the IRIS project organisation, ii) roles responsibilities and tasks as well as the iii) project goals and KPIs. This project governance document describes these.

1 Background

KTH conducts Research Assessment Exercises (RAE) as one quality assurance measure. The 2012 RAE identified that the ITM school had research strengths multiple areas relating to sustainable industrial transformation including design of new materials, products/services, business models, manufacturing techniques and processes, energy systems and also competence development.

The RAE also identified the scope for researchers working with these individual areas to collaborate more and enhance the scope for the ITM school achieving its ambition of leading the transition to a more sustainable industry.

Therefore, during 2019, ITM has started “IRIS”- The ITM school’s overarching Research Initiative on Sustainable industry and society (IRIS) - a multi-disciplinary project to contribute to sustainable transformation. IRIS consists of four interdisciplinary research themes, each focused on strategic areas for research, education and impact. The four areas go across the School departments and these are:

- Industrial transformation through sustainable digitalization
- Integrated mechanics, components and materials design including additive manufacturing (AM)
- Sustainable Energy Systems – Technology and Business Perspectives
- Innovation eco-systems, innovation management and entrepreneurship

ITM-school decided to initiate and execute this project based on “satsning med myndighetskapital 2020-2023” (V-2019-0942) during 2020-2023.

2 The IRIS Project's Goals and KPIs

By enabling inter-disciplinary research, educational activities and infrastructure investments, the planned outcomes of the IRIS Project are:

- Initiate interdisciplinary research activities
- Build and maintain new research activities and collaboration on new areas (that has not been researched before) within and between ITM:s departments
- Enhance external ITM/KTH visibility and recognition of IRIS research (joint projects etc)
- Contribute to improvement of KTH's and ITM's rankings

Resulting in

- Increased inter-disciplinary research results
- Broader and deeper knowledge creation, use and dissemination
- Further improvements in competences, capacity and infrastructure
- Further improvements in conditions for inter-disciplinary research projects
- Increased long-term impact

Noting there are four activity areas within IRIS, the KPIs associated with the above goals are:

<i>KPI</i>	<i>Quantitative/qualitative</i>	<i>Explanation Pros and Cons</i>
Post Docs Satisfaction	Survey	Satisfaction survey concerning IRIS Continuing Professional Development activities
# Papers # Papers # at area level # Papers # IRIS-wide level	Number of papers where authors are from the same IRIS area where authors are from different IRIS areas	Traditional KPI in the academic world Pro: need to encourage true inter-disciplinary collaboration Con: need to avoid unwarranted pressure on post docs
# Outreach articles # Outreach articles # at area level # Outreach articles # IRIS-wide level	Number of articles published in the general press e.g., NyTeknik, DN Debate etc (where the article addresses an individual research topics) ... where the article addresses an area ... where the article addresses the whole IRIS topic	Outreach is important to demonstrate to KTH's stakeholders about what we are doing; and that we can work together internally to build bigger picture in ... addressing areas ... addressing the overall transformation
# Exchange-Events / study trips / etc	Number of events	

#Industry/societal participants in the exchange Survey: Internal participants	Number of external participants in the event Internal participants consider the event enabled a meaningful dialogue	Internal events are important for building a holistic sense of the research outcomes Interaction with stakeholders is important for both shaping new projects and outreach It's fundamental that these events enable meaningful exchanges
Survey: External participants	External participants consider the event enabled a meaningful dialogue	
# Researchers with inter-disciplinary competences # Area level # IRIS-wide level	Number of researchers participating in the IRIS project / educational activities ... at area level ... at IRIS wide level	It is important that the IRIS research improves the competences and capacity of the ITM school. One competence measure is for researchers who are either developing their own competences via participation in research or via educational activities. Examples of educational activities could be PhD courses or infrastructure training courses.
# New Infrastructures # Area # Investment # Cross-IRIS # Investment	Number of new infrastructures made possible via IRIS project investments ... at area level ... at IRIS wide level	It is important that the IRIS research improves the competences and capacity of the ITM school. One capacity measure is the number and value of new infrastructures
# Proposals # at area level # IRIS-wide level # Project grant # External funding # Internal funding % granted	Research proposals, their financial value and their success rates	It is important that the IRIS research improves the competences and capacity of the ITM school, shaping new research areas – which is often measured as successful research proposals

Each year, target KPIs will be set both for the IRIS project as well as the different activities.

3 IRIS Project Organisation

The owner of the IRIS Project is the Dean of the ITM School.

The IRIS Project is run at the ITM School level and managed in accordance with best practices from contemporary research and practice. A project manager is appointed to ensure this.

The IRIS Project Manager is directed and supported by a Steering Committee, comprising:

- The vice Dean of the school, who chairs the Steering Committee
- One representative of the ITM school’s heads of department
- Two representatives of the area coordinators
- The Head of Administration

And, as reporting members:

- The project controller
- The project manager

The Steering Committee Chair liaises with the Dean of ITM School and the ITM Strategic Council.

Within the IRIS project, there are four activity areas that have different research themes. Each area has at least one area coordinator. Each area in the IRIS project is also supported by a reference group consisting of other experts that adds competences to the project team without being formally assigned to it, or have any authorization to govern it.

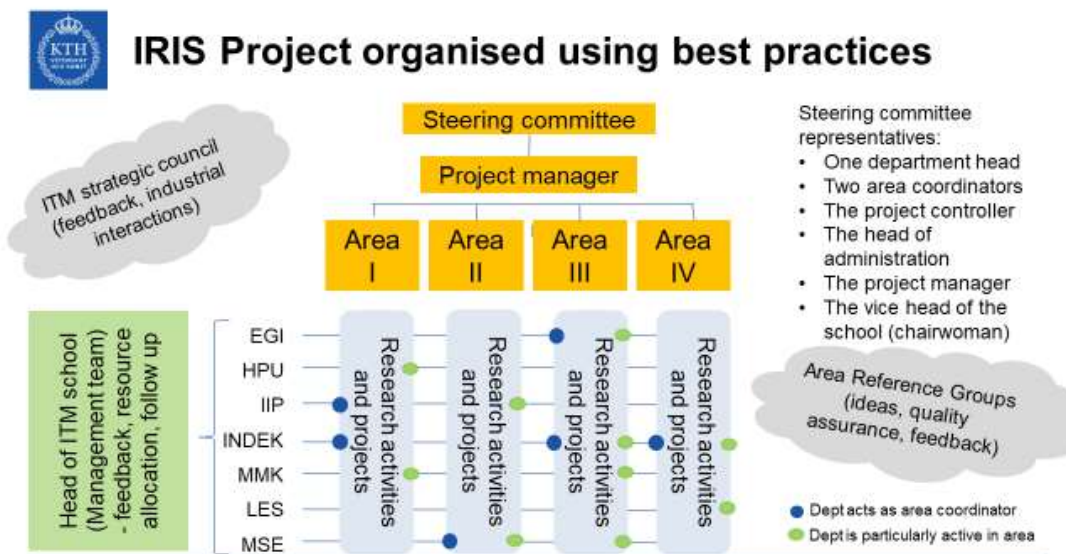


Figure 1. IRIS Project Organisation.

4 Roles and responsibilities

The IRIS Project has a number of organisational stakeholders and participants, whose roles and responsibilities as well as tasks are described in Table 1.

Table 1. Roles, responsibilities and tasks.

Organisational entity	Responsibility/ Decision mandate	Tasks
<p>ITM Management School Dean</p> <p>Consults</p> <ul style="list-style-type: none"> • Deputy head of the school • Head of Administration • GA/FA/FFA • Department heads 	<p>IRIS project owner</p> <p>Makes decisions on the IRIS projects:</p> <ul style="list-style-type: none"> • Overall budget frames, or changes thereof, and the project's objectives and aims • Shaping of the induction/competence development programme for the post docs • Changes of appointed area coordinators 	<ul style="list-style-type: none"> • Acts as project owner • Follows-up on the overall IRIS research results • Reports IRIS results to KTH's President
<p>Steering Group</p> <p>Steering group members consult the stakeholders that they represent</p>	<p>Directs and supports the IRIS project manager</p> <p>Evaluates ongoing IRIS project progress and emerging results</p> <p>Removes impediments to facilitate the execution of the IRIS project</p> <p>Decides</p> <ul style="list-style-type: none"> • Scope changes for the IRIS project objectives • The IRIS projects Performance Measure System (KPIs) 	<ul style="list-style-type: none"> • Supporting the project and area organization and planning • Preparing recommendations for project changes e.g., the people appointed as area coordinators • Decision making (see left) • Following-up on the areas and IRIS projects overall budget and time frame • Actions for removing hindrances to facilitate the projects and the areas progress
<p>Project Manager</p> <p>Consults all stakeholders and liaises especially with the area coordinators</p>	<p>Shaping the IRIS project overall research aims, objectives and goals</p> <p>Proactively leading both the IRIS project and activity areas so that its goals are achieved within budget</p> <p>Coaching and supporting the area coordinators</p> <p>Shaping cross programme initiatives e.g., post doc programme to add value to the areas and project as a whole</p>	<ul style="list-style-type: none"> • Formulating aims and objectives and strategic plans for the IRIS project • Developing, together with the coordinators, a yearly action and resource allocation plan for the project and the 4 areas • Coordinating the work towards the IRIS project's objectives - within the project's allocated resource and time frames. • Assessment of IRIS project and activity area progress • Assessment of project and area changes • Preparing decision making for the Steering Committee

<p>Area Coordinators play a pivotal role in the project Consulting the project manager, researchers, reference groups and heads of departments</p> <p>It is anticipated that area coordinators are up and coming researchers.</p>	<p>Shaping the area's overall research aims, objectives and goals</p> <p>Directing the area's overall research direction towards those goals</p> <p>Shaping the portfolio of projects, and individual projects, within the area in order to optimise individual project aims, area aims and project aims</p> <p>Jointly deciding with heads of departments about possible IRIS funding of incumbent faculty (agreeing on their involvement and scope) and helping form inter-disciplinary working groups</p>	<ul style="list-style-type: none"> • Formulating aims and objectives and strategic plans for the area • Collecting and organizing input from aligned researchers (and other stakeholders) and producing a yearly action and resource allocation plan for their area • Coordinating the work towards their project area's particular research objectives - within their allocated resource and time frames. • Alignment of what research activities that are initiated and executed and keeping track of when important results occur • Ensuring that their project area contributes to the overall objectives of the IRIS programme.
<p>Heads of Departments</p> <p>Consults the area coordinators, researchers, project manager, other heads of department – and liaise with the VHC</p>	<p>Responsible for securing the project has the necessary resources</p> <p>Taking employer responsibility</p> <p>Ensuring appropriate alignment of the resource allocation with the project, proactively plan the budget as well as reporting planned and actual costs</p> <p>Joint decision with area coordinators when allocating financial funding for purchase of infra-structure</p> <p>Appointing the department representatives to the reference groups</p>	<ul style="list-style-type: none"> • Based on needs specified by the area coordinators, and in cooperation with the area coordinators, allocating staff to IRIS, identify who (of employed faculty) that are doing research within the framework for IRIS • Communicating with the VHC about the resource allocation planning • Facilitating an alignment between relevant area research initiatives and the departments current research • Allocating the financial funding appointed for the department in a relevant way between the different areas
<p>Project members – researchers whose salary is (co)funded by IRIS</p> <p>Consult the Area Coordinators and Heads of Department</p>	<p>How and What research should be conducted</p> <p>Technical/research responsibility for the research initiatives that they are involved in</p> <p>Agree the research scope with the area coordinators</p>	<ul style="list-style-type: none"> • Propose new projects, Plan and perform seminars (knowledge sharing) • Conduct research activities • Enhance cooperation and collaboration with researchers within their area and also in other areas.

	<p>Publish the results in reports and scientific articles</p> <p>Create new research proposals</p>	
<p>Reference groups, one for each activity area</p> <p>Note. Reference group members are not financed from the project</p>	<p>Responsible for advising the area coordinators on assessments of how well the areas research initiatives are aligned with the research front, as well as other research projects at their department</p> <p>Represent the areas at various relevant meetings especially within their department/unit</p>	<ul style="list-style-type: none"> • Participate in the reference group meetings • Communicate with area coordinators when aims and objectives, strategic plans, etc are updated
<p>Project controller –</p> <p>Consults with each VHC at ITM:s departments</p>	<ul style="list-style-type: none"> • Identifies the IRIS project budget activities • Monitors and control the follow-up of each area’s budget/resource allocation • Administration of <ul style="list-style-type: none"> - How to do correct purchase - How to book the costs for resources in the schools accounting system 	<p>Works together with the IRIS project manager as well as the area coordinators to specify and maintain the IRIS project's decided budget, analyses progress reported against booked costs</p> <p>Each department’s VHC will support the department heads and coordinators with enquiries about specific costs in relation the specific department</p>

5 Budget

The IRIS Project Owner sets the IRIS Project's budget and any decides on any budget changes. The activity areas budget will be updated yearly.

6 Budget and resource allocation process

6.1 Existing personnel

Existing personnel are people who already have employment at KTH and have the relevant research completeness, and willingness to adapt to working in an interdisciplinary project – for a shorter period and probably for a percentage of their working time.

The general process for allocating existing personnel resources to the project are:

1. Based on input about the research scope and aims from area coordinators, Heads of department can recommend incumbent researchers to contact area coordinators with a proposal for the engagement of incumbent researchers in the IRIS project
2. The researchers, heads and area coordinators then negotiate the proposal and its project contribution and costs i.e., project goals, project activity as well as associated costs.
Note. All research proposals must be agreed upon by all relevant parties (following the KTH's delegationsordning) with parties respecting that area coordinators have a noteworthy voice in the anchoring process.
3. The area coordinators then anchor each areas resource allocation with the IRIS project manager who will coordinate and influence the allocation to enable synergy effects from an IRIS perspective

Another possible process is:

1. Area coordinators recognise an opportunity, need or gap and shape a research project proposal
2. Area coordinators approach department heads / co-workers with a view of securing resources (existing staff or new temporary employees) to undertake a research project proposal
3. The area coordinators and department heads then negotiate the proposal and its contribution and costs versus IRIS project goals, area objectives as well as associated costs.
Note. All research proposals must be agreed upon by all relevant parties (following the KTH:s delegationsordning).
4. The coordinators then anchor each areas resource allocation with the IRIS project manager which will coordinate and influence the allocation to enable synergy effects from an IRIS perspective

6.2 Recruitment of new personnel to IRIS project

When the area coordinators recognise that there is a need or opportunity for new personnel to undertake research activities in the project e.g., post docs working 100%, then the following process is advocated.

1. Area coordinators scope the competences, research profile and outline research activities that the new recruit needs to undertake
2. This profile and cost allocations are then negotiated with the relevant department heads (see roles and responsibilities)
3. A recruitment committee is agreed (assigned within the group of department heads, area coordinators, project manager, reference group members)
4. The profile, cost allocations, recruitment committee and recruitment selection process are submitted to the Steering Committee for approval
5. Heads take responsibility for the completion of the recruitment process

6.3 Purchase of new infra structure

When the area coordinators recognise that there is a need for new equipment to undertake cross disciplinary research activities, and that such equipment can be used within the IRIS time framework, then the following process is advocated.

1. There is a discussion of the type(s) of equipment needed in the project and which department/laboratory is most suitable for hosting the equipment i.e., will take responsibility for ensuring long term equipment maintenance and use
2. Each department then discusses its long-term needs and ranks their equipment priorities
3. Area coordinators review the rankings by departments and negotiate a final ranking with project participants and heads of departments
4. Area coordinators then, in discussion with relevant user groups, heads, labs etc, secure a plan for installing the equipment, training people to use the equipment, equipment accessing procedures, maintenance responsibilities (see also the KPIs)
5. This equipment specification, capital investment and maintenance cost allocations are then negotiated with the relevant labs/ department heads (see roles and responsibilities)
6. The head of departments then initiate a procurement process
7. The coordinators then anchor the planned use of the infra-structure with the project manager to enable synergy effects from an IRIS perspective
8. Area coordinators take responsibility for reporting the training and use of the equipment during the project

6.4 Additional costs

Area coordination costs are allocated to the ITM school – not to the departments.

A previous decision was made to set a cap of 25% for each area's coordination for the entire duration of the project, which was equivalent to 8.8 million SEK. Accordingly, if an area has two coordinators, they will need to divide that 25% coordination time amongst them. If the coordinators also have own research activities within IRIS e.g., support of post docs, there will need to be an agreement with the heads of departments in accordance with the process described earlier in section 6.

There will be no financial support for the persons appointed to the reference groups.