



# Briefing

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*What IRIS means by interdisciplinary*

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## The IRIS Half Term Project Workshop

The IRIS Half Term workshop is approaching. Researchers funded by IRIS have been asked to provide posters, which have a section “What this project means by interdisciplinary is”. The workshop aim and programme also address “What does IRIS Mean by Interdisciplinary?”

An easy question. However, teasing out an answer is non-trivial. There may also be several answers, depending amongst other things on the IRIS area.

To initiate the process of people individually and collectively arriving at possible answers to this question – and even understanding why we are asking this question - is therefore the intension of this document.

Recognising that teasing out answer is very much context dependent, it therefore makes sense to start to ask the question “What this project means by interdisciplinary” to every project/project researcher. The intension is that if everyone reflects what it means for themselves and their project, we then have a significant body of knowledge to start to develop an answer at the workshop.

So why does that matter. Well, we’re being asked that by the KTH President, KTH Board and others. Furthermore, it is likely that the Research Assessment Exercise will ask us to develop interdisciplinary roadmaps ... which implicitly requires a specific understanding of what we mean by interdisciplinary.

Such roadmaps ought to be an output of the IRIS project on 31 December 2023. Therefore, recognising that getting to a good end often means looking at the beginning, let’s start at the beginning. Why IRIS.

### 1 Why interdisciplinary research

With the aim of enhancing the quality of our work, KTH undertakes periodic reviews of its activities, which are called Research Assessment Exercises (RAE).

The 2012 RAE recognised that the ITM School was making significant research efforts, in many departments/fields, related sustainability and digitalisation. Digitalisation and sustainability are complex topics that require epoch changing technological developments in many fields. In addition to the technological complexity, these topics also require a large number of diverse actors throughout societies to develop and change simultaneously. It is therefore widely recognised in the scientific community that interdisciplinary research is needed to address such issues. This recognition is exemplified by Nature’s special addition on interdisciplinary in 2015.

[The Nature special edition on interdisciplinary](#) addresses why interdisciplinary research matters, considers it is a necessity for scientists to work together to save the world, and asks how scientists can scale disciplinary walls – and other topics.

The 2012 RAE therefore recognised that the ITM could improve its contributions to society by also initiating collaborative research across the ITM’s department boundaries – and so made such a recommendation.

## **2 Why IRIS has a focus on inter disciplinary research**

How the ITM School's management have chosen to implement the 2012 RAE's recommendation to work across department boundaries is by establishing the IRIS project.

The IRIS project has a goal to establish collaboration. Working together across department boundaries is also the means to establish collaboration. (see <https://www.kth.se/en/itm/forskning/iris/om-iris/om-iris-1.929863>).

## **3 How interdisciplinary is 'built into' the IRIS organisation**

The IRIS project organisation was conceived to encourage collaboration across department boundaries, and thereby establish interdisciplinary research. This is evident from:

- IRIS Research Areas cross departmental boundaries
- IRIS appointed post docs are cofinanced by at least two departments.

That is, working across department boundaries is simultaneously a goal and an organisational means to achieve the goal.

– with the means to create the goal now being made more concrete with the proposed intention to create roadmaps.

## **4 Why is it a challenge to define interdisciplinary research**

It is challenge to define, as well as conduct, inter disciplinary research because we are so familiar with our own disciplines – and our disciplines are actually also vital for scientific progress.

The issue however is that our disciplines have actually developed an enormous set of taken for granted assumptions. These taken for granted assumptions are really useful to help us be good at our disciplinary research because the assumptions help us focus. That is, we intuitively use disciplinary assumptions in order to quickly narrow down a problem into a tangible start point. Such tangible starting points also imply very many things that we also ignore. Ignoring things is useful because it enables us to minimise complexity and so arrive at answers more quickly.

The challenge we all face this therefore identifying the taken for granted assumptions of our own research discipline – as well as understanding other disciplines and their taken for granted assumptions. This takes time.

## **5 Some useful links**

[Nature's 2015 special edition of interdisciplinary](#)

[https://jlesc.github.io/downloads/docs/ISSTI\\_Briefing\\_Note\\_1-Writing\\_Interdisciplinary\\_Research\\_Proposals.pdf](https://jlesc.github.io/downloads/docs/ISSTI_Briefing_Note_1-Writing_Interdisciplinary_Research_Proposals.pdf)

<https://www.jstor.org/stable/j.ctt1bc540s>

<https://en.m.wikipedia.org/wiki/Interdisciplinarity>

[https://polytechnic.purdue.edu/sites/default/files/files/Polytechnic%20Collaborative%20Research%20Award\\_guidelines.pdf](https://polytechnic.purdue.edu/sites/default/files/files/Polytechnic%20Collaborative%20Research%20Award_guidelines.pdf)

## **6 Key points to remember**

You know your work best – so we value your contribution of a definition.

Your definition, and the definitions of others, will constitute a body of knowledge about what the IRIS project specifically means by interdisciplinary. It's the starting point from which we can all tease out a shared definition and way forward.