



Interdisciplinary mission-oriented research at Aarhus University

Report 2022

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Background

On 24 February 2022, the senior management team decided to establish a working group on interdisciplinary mission-oriented research. The group's brief was to develop proposals aimed at strengthening AU's profile as a university with solid interdisciplinarity and strong mission-oriented research partnerships that contribute to solving major societal challenges. The working group was tasked with drawing on existing institutional knowledge regarding organisation, instruments and attracting external funding for interdisciplinary mission-oriented research.

The primary questions the working group was tasked with addressing are:

- How can AU create the best possible framework for interdisciplinary mission-oriented research collaboration? For example, are there internal structures that can be improved when applying for mission-oriented funding?
- How can AU do an even better job of supporting existing interdisciplinary mission-oriented projects, including securing the necessary external funding?
- How can we reap benefits from such collaborations, including institutional embedding and anchoring?
- How can we best provide administrative support for trans-organisational collaboration? Recommendations regarding administrative practices can usefully draw on existing institutional knowledge about effective administrative practices and take the form of a catalogue or overview of tried and tested approaches.

The members of the working group:

- Søren Rud Keiding (†), director of AIAS (chair through 1 Sept. 2022)
- Anne Marie Pahuus, vice-dean for research, Arts (chair from 1 Sept. 2022)
- David Lundbek Egholm, vice-dean for research, Nat (Chair from 1 Sept. 2022)
- Andreas Roepstorff, head of dept. and former centre director at Interacting Minds Center, Arts
- Carsten Jensen, centre director, Aarhus BSS
- Lene Baad-Hansen, deputy head of dept. for research, Health
- Thomas Vosegaard, director of iNANO, Nat
- Mogens Hinge, associate professor, Tech
- Hanne Vester Rasmussen, deputy head of administration, Tech

Administrative support from:

- Knud Warming, Research Support Office
- Inge Liengaard, Rector's Office

The working group held a total of six plenary meetings preceded by preparatory meetings in smaller groups.

1.0 Preliminary comments on the nine recommendations

Danish universities have a strong obligation to contribute to the achievement of the Sustainable Development Goals or missions that are of critical importance for a sustainable societal transformation. The creation of interdisciplinary research capacity should be seen as a long-term investment in the knowledge which is of crucial importance to this work. This applies not least in relation to the contribution of research and education to achieving the goals that we as a society are striving to achieve, including protecting our environment, reducing inequality, securing a democratic society, diversity and strong institutions. This report describes the organisational opportunities and initiatives which we consider most useful and promising with regard to ensuring that Aarhus University's knowledge is brought into play in this society-wide effort.

The university must be able to draw on research groups with a scientific research orientation that aim to advance knowledge for its own sake, but which can also be guided by political objectives of contributing with solutions to society for the common good. The benefit to society emerges from the ability of researchers to both engage in long-term, immersive research projects and to act quickly, because a dialogue between the disciplines has been established and a common language has been created.

However, making a difference through this kind of collaboration takes time and space. Aarhus University has been investing in cross-disciplinary research collaboration for many years, and has made a targeted effort to become an important partner outside the university as well. However, the university can usefully develop a more robust structure in the area of leading and organising transdisciplinary cooperation, in order to facilitate better and broader knowledge-sharing and institutional anchoring.

From this starting point, the working group has formulated two ambitions, nine recommendations, a taxonomy of organisational types and a collection of cases for inspiration.

Ambition I

Build interdisciplinary research collaboration capacity

Recommendations

- #1 Create a task force for interdisciplinarity
- #2 Provide opportunities to meet
- #3 Provide seed funding
- #4 Professional recognition
- #5 Rethink formats
- #6 Improve communication

Ambition II

Strengthen the organisational infrastructure

Recommendations

- #7 Advice and guidance in the start-up phase
- #8 Create a framework for knowledges exchange
- #9 Share administrative best practices

2.0 Ambitions and recommendations

2.1/Ambition I: Build interdisciplinary research collaboration capacity

Interdisciplinary mission-oriented research collaboration relies on the existence of a fundamental interdisciplinary collaborative capacity and culture that can be brought into play whenever the need for this prevails. To develop this requires a considerable investment from the parties involved: it takes time to develop the ability to make the changes in perspective required for genuinely interdisciplinary collaboration. There are also a number of barriers that must be overcome before the value of such collaboration becomes evident to the participants. The six recommendations are aimed at creating good framework conditions for the development of an interdisciplinary collaboration capacity and culture.



#1 Create a taskforce for interdisciplinarity

An organisational framework is necessary in order to generate the necessary focus on interdisciplinary mission-oriented collaboration.

The working group recommends: that the university establishes a taskforce for interdisciplinarity to motivate, advise, and inspire crosscutting collaboration on specific themes relevant to possible new missions or existing ones. The interdisciplinary taskforce could be comprised of department/school heads or researchers/advocates. The group's tasks would include contributing to theme meetings (proposal #2), in addition to advising the senior management team with regard to interdisciplinary mission-oriented research.

The next step: Each faculty appoints at least one member to the taskforce, and AIAS appoints one. The taskforce convenes for a first meeting at which rules of procedure and working methods are agreed on and ideas are discussed. Administrative support for the taskforce is provided by AIAS, and the taskforce provides input to the senior management team and the academic councils as needed.



#2 Provide opportunities to meet

An active effort must be made to provide forums for interdisciplinary encounters. While some good examples of such forums do exist (for example, the university teaching courses for early-career researchers), we lack forums for dialogue on specific topics.

The working group recommends: that the university establishes a framework for themed meetings that create a space for transdisciplinary encounters within research and teaching. The focus of the meetings would be the potential for academic collaboration driven by curiosity and ambition. Themes could include recognised societal challenges, missions, and potential new solutions. Such meetings should be initiated by advocates with a genuine interest in inter- and transdisciplinary collaboration, and should involve early-career researchers, perhaps in conjunction with supervisors/senior researchers. External partners could also be included. The themed meetings would be

short (max. two hours) and structured around short presentations followed by informal dialogue. Consideration should also be given to how participants might continue their discussions if they are interested in doing so.

The next step: The taskforce (see recommendation #1) develops a framework for theme meetings, drawing on inspiration from existing interdisciplinary meeting formats, such as presentations by AIAS fellows and the exploratory lunch meetings at Arts.



#3 Provide seed funding

Seed funding is a simple and relatively inexpensive way to create incentives for interdisciplinary collaboration. Seed funding is particularly effective in relation to early-career researchers. Junior-career researchers in particular find collaboration with colleagues from other disciplines motivational. In addition, even small grants can provide a career boost to early-career researchers who don't yet have a lot on their CVs. However, seed funding requires managerial willingness to take risks: such projects can take a long time to bear fruit, and it can be difficult to pinpoint precisely what results such funding makes possible in the long term. For this reason, the funder must accept that not all project ideas may lead to viable projects.

The working group recommends: that funding is earmarked, either locally or centrally, to support the initial phases of interdisciplinary research collaborations. We also recommend that such seed funding be allocated through open competition for grants, for example with fixed application dates and a wide field of applicants, as well as a prerequisite that applicants from different disciplines collaborate on the application.

The next step: The central Research Committee/the faculties' research committees agree on how to use any available seed funding from the university to promote interdisciplinary research.



#4 Professional recognition

Participation in interdisciplinary mission-oriented research has a significant impact on society. It's important to ensure that this harmonises with the recently adopted Agreement on Reforming Research Assessment, for which the European Commission took initiative. This would mean that research initiated and published through mission-oriented collaboration must at the same time be assessed and recognised in the context of Aarhus University's own talent development and career programmes. The faculty management teams are responsible for clarifying the frameworks within which interdisciplinary and problem-oriented impact is assessed and recognised. This might usefully be included in a broader discussion of research assessment and recognition.

The working group recommends: that management ensures that guidelines for assessment of applicants to academic positions and criteria for research evaluation recognise and valorise participation in and results from interdisciplinary research. In addition, we recommend that the university explore the funding opportunities for interdisciplinary mission-oriented research in dialogue with Danish foundations.

The next step: On the background of an initial discussion by the Research Committee, the faculties should work on introducing a more holistic and discipline-sensitive approach to research qualification assessment and recognition. This work might usefully take its point of departure in the Agreement on Reforming Research Assessment.



#5 Rethink formats

Aarhus University has a variety of formats that support interdisciplinary mission-oriented research collaboration.

The working group recommends: that existing formats be rethought to secure more pronounced inter-disciplinary opportunities. One example might be:

The annual MatchPoints conference, a well-established format. Currently, each MatchPoints conference is organised by a single faculty with the involvement of additional faculties and external partners. We propose that in the future, MatchPoints should be a collaborative effort involving at least two faculties, with an even stronger focus on topics of transdisciplinary nature and interest. We also recommend raising awareness of the conference at the faculties.

Regardless of which formats are rethought, it is important to incorporate a plan for ensuring the continuation of possible new collaborations after the event.

The next step: Events and Communication Support (the Rector's Office), which is responsible for the overall planning of "MatchPoints", will develop a revised concept for the event. An investigation of other formats which might usefully be rethought will also be made.



#6 Improve communication

Communication from AU must demonstrate the value that researchers and research activities create through knowledge, new discoveries and collaboration. In this way, communication can support the dialogue and collaboration between the university and external stakeholders by disseminating knowledge of how cross-disciplinary mission-driven research contributes to societal development.

The working group recommends: that interdisciplinary mission-oriented research collaboration is emphasised in research communication, for example in press releases about grants and research for external media and in news items on AU's own channels.

The next step: Communication and Press (the Rector's Office) will develop proposals for how AU's interdisciplinary profile and communication on interdisciplinary mission-oriented research collaboration can be improved, internally as well as externally. The communication forum will be involved.

2.2. Ambition II: Strengthen the organisational infrastructure

Over the past decades, Aarhus University has invested in various forms of interdisciplinary research collaboration. Major strategic initiatives have been launched – such as iNANO, ALIAS, DANDRITE, the Arctic Research Centre, the Interacting Minds Centre, BIRC (Bioinformatics Research Centre) and CIRRAU (Centre for Integrated Register-based Research) – and funding has been given to smaller interdisciplinary networks and research groups.

This means that knowledge and experience have been accumulated in many different parts of the organisation regarding such aspects as research team leadership as well as the administrative structure and support of cross-organisational projects and centres. However, this knowledge is not gathered and shared systematically. This means that it is often necessary to start 'from scratch' when a new initiative is to be launched.

These recommendations aim to create an infrastructure for the collection and sharing of experience to contribute to the learning organisation. The working group has also developed an overview which describes four 'ideal types' of organisation of interdisciplinary research collaboration at AU (see Appendix 1 – only available in Danish). This was done to articulate the characteristics of the different types of organisation, including how administrative facilitation takes place.¹ For each of the four types, examples of interdisciplinary research collaboration at AU are presented.



#7 Advice and guidance in the start-up phase

While there is already considerable knowledge and experience at AU in leading interdisciplinary mission-oriented research collaborations, there is no structure for how the leaders of new interdisciplinary mission-oriented collaborative projects can draw on this knowledge and experience in order to create the right framework from the outset.

The working group recommends: that when a new interdisciplinary mission-oriented research collaboration is established (for example, like START, PIREAU or SHAPE), a 'dialogue space' should be set aside during the start-up phase to make time for advice and guidance in relation to issues such as research and centre leadership, research questions and the establishment of the administrative framework. Colleagues with relevant experience at a comparable level should be involved (cf. the overview). Advice and guidance will include knowledge of and issues from previous or similar projects and in this way support the organisational learning.

The next step:

The Research Committee is responsible for drawing up a proposal for how to create a systematic way of establishing 'dialogue space' in the start-up phase for research leadership and administrative support, respectively. The heads of the administrative centres should be involved with regard to administrative support.

¹ As there is extensive interdisciplinary collaboration at AU, attempts to create an overview will always be complicated by the fact that some forms of collaboration do not fit neatly into the categories described and contain elements that transcend them. In addition, some centre structures are not included in the overview, such as the national centres for public sector consultancy (DCA and DCE). The overview should thus be understood as a point of departure for considering various organisational 'ideal types.'



#8 Create a framework for knowledge exchange

Once interdisciplinary mission-oriented research collaborations have moved from the establishment phase to day-to-day operations, participants continually gain experience in handling the complex questions of a strategic nature that characterise interdisciplinary research collaboration. These experiences are not currently collected and shared.

The working group recommends: that a framework is established to support the ongoing exchange of experience between research group leaders and researchers involved in interdisciplinary research collaboration. Such dialogue between researchers across projects should be recognised in connection with performance evaluations, so that AU as an institution can ensure that knowledge and experience about good forms of collaboration is gathered and contribute to better evaluation criteria for interdisciplinary mission-oriented research.

The next step:

The Research Committee is responsible for drawing up a proposal for a system that ensures a framework for ongoing knowledge exchange.



Share administrative best practices

A particular challenge in connection with interdisciplinary collaboration is how to handle administrative processes involving several departments and faculties, for example finances, legal issues, communication/websites and human resources. To deal with these challenges, it is necessary to involve administrative staff across the entire organisation.

The working group recommends that administrative processes that pose particular challenges to cross-organisational projects are mapped and described, and that tried and tested solutions to these challenges are presented. This will require contributions from the faculties' administrative centres, as this is where staff are most knowledgeable about the challenges as well as tried and tested solutions.

The next step: LEA (the administration's leadership team) decides how and when descriptions of barriers and tried and tested solutions are to be collected which can be used across the administrative centres and departments/schools.

