

# KNOWLEDGE FOR THE WORLD

Aalborg University Strategy 2016-2021



**AALBORG UNIVERSITY**  
DENMARK



# Knowledge for the World

## **PREFACE**

Knowledge for the World is Aalborg University's overall strategy document, which will form the basis, chart the course and set the level of ambition of Aalborg University towards 2021. Our strategy will help us ensure that we continue to develop our strengths, and it will prepare us to meet the challenges and opportunities which are already emerging.

The strategy focuses on the University's core activities: research, education and knowledge collaboration. Within each core activity a vision has been formulated, as well as a number of actions which will ensure that we continue to make progress within these areas in the years to come.

The strategy has been developed through an open and inclusive process involving members of staff, students and external business partners as essential contributors to the formulation of the course to be charted for Aalborg University for the next few years. Throughout the strategy process, we have received a wide range of constructive and original ideas which, in combination with good consultation responses, have contributed substantially to the creation of the strategy.

We thank you for your valuable contributions and input, and we hope that the extensive involvement displayed throughout the organisation will continue in the implementation of the strategy; only a shared effort will ensure the further progress of the University and the creation of knowledge for the World.

### **The Executive Management**

Aalborg University  
October 2015





# Aalborg University's strategy 2016 to 2021 – Knowledge for the World

Aalborg University (AAU) has a long tradition of building strong collaborative relationships. Since the University was established in 1974, our goal has been to use our platform as a global knowledge generating institution to challenge, support and develop society. We can conclude that successful collaboration with our local communities renders the University an even stronger player in our fields of expertise: research, education and knowledge collaboration.

AAU's ambition is to contribute to the solution of the large challenges faced by society today. Our knowledge must engage with contemporary issues; it must challenge existing paradigms, inspire new discoveries and make a difference.

## OUR MISSION

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**AAU contributes to the knowledge build-up of the global society as well as to the development of the prosperity, welfare and culture of Danish society. This is accomplished through research, research based education, public sector services and knowledge collaboration.**

**We are educating students for the future and are basing our activities on a dynamic and transformative collaboration with our local communities. Our employees embrace all academic fields and take a holistic approach which challenges existing paradigms and creates robust, research based solutions to the complex challenges of society.**

## **WE HAVE A STRONG FOUNDATION**

AAU constitutes an important link between new global knowledge and the business communities in our regions. Together with regional partners, our graduates, researchers and students have, since 1974, contributed to the creation of knowledge and growth in Northern Jutland. The North Jutland region remains very important to us, but we are also strongly rooted in and committed to the other regions in which we are based.

AAU currently has campuses in Aalborg, Esbjerg and Copenhagen, and in all of these, our competences, special study programmes and learning methods are attractive to the business community and the students. We believe that our status as an internationally recognised and collaborative university can help elevate the regions to even higher levels in terms of knowledge.

For a number of years, the University has experienced rapid growth in education. During this period we have also succeeded in developing world class research environments, and the research production has seen a significant increase. The increase in academic publications is unparalleled in the sector and serves to emphasise our ambitious research targets. At the same time, the level of acquired external funding from Danish and international councils and foundations, public and private grantors, as well as the EU system is higher now than ever before.

These positive results as well as the high activity level created in a joint effort by the University staff have resulted in an academic point of departure and a volume which equips us well for the years ahead when considerable changes within research and education spheres are expected.

The individual characteristic features per se do not constitute the AAU hallmark. The combination of these features is what constitutes our strength.

### **OUR CHARACTERISTIC FEATURES ARE OUR STRENGTH**

To address the development trends of the next few years, we have decided to focus on our characteristic features, which are the qualities that set AAU apart from other universities.

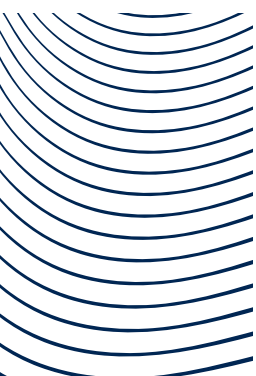
**Problem orientation** — AAU's problem based approach to research and education is strong and well founded. Our researchers, students and graduates are well trained in analytical, holistic and problem and solution oriented methods.

**Collaboration** — AAU conducts research in close collaboration between staff, students and partners in the business world and in public institutions. Working with authentic issues implies that the University maintains close contact with external partners.

**Commitment** — AAU reflects the vigour and zeal of its staff and students. AAU is a university for committed staff and students who assume responsibility and make things happen within the University and in its surrounding society.

**Change** — AAU creates knowledge that changes the world. Our problem oriented approach to research, education, knowledge dissemination and collaboration makes a difference and creates change.

The individual characteristic features per se do not constitute the AAU hallmark. The combination of these features is what constitutes our strength. Our strategic actions should support and develop the four characteristic features, causing us to become by 2021 an even stronger edition of the unique university we are today.





## **THE COURSE TOWARDS OUR VISION**

In future, we must aim at growth based on informed prioritisation of the various options available, and in some areas we will need to raise the level of ambition even further.

This means that we must further develop our problem based learning model so as to ensure that the model will continue to accommodate the learning and competence-related needs of students and society. The study programmes we offer must also support and remain at the cutting edge of the needs of society. We must enhance our research performance and create substantial results at the highest level. We must increase the acquisition of external funding through mutually binding collaboration with private and public partners. And we must intensify our endeavours to promote innovation and knowledge collaboration with business enterprises, institutions and public authorities.

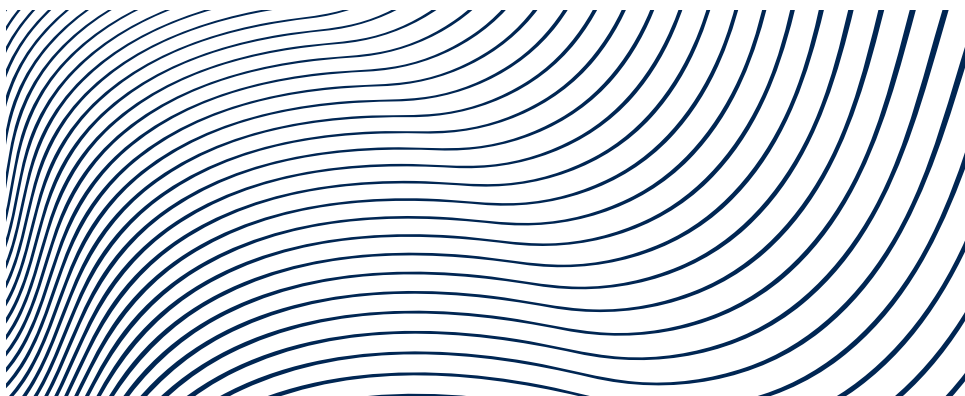


## VISION 2021

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- **We act and are recognised as a university with a distinct profile and well-documented quality in all of our activities**
- **We are internationally recognised for excellence in research with a problem and solution oriented perspective**
- **We educate students for the society of the future**
- **We implement our basic principles of problem and project based learning, and the University is internationally acclaimed for the documented results of this learning method**
- **We are an attractive collaboration partner for private companies and public authorities and institutions, and our carefully selected knowledge-sharing partnerships are based on mutuality and a shared focus**

We will implement our vision by focusing on actions in the following areas: research, problem based learning, education, knowledge collaboration and our organisation.



# RESEARCH

## VISION FOR RESEARCH

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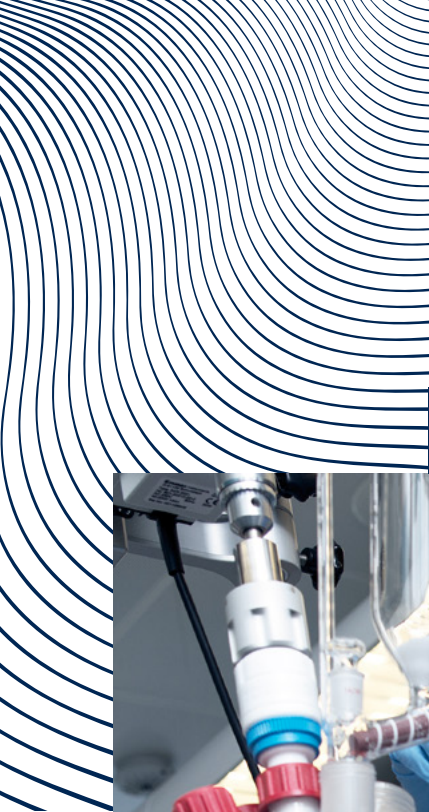
**AAU is internationally acclaimed for its excellent problem and solution oriented research, which is creating outstanding results.**

**Our research is holistic; it is conducted in collaboration with business and organisational partners in our local communities, and new insights and positions of strength are reached through the goal-oriented development of our research potentials.**

Competition in the international research arena has intensified. Aalborg University's world class research environments are already making their mark; however, only by striving for excellence and by cooperating with the best international research environments will we achieve recognition for our knowledge dissemination in high-impact, distinguished publications and through prestigious grants and collaboration agreements. Based on our research environments and the competent services delivered by our administrative units we will continue to develop and enhance the quality of our research.

Problem and solution oriented research creates results and provides development for society. In some areas our research creates solutions to concrete challenges. In other areas, the purpose of research is to identify, question and challenge existing paradigms, thus supplying society with critical reflection and dialogue.

Regardless of the ultimate aim, our focus on addressing the challenges of society will often presuppose the ability to operate across traditional disciplinary boundaries. Our research environments will therefore cut across internal and external areas of expertise, thus rendering our research increasingly holistic. At the same time, we will focus on identifying and developing tomorrow's research talents. We have unique possibilities of unleashing new research potentials in the interplay between the mono-disciplinary environments, while developing new positions of strength.



# Actions - research



## **1. ENHANCING RESEARCH QUALITY**

### **1.1**

AAU will increase the impact of its research in the national and international arenas. This will be done by increasing the volume of contributions to recognised and wellreputed publications and by acquiring a larger number of prestigious grants.

### **1.2**

In order to support our research and our efforts to acquire an increasing number of prestigious grants, a targeted research support initiative will be launched. This initiative will involve a sharper focus on the potentials, development and capacity of research environments; and it will ensure that researchers receive support from administrative staff throughout the application process and project period. The research support initiative will be supplemented by interest promotion in the fora in which framework conditions and calls are formulated.

### **1.3**

AAU will strengthen its endeavours to identify and develop budding research talents through a general talent development initiative. Talent development initiatives will be integrated in an on-going effort to identify emerging research environments.

## **2. DEVELOPING NEW INTERDISCIPLINARY POSITIONS OF STRENGTH**

### **2.1**

AAU will enhance its holistic research and develop new positions of strength within areas with an untapped potential of collaboration between our mono-disciplinary research environments. This is done by launching three to five interdisciplinary research projects with participants from research environments from across the University.

# PROBLEM BASED LEARNING

## VISION FOR PROBLEM BASED LEARNING

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**AAU is internationally recognised for our problem and project based learning and the documented results of this learning method.**

**All our students and staff act out our basic principles of Problem and Project Based Learning, which is a general feature in all programmes at the University. IT is an integral part of problem and project based learning.**

AAU's principles of problem and project based learning (PBL) are a basic formational principle which enable contemplation, independent thinking and academic development. PBL is based on a high level of disciplinary expertise, and at AAU it is the means of acquiring the highest academic level.

Internationally, AAU is already a cutting-edge university within PBL and the development of PBL practices; and we are hosting a prestigious UNESCO centre for Problem Based Learning in Engineering Science and Sustainability.

In order to maintain our position as a leading PBL-university, it is essential that PBL remains firmly embedded in AAU's study programmes as well as in the learning approach of students and staff and the administrative support provided to teaching activities. It is our ambition that the principles of PBL form the pedagogical foundation for all teaching activities at AAU. Through their teaching activities, all lecturers will act out these principles, and our students will obtain PBL-skills and academic skills at the highest level. Moreover, our study environment will support problem and project based learning.

At the same time, the world we live in is one of change, and it is therefore crucial that we always maintain a reflexive stance to PBL and our own practice. We must constantly consider the impact of new types of students, new staff, altered physical surroundings, new technologies etc. on our PBL practice. This is why we intend to explore and challenge our own PBL practice in research projects and pedagogical experiments so as to document our knowledge and the impact of PBL, for the benefit of ourselves and our surrounding society.



## Actions - problem based learning





### **3. INTERNATIONAL RECOGNITION OF PROBLEM AND PROJECT BASED LEARNING AND DOCUMENTED RESULTS**

#### **3.1**

We will identify existing research results of our PBL practice. Moreover, a number of research and educational development projects will be launched; the aim of these will be to further explore and challenge AAU's PBL practice and to create development of this practice. The aim is to document the knowledge and effect of PBL through existing and new knowledge. A set theme will be the use of IT in PBL and the motivation and learning experience of students.

### **4. PBL-PRINCIPLES FORM PART OF AAU'S QUALITY ASSURANCE**

#### **4.1**

As part of AAU's quality assurance of study programmes, AAU's PBL principles are being continuously reassessed. The aim is to further develop our problem based learning model so as to ensure that the model will continue to accommodate the learning and competence-related needs of students and society. A first step will be to integrate IT directly in the model.

### **5. ORGANISATIONAL EMBEDDING OF PBL PRINCIPLES**

#### **5.1**

The schools will develop their programmes on the basis of the PBL principles updated in 2015.

#### **5.2**

The integration of PBL as an explicit learning objective in the curricula and regulations of all study programmes will be ensured.

#### **5.3**

Systematic introduction to PBL to students in all study programmes will be ensured.

#### **5.4**

New staff will receive systematic introduction to PBL, and the heads of departments will prepare a plan for and ensure the on-going upgrading of the PBL and IT competences of teaching staff.

# EDUCATION

## VISION FOR EDUCATION

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**AAU educates students for the society of the future. AAU's education portfolio is future-oriented, robust and in compliance with the University's distinctive profile.**

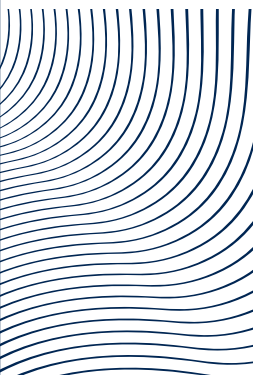
**The quality of our programmes is constantly being kept in focus. Students, staff and management are making systematic efforts to ensure the continuous maintenance and further development of the quality and relevance of our programmes.**

**AAU's study programmes are based in an attractive student environment which supports problem and project based learning.**

The study programmes offered at Aalborg University will be future-oriented and relevant. In regard to the development and flexibility of the educational sector, we will remain at the cutting edge of the needs of society while capturing the interests and motivation of our students.

We also want to have a robust education portfolio. This entails that our programmes must be soundly based as regards research support, quality, relevance, academic proficiency level, size and economy; or they must be embedded in the overall portfolio within education and research, thus assuring robustness. Many of the above are natural elements in the University's quality assurance policy and system, which are strategic tools in the maintenance and further development of the University's education portfolio.

AAU's study programmes must be based on an attractive student environment which is supportive of learning. At all levels in the University structure, attention must be paid to the student environment to ensure that our students are included as active participants in initiatives across the university. A special committee will be established to discuss and suggest inter-faculty initiatives focusing on the physical, psychological, aesthetic and digital student environments.





# Actions - education

## **6. ASSURING ROBUST STUDY PROGRAMMES**

### **6.1**

Relevant parameters for robustness principles to be included in the evaluation of the education portfolio will be set up.

### **6.2**

On the basis of these robustness principles, an initiative will be launched for the purpose of outlining the study programmes of the future. This will apply in concrete terms to AAU's future education portfolio. However, it will also apply in more investigative terms as a basis for discussing the characteristics which should be included in study programmes designed for the society of the future.

### **6.3**

Robust study programmes are characterised by sustainable intakes of motivated and well-informed students. An AAU strategy must be developed for the recruitment of the students of the future. The purpose of this is to coordinate bridge-building and marketing activities across the organisation, and to integrate the development of these activities with the supply of current and future student places.

### **6.4**

Growth potentials in continuing and further education must be identified, and a plan for the area must be developed.

## **7. ASSURING QUALITY AND RELEVANCE OF STUDY PROGRAMMES**

### **7.1**

The University's steering group for quality assurance and development will conduct a systematic follow-up procedure and will continuously develop the quality areas in the University's quality assurance system.

## **8. ENSURING A GOOD STUDENT ENVIRONMENT**

### **8.1**

An attractive and learning-supportive student environment with an operational centralised student environment set-up will be established. This will be a supplement to the decentralised student environment initiatives and will ensure the active inclusion of the students in the shaping of the student environment across the University.

# KNOWLEDGE COLLABORATION

## VISION FOR KNOWLEDGE COLLABORATION



**AAU is an attractive collaboration partner for private companies and public authorities and institutions, and we create knowledge in mutually committing partnerships.**

**We aim to supply state-of-the-art solutions and contribute to optimising existing solutions, and our cooperative relationships are focused and based on careful selection.**

**Knowledge collaboration is an integral element in research and education.**

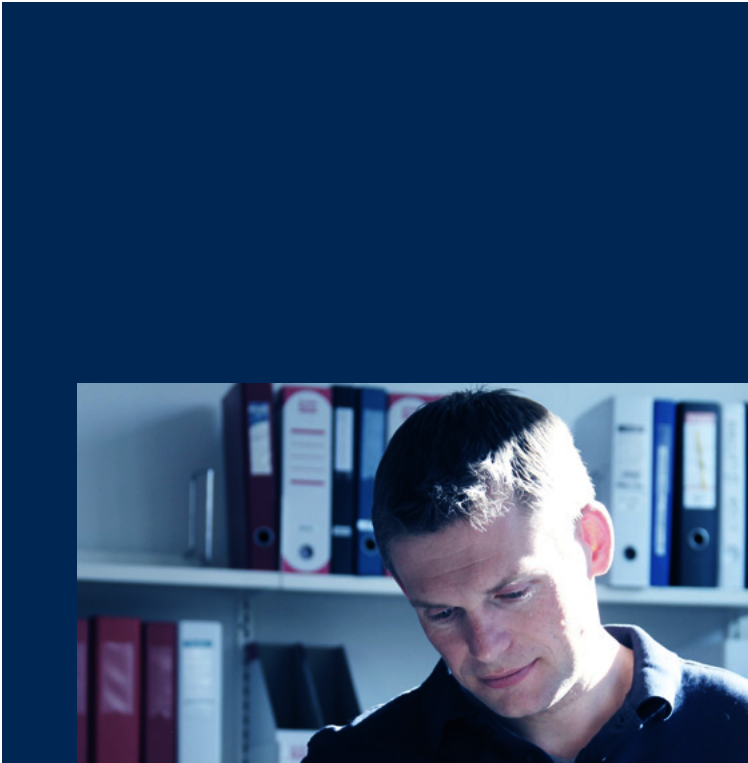
AAU staff and students have a long history of cooperation within research and education with external partners to solve key challenges in society and to develop value-creating solutions to such challenges.

We are very successful in this field and will set new targets in a separate plan for the support of knowledge collaboration. Our ambition is to conduct strategic selection when choosing collaboration partnerships, to formulate problems and solutions jointly in all collaboration partnerships and for the benefit of both parties, and to ensure a balance in the overall collaboration portfolio.

AAU must continue to cooperate with major knowledge-intensive companies and public authorities. At the same time, AAU must acknowledge its embeddedness in a society dominated by small and medium-sized companies; these do not have the same strong tradition of cooperating with the University. We must therefore direct a special focus on cooperating with small and medium-sized companies, thus contributing to increasing their capacity for innovation.

In the future we will continue our targeted use of problem-based learning as a valuable means to establish successful collaboration relationships between our surrounding community and our students. This approach enables the students to gain practical knowledge while the business community gains an insight in the most recent theoretical knowledge.

Today successful entrepreneurs already emanate directly from AAU. It is our ambition to inspire more students and staff to make use of their PBL competences to initiate innovative, value-creating projects in a flexible incubator environment.





# Actions - knowledge collaboration

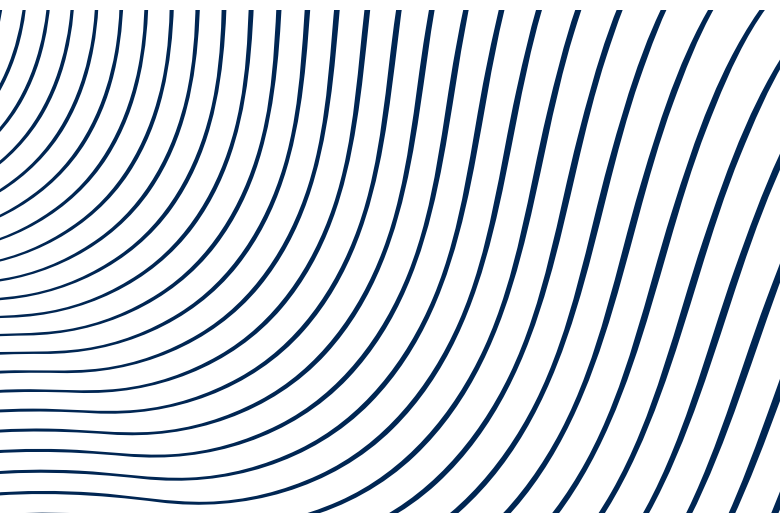
## **9. INCREASED INTEGRATION BETWEEN RESEARCH, EDUCATION AND KNOWLEDGE COLLABORATION**

### **9.1**

A plan for the support of the University's collaboration with our surrounding society will be developed. This plan should promote the integration between education, research and knowledge collaboration by means of physical, organisational and virtual collaboration platforms e.g. The plan will include the organisational and administrative set-ups; it will focus on documenting the effect of knowledge collaboration and an increase in external funding.

### **9.2**

AAU's entrepreneurial activities for students and staff will be increased. A flexible incubator environment will be included in a programme for the support of idea generation, business development, prototyping, proof-of-concept development, etc.



# OUR ORGANISATION

## AMBITION FOR THE ORGANISATION

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Our staff and managers are a precondition for our success in implementing the visions we have set up for the University's future activity. It is therefore essential to ensure the optimal operation of the organisation. In order to achieve this, we have set up the following ambition for the AAU as an organisation:

- We are an attractive workplace for committed and competent employees, and taking an offset in the University's characteristic features, we are acting professionally as one university.
- AAU's characteristic features are being recognised as the core of our identity.
- AAU has a culture that promotes the good work environment and creates value for students, staff and the surrounding community. We cherish our ability to do so in a collaborative context.
- At all levels, AAU is a learning, competent and efficient organisation which is capable of creating the best results in positive collaborations across scientific and administrative functions.
- In line with our present staff, the employees we attract must contribute to and be motivated by AAU's characteristic features.
- AAU's administrative processes are service and solutions oriented and contribute to the value creation of the University by supporting our ambitious targets for the development of our core activities.

## FOCUS AREAS

We have defined three focus areas for the AAU as an organisation:

- Identity, culture and communication
- Competence, organisation and management
- Administration and service





# Actions - our organisation

## **10. VISION FOR IDENTITY, CULTURE AND COMMUNICATION**

We act and are recognised as a university with a distinct profile and a high quality level in all of our activities. All employees are dedicated to creating knowledge for the benefit of our students and the surrounding society.

Our interactions and relationships are based on openness, inclusion, mutual respect, professionalism and quality across disciplinary fields, scientific and administrative functions, campuses and managerial levels.

We will enhance AAU's culture and identity as a university involved in collaboration with the surrounding society.

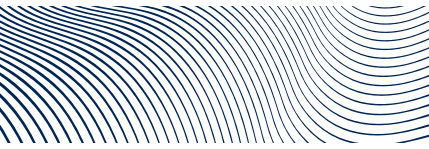
Our ambition is that AAU's communication activities will promote the sense of cultural community across the University's organisational and geographical units and clarify AAU's qualities within the organisation and in the surrounding society.

Our communication must continuously develop and support the University's four characteristic features: problem orientation, collaboration, commitment and change.

## **ACTION**

### **10.1**

Frameworks will be established for a project which will enhance AAU's identity and cohesion and form the basis of the University's communication activities. It must be made clear to all what we believe in, what we stand for and what we have to offer. A central aspect of the project is that it takes as its point of departure AAU's four characteristic features.



## **11. VISION FOR COMPETENCE, ORGANISATION AND MANAGEMENT**

AAU is a learning, competent and efficient organisation which is capable of creating the best results in positive collaborations across scientific and administrative functions.

We wish to be recognised as an attractive university that promotes development and learning. We aim to provide the best possible conditions for all staff as regards talent development, career development and competence development — supported by motivation, and with an eye for potentials.

We wish to continue to attract staff who contribute to and are motivated by AAU's characteristic features. Our organisation must therefore ensure embedded and efficient work processes characterised by clear and respected roles and responsibility. Everyone knows how success is defined within their own roles.

The above objectives require competent, visible and inclusive management. Our strategy requires transparency in management roles and responsibility; that the management is able to prioritise and implement decisions in an efficient manner and in cooperation with committed staff.

## ACTIONS

### 11.1

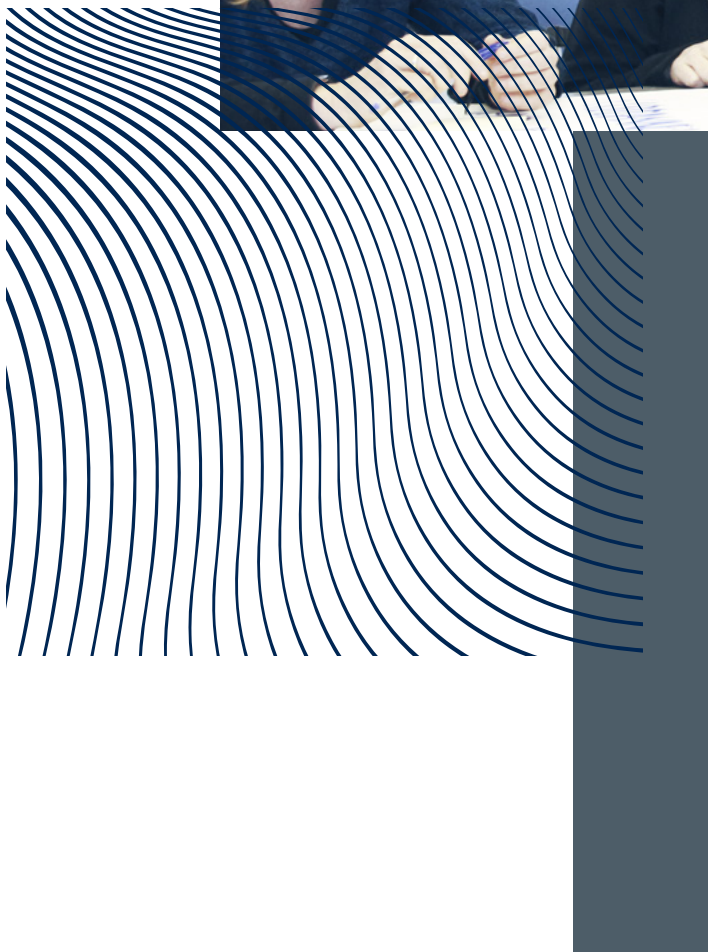
A competence strategy will be developed within research, education, knowledge collaboration and administration that focuses on talent development, competence development and career development. The aim is to ensure the necessary capacity-building.

### 11.2

Through active leadership and involvement of employees, AAU's management must create a framework for balanced planning of work processes within research, education, study programme development, knowledge collaboration and administration.

### 11.3

A management development plan for AAU will be prepared. The aim is to ensure competent management of the University.







## **12. VISION FOR ADMINISTRATION AND SERVICES**

AAU's administrative processes and support functions contribute to value creation at the University in that they are proactive, relevant, service and solution oriented and aligned with the University's core activities. Our ambition is that the administrative work processes support embeddedness and the safeguarding of knowledge, qualifications and learning across the University. Good solutions in one unit should benefit the entire University. We also wish to ensure that the administrative processes and systems are efficient, transparent and characterised by clear roles and responsibility.

### **ACTION**

#### **12.1**

A strategy for the administrative area will be developed. The overall purpose of this action is to ensure that the administrative job functions support the implementation of the University's strategic ambitions for its core activities.

## VISION

- We act and are recognised as a university with a distinct profile and well-documented quality in all of our activities
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<b>ACTIONS</b>	<b>RESEARCH</b>	<b>PROBLEM BASED LEARNING</b>
	<ul style="list-style-type: none"> <li>• Increase the impact of AAU's research in the national and international arenas</li> <li>• Targeted research support</li> <li>• Talent development of emerging research talents</li> <li>• Developing new interdisciplinary positions of strength</li> </ul>	<ul style="list-style-type: none"> <li>• Documenting knowledge and effect of PBL, and develop our PBL practise and use of IT</li> <li>• PBL-principles form part of AAU's quality assurance</li> <li>• PBL is included in the development of all study programmes</li> <li>• PBL is integrated as a learning objective in all curricula and regulations</li> <li>• All students receive systematic introduction to PBL</li> <li>• All new members of staff receive systematic introduction to PBL</li> </ul>
	<b>EDUCATION</b>	<b>KNOWLEDGE COLLABORATION</b>
	<ul style="list-style-type: none"> <li>• Establishing parameters for robustness</li> <li>• Identification of the study programmes of the future and their characteristics</li> <li>• A strategy for the recruitment of the students of the future</li> <li>• A plan for growth in the area of continuing and further education</li> <li>• Follow-up on and development of the University's quality assurance system</li> <li>• Ensuring an attractive and learning-supportive student environment</li> </ul>	<ul style="list-style-type: none"> <li>• A plan for the support of the University's collaboration with our surrounding society</li> <li>• Increase in entrepreneurial activities for students and staff</li> </ul>

## AMBITION FOR THE ORGANISATION

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- AAU's characteristic features are being recognised as the core of our identity.
- AAU has a culture that promotes the good work environment and creates value for students, staff and the surrounding community. We cherish our ability to do so in a collaborative context.
- At all levels, AAU is a learning, competent and efficient organisation which is capable of creating the best results in positive collaborations across scientific and administrative functions.
- In line with our present staff, the employees we attract must contribute to and be motivated by AAU's characteristic features.
- AAU's administrative processes are service and solutions oriented and contribute to the value creation of the University by supporting our ambitious targets for the development of our core activities.

PHOTOGRAPHERS:

SVENN HJARTARSON (PAGE 4)

KLAUS HOLSTING (PAGE 12 AND 16)

LARS HORN (PAGE 20)

AAU (PAGE 24, 28 AND 32)

# **KNOWLEDGE FOR THE WORLD**