



# STAFF OF UNIVERSITIES OF APPLIED SCIENCES PROMOTING SUSTAINABLE DEVELOPMENT AND RESPONSIBILITY

Results from the personnel survey of the  
programme for the sustainable  
development and responsibility of  
universities of applied sciences



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Authors:

**Eveliina Asikainen**, Tampere University of Applied Sciences  
**Olli Ervaala**, South-Eastern Finland University of Applied Sciences  
**Mervi Friman**, Häme University of Applied Sciences  
**Heli Helenius**, Centria University of Applied Sciences  
**Kiti Häkkinen**, Haaga-Helia University of Applied Sciences  
**Turo Kilpeläinen**, LAB University of Applied Sciences  
**Taru Konst**, Turku University of Applied Sciences  
**Juha Kääri**, Turku University of Applied Sciences  
**Jaana Tolkki**, Karelia University of Applied Sciences  
**Maarit Turja-Ilola**, LUT University

Data processing and visualisation:

**Jari Järvinen**, Häme University of Applied Sciences

Editors:

**Kaisa Varis**, Karelia University of Applied Sciences  
**Nina Ylönen**, the Rectors' Council of Finnish Universities of Applied Sciences Arene



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## Foreword

The Programme for the sustainable development and responsibility of universities of applied sciences was approved in November 2020 at the Arene rectors' meeting. In January and February 2021, a survey on sustainable development and responsibility was carried out with the personnel of universities of applied sciences. This report presents the results of the survey. Arene's personnel working group for sustainability and responsibility work has been in charge of preparing the survey and report. Special thanks are given to the members of the personnel working group Mervi Friman and Taru Konst for their work in the preparation of the survey and report.

**Jaana Tolkki**

Chair of Arene's personnel working group on sustainability and responsibility

## Universities of applied sciences in building sustainability and responsibility

Permanent universities of applied sciences will celebrate their 25th anniversary this year. Over 500,000 university degrees have been completed in universities of applied sciences during the last quarter of a century. In his anniversary greeting, President Sauli Niinistö said that it was difficult to imagine what professional life would look like without universities of applied sciences. Our actions have changed the world!

The value of our daily work will manifest itself over time. The world was a very different place 25 years ago. I am certain we could not even imagine what the world could look like in 2021. We have developed a lot by doing things that no one else knew anything about. New structures, operating models and expertise were initially required of us, and gradually this has been reflected in the students' competence and thus in the everyday life of companies.

At universities of applied sciences, we are there to make the world a better place, without forgetting about business growth and internationalisation. People who have learned from us have the opportunity, and certainly also the duty, to work towards a better tomorrow and a better world.

One of the most significant global challenges for the future is sustainability and responsibility. If society focuses on the ability of those with a higher education to solve wretched problems, it must also be possible to expect the same from higher education institutions. We must be able to act in such a way that our activities and expertise minimise our carbon footprint and maximise our carbon handprint. We must act as we teach. This is done with skilled personnel familiar with the subject.

As part of Arene's sustainability and responsibility work, we have examined the situation picture of what kind of sustainability and responsibility work and competence there currently is in universities of applied sciences. This publication presents the results of the study. The report provides us with an excellent basis for building the societal capacity of sustainability and responsibility more effectively.

Together and in cooperation, it will be wonderful!

### **Turo Kilpeläinen**

President of LAB University of Applied Sciences

Chair of Arene's working group on sustainability and responsibility

## Objective and implementation of the survey

The Rectors' Conference of Finnish Universities of Applied Sciences Arenery published the Programme for the sustainable development and responsibility (KeVa) of universities of applied sciences in November 2020. One of the first stages of the programme's implementation was the mapping of personnel competence by means of a personnel survey directed at all universities of applied sciences. The objective of the survey was to hear the thoughts of the staff of the universities of applied sciences on sustainable development and to gather ideas for the implementation of the programme. The results of the survey will be used to promote the goals of sustainable development at universities of applied sciences, and based on them, a roadmap for the development of personnel and its goals and steps will be prepared.

The survey was sent to all universities of applied sciences in January 2021, and they were given three weeks to respond. The survey contains 13 questions, and the answers are anonymous. The survey was estimated to take 10–15 minutes to complete.

A total of 1,791 replies were received. This report describes the results of the entire material without separating the responses from different universities of applied sciences. Universities of applied sciences also received their own results for developing their sustainable development measures.

1,791 people responded to the survey. 45% of respondents worked in education, 32% in administrative and support services and 24% in RDI activities (Figure 1). The respondents represented all 24 universities of applied sciences.

Distribution of respondents by personnel group

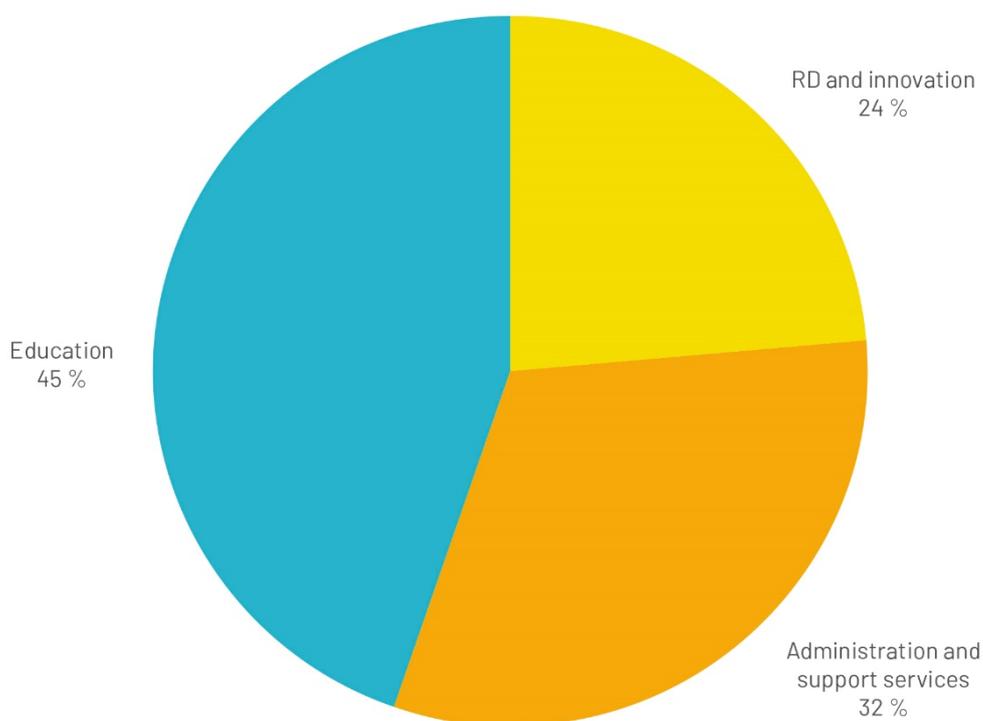


Figure 1 Distribution of survey respondents by personnel group

For each sector, respondents were distributed as follows: 19% in the field of technology, 12% in the fields of health and well-being, 11% in the fields of business, administration and law, and 5% in the fields of arts and culture. Other fields of education were smaller than this (Figure 2). The group 'others' accounted for 37% of the respondents, and it proved difficult to carry out sectoral reviews. Below, the survey data was mainly examined in accordance with the respondents' tasks.

### Distribution of respondents by field of education

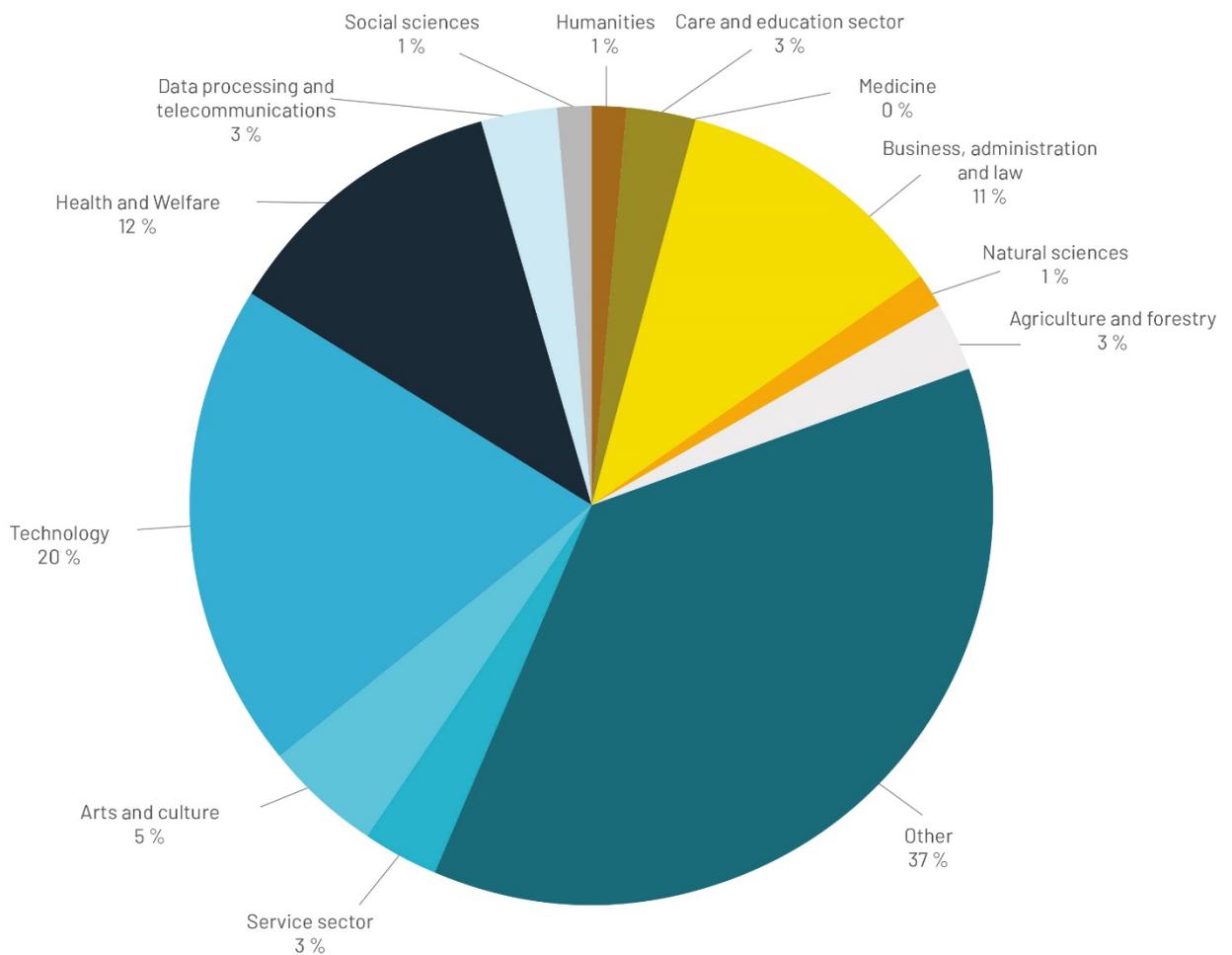


Figure 2 Distribution of respondents by field of education

## Survey results

At the beginning of the survey, respondents were asked to select four of the UN Sustainable Development Goals, which they consider to be the most important for the educational task of their own university of applied sciences. Good education, sustainable industry, innovations and infrastructure as well as health and well-being (Figure 3) came out on top. In their responses, RDI operators referred to sustainable cities and partnerships more than education operators. Reducing hunger and poverty and protecting terrestrial and underwater life remained the least important topics.

The UN Agenda 2030 goals number a total of 17. In your opinion, which of these goals are most important from the viewpoint of the education that your university of applied sciences offers? (Select 4.)

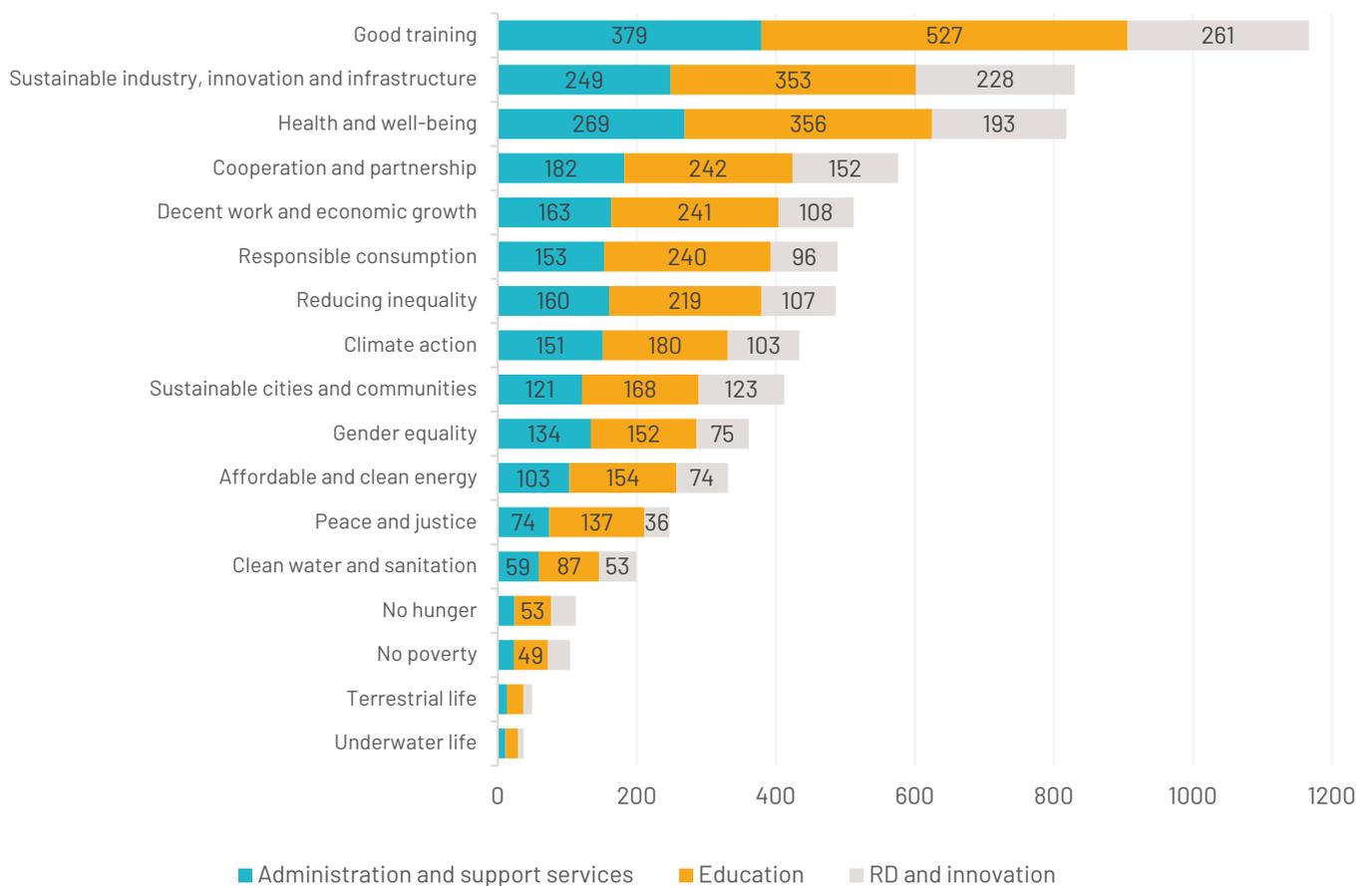


Figure 3 The main UN Sustainable Development Goals (SDGs) for the educational mission of the University of Applied Sciences. Responses by personnel group.

When asked about the implementation models for learning sustainable development, the most popular option among all respondent groups was its integration into all teaching. The second-highest level of

support was given to continuous learning, and the third was a compulsory study unit and an optional study unit (Figure 4). The open responses highlighted RDI projects, additional teaching functions and the formats and ideas developed by students. In addition, the UN's Sustainable Development Goals (SDGs) were proposed as a reference framework for curricula and other activities. The significance of the everyday practices of universities of applied sciences was also pointed out.

### How should teaching and learning sustainable development be implemented at your university of applied sciences? (Select 3.)

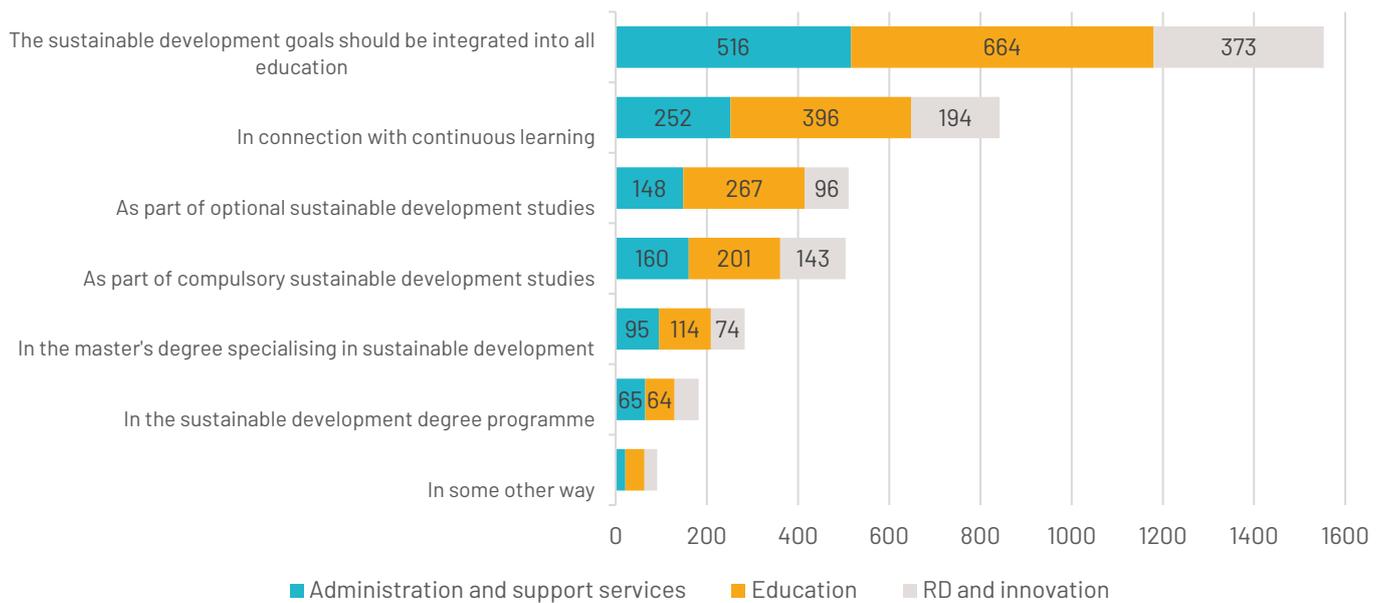


Figure 4 How teaching sustainable development should be implemented at universities of applied sciences. Responses by personnel group.

The respondents were asked to select four options that the RDI activities of the university of applied sciences should focus on. (1) Sustainable industry, innovation and infrastructures, (2) cooperation and partnerships, (3) sustainable cities and communities and (4) health and well-being (Figure 5) were considered key issues. In the field of technology, responses focused on sustainable industry and infrastructures, energy issues and sustainable cities, while in the business sector, decent work and sustainable economic growth came out on top in addition to sustainable industry and innovation.

In your opinion, which of these goals are most important from the viewpoint of the RDI work carried out at your university of applied sciences? (Select 4.)

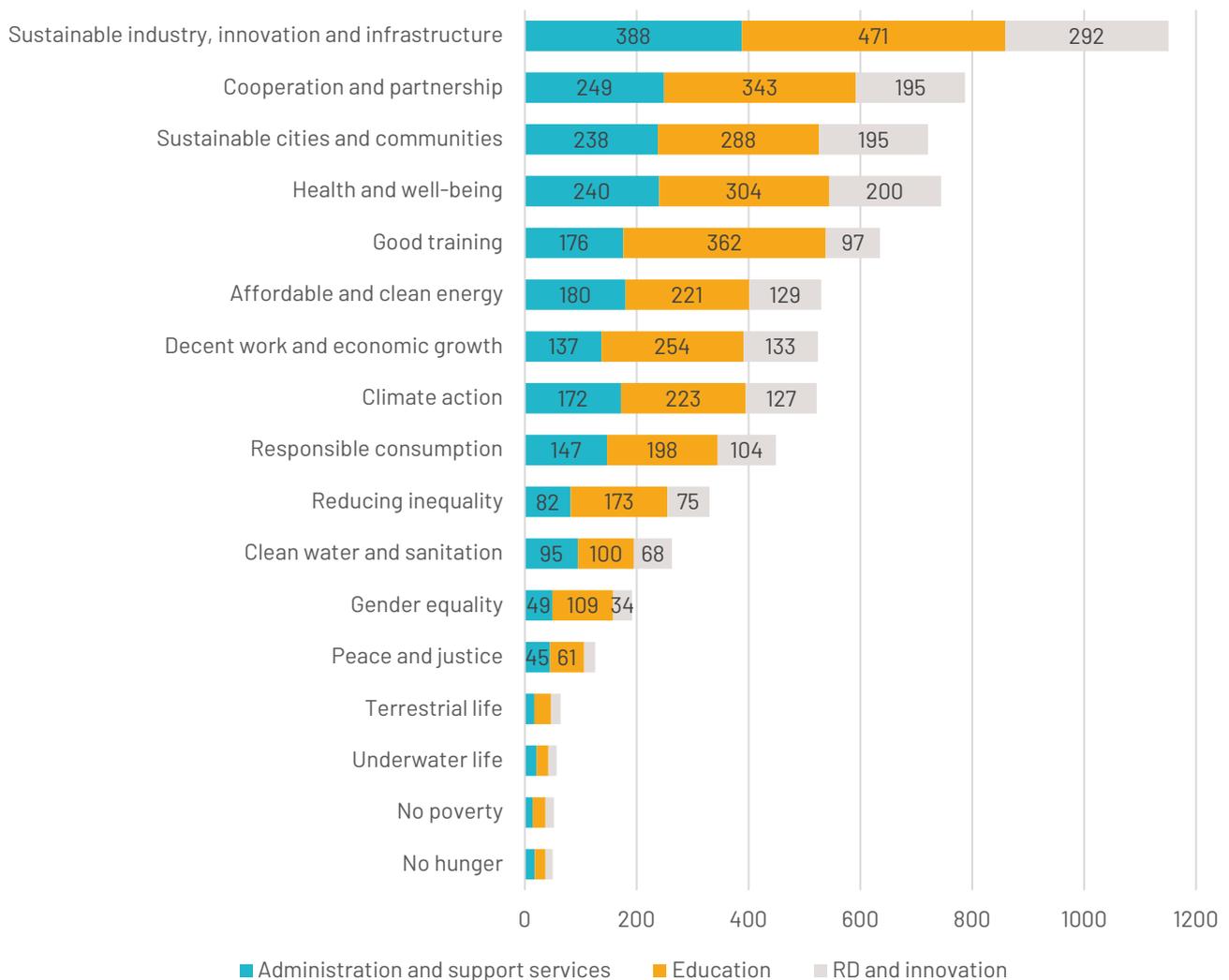


Figure 5 Key objectives for RDI work at universities of applied sciences. Responses by personnel group.

When asked which issues the university of applied sciences should pay attention to in order to reduce its carbon footprint, the responses were divided into three clusters. The first included real estate and travel, and the second included procurement and recycling. The third included information systems, recycling and restaurant services (Figure 6). Administrative actors regarded measures related to real estate and travel as the most important. Recycling and restaurant services were considered more important among education operators compared to other groups. In the open responses, the following issues were pointed out: linking project funding to the SDGs, the competence of one's own key personnel and the provinces' key personnel, taking sustainable development criteria into account in partnership cooperation, and increasing the possibilities for charging electric cars.

To which of the following should your university of applied sciences pay attention when the goal is to reduce the carbon footprint of your university of applied sciences? (Select 3.)

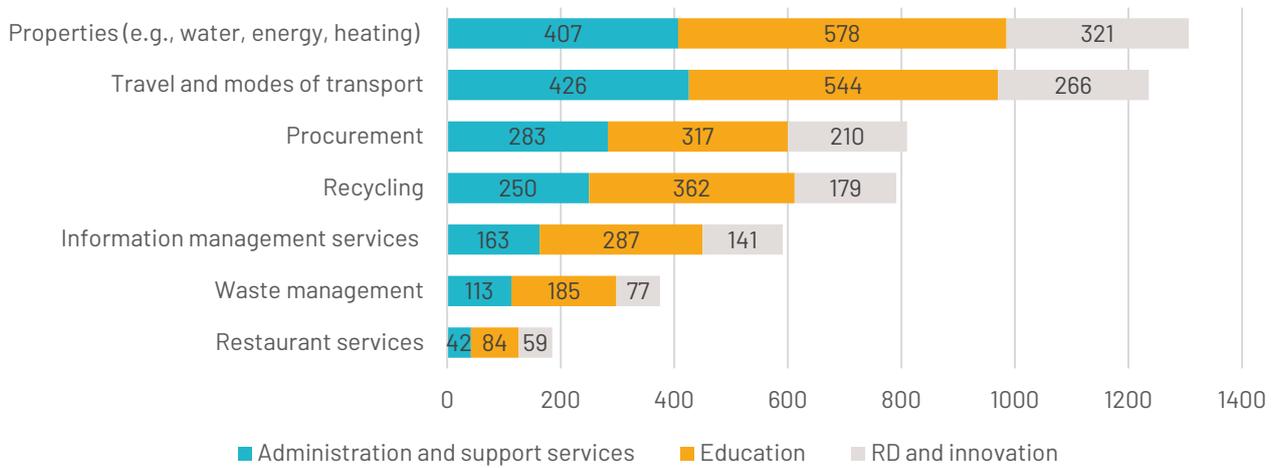


Figure 6 What should your university of applied sciences pay attention to when the goal is to reduce the carbon footprint of your university of applied sciences? Responses by personnel group.

When the personnel were asked how their university of applied sciences could best promote social, cultural and economic sustainability, all respondent groups highlighted flexible remote work and learning arrangements, open and encouraging management and a transparent operating culture and equality (Figure 7). Responsible financial management and accessibility were more visible in the responses of administrative staff than in the other groups, while promoting multiculturalism was at its strongest in the responses of those in the field of education. The open responses highlighted, for example, responsible investment, taking social criteria into account in procurement services and competitive tendering, and supporting interaction between students and zero tolerance to bullying.

How can your university of applied sciences best promote social, cultural and economic sustainability? (Select 3.)

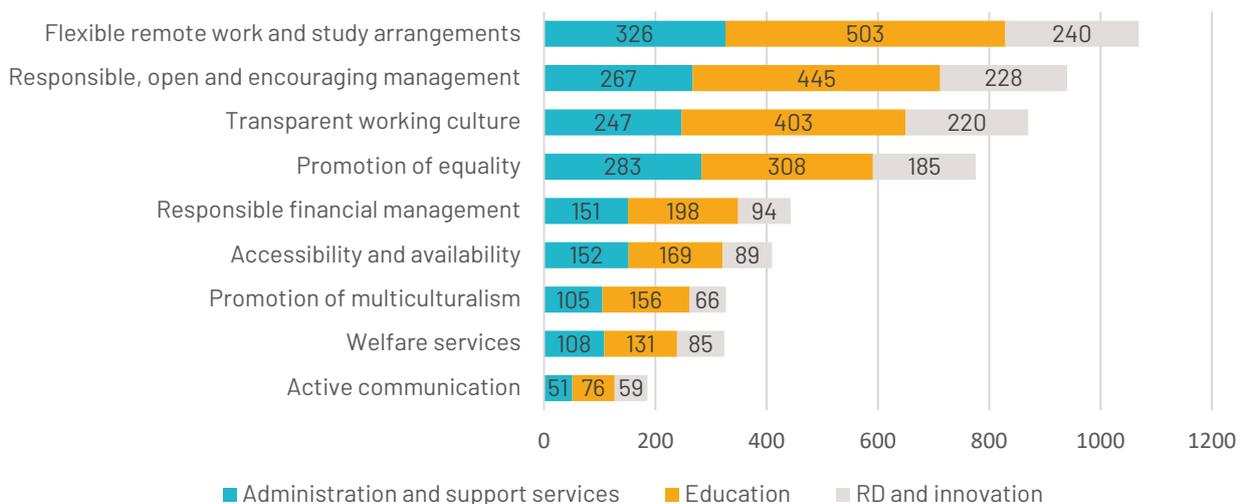


Figure 7 How can universities of applied sciences best promote social, cultural and economic sustainability? Responses by personnel group.

When asked how well the principles of sustainable development can be applied in one's own work, differences between fields of education were found. 60% of those in the natural sciences, agriculture and forestry replied that they were able to apply the principles of sustainable development well or very well. In other fields of education, 10–15% of respondents estimated their competence to be low. More than 10% of highly skilled people were found in the following areas: social sciences, technology, data processing and business.

## The staff need information, good examples and support from the management

The aim of the survey was to find out what kind of support the personnel of universities of applied sciences need in their work in terms of sustainable development and responsibility. 696 people, i.e. 39% of the respondents, answered the question *"What kind of help or support would you need to be able to apply sustainable development and responsibility better in your work?"*

The **need for information and training** was mentioned most in the responses. The respondents wished for training and information so that their competence in sustainable development could be reinforced and applied in their own work in teaching, RDI tasks and administration.

*"Good practices from other higher education institutions"*

*"Public events with opportunities for discussion."*

*"More information on how to influence the implementation of sustainable development and responsibility in one's own work."*

**Concrete instructions, practical examples and tips** for implementing responsibility in practice were considered the next most relevant type of support. Forums, brainstorming and open discussion on how to implement the objectives in everyday life, personal work and the daily teaching of students were called for in their own work communities. The responses also highlighted effective communication and various incentives and rewards as motivators for the personnel.

*"Information and concrete instructions, so that by following them, I know that I am acting in a sustainable manner. Examples of selection situations."*

*"Incentives could be set for reducing the carbon footprint associated with one's own work. For example, we could be motivated to use the same tools, commute, etc. for longer if it accumulated points that could even affect our wages, or if we received something like coffee coupons. Compiled information on the joint effort for reducing the carbon footprint of the entire organisation could be pointed out in communication and marketing."*

**Management support and commitment** was the third most mentioned item. Concrete action plans and allocation of sufficient resources were called for at the respective higher education institutions of the

respondents, for instance for the development of curricula and study modules or RDI activities in accordance with the responsible objectives (e.g. support persons, time available for development, joint forums).

*"It is important for the Finnish higher education sector to work together to outline which measures are genuinely effective measures promoting sustainability, and which regional level (local, national or global) is the most important for us. Only then should we consider organisation-specific measures."*

*"Especially management support and encouragement for solutions to be more sustainable. The management should point things out vocally and also lead by example."*

*"A communal clarification of the core objectives of the university of applied sciences in all areas of sustainable and responsible activities would also direct the goals of one's own work. Practical tools for examining themes and identifying competence and development needs in the field, e.g. a shared innovation platform where materials, tools and experiments can be collected."*

In addition to the themes mentioned above, the responses emphasised the desire for close cooperation between the different departments, degree programmes and experts at the higher education institution. It was hoped that the sharing of information, expertise and tips would become part of everyday life, and it was proposed that forums, regular briefings and the appointment of support persons for practical work would be supported. The responses also called for simple indicators for promoting and monitoring responsibility work.

*"Examining your own working methods with people who are familiar with the subject."*

*"Competence in development design so that I can take goals forward in the development processes in which I am involved."*

Several respondents mentioned the desire for national cooperation for education, information and the sharing of best practices. The themes of sustainable development and the practical challenges associated with them apply to all higher education institutions, and as development work is under way at different stages in universities of applied sciences, there are plenty of tips and examples to share.

*"Best practices, examples from other fields, other educational institutions and the entire world."*

*"Discussion, examples and information on different applications in my work environment; I'm currently engaged in project work, and that certainly involves continuous sustainable development and responsibility."*

## Personnel training needs

The question “What kind of training would you need to be able to better apply sustainable development and responsibility to your work?” was used to map out the personnel's needs and wishes related to training. 605 respondents answered the question (34% of respondents). The responses expressed an opinion on both the content of the training and the way the training is organised. Many also felt that there was no need for training.

### **Training from basics onwards**

Several respondents stated that sustainable development training is needed from the very basics onwards. It was considered that there is a need for basic-level training in terms of increasing the competence and awareness of both the individuals and the work community as a whole. In addition, it was hoped that the criteria would be followed by further in-depth and continuous training in order to keep up with the latest and rapidly developing research data.

Most respondents felt that they needed training, especially on the application of the principles of sustainable development to their own work. In other words, education should answer the following question: how do I apply the principles of sustainable development for instance to teaching, procurement and communication when the basics have already been learned? In addition, many responses pointed out that the goals, indicators and common policies of sustainable development and their effectiveness in the activities of one's own university of applied sciences should also be taken into account in the curricula.

In most responses, the need for training was on a general level, but many had also specified their more detailed educational needs. The responses were dispersed to a great extent, but for instance the calculation of the carbon footprint is mentioned in several responses. In addition, sustainable development management, circular economy, ethics and IT competence were mentioned. The responses also highlighted the need for training on social and cultural sustainability. In the opinion of several respondents, they were considered to be less highlighted than the environmental and nature perspective.

*“---how areas of sustainable development can be taken into account in work and everyday life as well as practical examples of effective actions, not just things like the recycling of tea bags. There should be supporting data on how a particular choice affects the carbon footprint or saves resources, etc. There should be assistance and education particularly in social and cultural sustainability, which are the most vague of the subjects and perhaps easily ignored.”*

*“Diverse and multidisciplinary to keep up with development instead of just seeing things within the narrow boundaries of one's own community and field. In that case, many things in the whole would be ignored.”*

Some of the respondents felt that sustainable development training was not needed and that the organisation's policies and common rules would be sufficient instead. Many respondents felt that they already had sufficient capabilities and did not feel there was a need for additional training. Some respondents consider that there is no time for training or that it may not be used for such purposes by the employer. Some also felt that their own higher education institution already offered so many opportunities for training that no additional training was needed. The learning goals were also considered to be partly unclear.

*"First, I should know what is expected of me in terms of sustainable development and responsibility in my work, so that I can tell what kind of training I need."*

### **Briefings and joint discussion**

Many wished for briefings on sustainable development and responsibility. There could be regular briefings to keep the subject highlighted. Briefings should also be as concrete as possible.

Seminars, joint discussions or workshops were also called for. It seems to be desired that the events will help to better structure a common interpretation of sustainable development and responsibility. Online implementations which are carried out independently and which are not tied to time or place were also mentioned several times.

However, sharing concrete examples received the most support. These were requested from colleagues, experts and company representatives.

*"The matter could be discussed, for example, at dedicated team meetings. When more than one person talks, different perspectives are created on the same topic."*

*"Briefings, recordings etc. in small batches, for instance on recycling, travel and reducing it, etc."*

### **Sustainable development and responsibility as part of everyday activities**

The last question in the survey was *"How can a university of applied sciences promote sustainable development and responsibility?"* 856 respondents answered the question (48 % of respondents).

The most popular option was the promotion of sustainable development **through education**. In the respondents' opinion, universities of applied sciences have the best opportunities to promote sustainable development and responsibility through curricula and learning contents.

*"By educating experts who are familiar with the principles of sustainable development and know how to apply them in their own work."*

*"Integrating sustainability education into all curricula."*

The **everyday activities and practical actions of the university of applied sciences** were also considered highly relevant. Universities of applied sciences are expected to act as examples in promoting sustainable development. Concrete measures are needed to reform the activities in the direction of sustainable development.

*"By being a role model and taking responsibility issues into account in all activities"*

*"By taking concrete measures, not only by stating that this should be done, or even by making large plans on paper but without implementing them. By taking responsibility, directing and communicating a lot on the subject."*

The **importance of a holistic approach** was the third most mentioned item. It is not enough to take sustainable development into account in certain activities only. Instead, it should become the “new normal”. Sustainable development must be visible in all activities, whether it is about education, research and development, everyday activities on campuses or labour market cooperation.

*“By better integrating it into all activities. Sustainable development is not an isolated issue, it is linked to all activities.”*

*“I believe that the question should be formulated as ‘how to promote it’, because sustainable development is, however, a prerequisite for the continuation of life.”*

The responses also highlighted the important role of **research, development and innovation (RDI) activities**. RDI activities must promote sustainable development and responsibility and be integrated into studies. Communications were also seen as an important means of exerting influence. We need communication and information on how to promote sustainable development, what good practices have been created and what has been achieved. The **development of personnel competence** was also considered essential, as otherwise it will be difficult, if not impossible, to integrate sustainable development and responsibility into all activities. Several references were also made to the **strategy and management** of the university of applied sciences. Sustainable development should be committed to in the strategy, and it should be reflected in the values of the university of applied sciences and the willingness of the management to promote sustainable development.

*“Training staff to subsequently train students. Sustainable development and responsibility should be part of everyday activities.”*

*“Through the management system, matters must be visible in all curricula, and compulsory basic-level studies on the topic must be quickly available for all training programmes. The training of personnel must be invested in first. Only after everyone is aware of the basics of sustainable development can it be promoted throughout the UAS community. The aforementioned requires a substantial reallocation of resources within universities of applied sciences.”*

The responses also highlighted the **campus activities of universities of applied sciences**. Most of the development proposals that related to campus activities included developing commuting in a climate-friendly direction, reducing travel, increasing remote work and studies, and taking sustainable development into account in recycling and waste management solutions, procurement and meals. **Cooperation and partnership with stakeholders and societal impact**

*“Through the regional impact of universities of applied sciences, the region’s business life can be influenced and, through it, sustainable development and responsibility can also be influenced.”*

## Perspectives on the carbon handprint and carbon neutrality of education, RDI and staff

The carbon-neutrality target of universities of applied sciences means reducing the carbon footprint and increasing the carbon handprint. The carbon handprint is increased by the best-skilled personnel in both training and RDI activities. A common understanding of the state of the carbon footprint and the possibilities to reduce it is based on a common calculation basis. These perspectives comprise the working groups of the Arene sustainability and responsibility work.

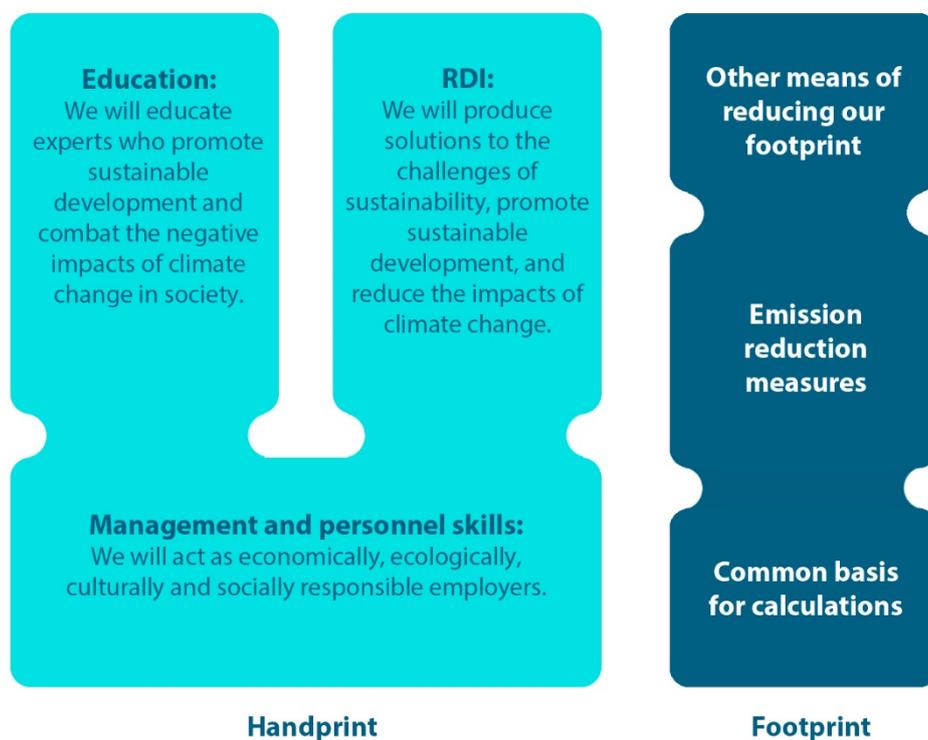


Figure 8 Aspects of increasing the handprint and reducing the footprint of universities of applied sciences

## Education: Competence in sustainable development as part of all degrees

The aim of the sub-group responsible for education in the Arene sustainability and responsibility working group is to promote the definition and measurement of joint competence in sustainable development at universities of applied sciences and to support universities of applied sciences in integrating sustainable development into curricula. A sustainable development survey conducted for universities of applied sciences provided the group with useful information to promote these goals.

With regard to the UN Sustainable Development Goals (SDGs), the survey respondents overwhelmingly consider "*Good Education*" to be the most important objective for educational organisations. On the other hand, good education becomes the most important goal for sustainable development also in surveys conducted for non-education professionals. The UN has also emphasised the importance of education in achieving the SDGs, for example through the decade of education promoting sustainable development (2006–2016).

The objectives of *health and well-being* and *sustainable industry, innovation and infrastructures* have received a lot of mentions, describe the largest fields of education in universities of applied sciences, health care and technology. It is gratifying that the fields of education recognise the sustainable development objectives related to their core contents. From the perspective of promoting sustainable development, it would be important that training sessions should also openly highlight the core competence of the sector and the task of implementing the SDGs.

After these three objectives, the objectives of *cooperation and partnership*, *reducing inequality*, and *decent work and economic growth* steadily follow. These are the more general objectives of social and economic sustainability for all education and training.

It is understandable, but in some ways worrying, that objectives which are clearly related to ecological sustainability and organic nature (*Climate action*, *Underwater life* and *Terrestrial life*) received little response. It is understandable in that the scope of the field of natural resources is small. It is worrying because it should be everyone's task to take care of the common natural environment. If ecological sustainability is not realised, there will be no long-term preconditions for social or economic sustainability.

In addition to the Sustainable Development Goals, the working group has focused on sustainable development competences and their relationship with the shared competences of universities of applied sciences. The group considers that some of the competencies in sustainable development do not have sufficient visibility in shared competencies. These include systemic thinking, anticipation competencies, future-oriented thinking as well as strategic thinking. The group's work has led to the vice-rectors responsible for education activities examining competencies from the perspective of sustainable development and in other respects considering their need for renewal.

The training group works in close cooperation with Arene's vice-rectors responsible for education activities and the group of presidents responsible for education activities. The joint goal is to support universities of applied sciences in the comprehensive integration of sustainable development into teaching and learning. This goal will be achieved by organising a webinar series in autumn 2021, which will broadly highlight different practical experiences combined with the theoretical examination of sustainable education. This also responds to the need for teachers to be trained, which has also emerged in the survey.

## Management and competent personnel – commitment and reinforcement of competence

One of the three handprints of sustainable development and responsibility in universities of applied sciences is management and a competent personnel. Universities of applied sciences are committed to working as economically, ecologically, culturally and socially responsible employers. The starting point for increasing this handprint is the commitment of the management of universities of applied sciences to responsible management and ensuring and developing the competence in sustainable development of the personnel of universities of applied sciences.

The personnel's competence capital is a key success factor in expert organisations. This means that without increasing the capital for sustainable development and responsibility among the personnel of universities of applied sciences, the objectives set in the programme of sustainable development for universities of applied sciences cannot be achieved. In particular, the open questions in this survey were intended to provide information on the need for assistance, support and training among the personnel for better application of sustainable development and responsibility in their own work. The results of this survey and, in particular, open responses support and reinforce this need to increase competence capital. Open responses strongly highlighted the need for education, knowledge, good practices and concrete examples related to sustainable development and responsibility. Based on the responses, it can also be concluded that the baseline of competence and development needs of different personnel groups vary. The teaching staff seem to be in particular need of deepening their knowledge-related competencies. The development needs of RDI personnel are more clearly linked to the operating environment of their own field of research. In particular, administrative staff feel they need basic tools that can be applied in their own work. Based on the results of the survey, it makes sense to target and tailor the reinforcement of competence in sustainable development and responsibility by personnel group in universities of applied sciences.

Personnel competence shall also be managed. In the survey, one statement focused on how cultural, social and economic sustainability could be promoted. Based on the responses, the most important alternatives were found to be the following:

- flexible remote work and study arrangements
- responsible and encouraging management
- transparent operating culture

The open responses also emphasised the support and commitment of the management and the example of putting responsible management into practice in universities of applied sciences. Based on the responses, it can be concluded that responsible economic, social and cultural management should be developed consciously and in a goal-oriented manner and should be made transparent to all personnel in the organisation. This could mean, for example, that the different programmes and plans (strategy, personnel plan, equality and non-discrimination plan) of the organisations take the cross-cutting view of responsible management into account.

The results of the survey support the management and personnel-related measures recorded in the programme for sustainable development and responsibility of universities of applied sciences. These measures for increasing management and staff handprint include:

- defining the goals of the personnel's competence in sustainable development and responsibility as part of the joint road map of universities of applied sciences
- sustainable development and online courses targeted at various personnel groups at universities of applied sciences and the competence badges obtained from them
- a model for familiarising new employees with sustainable development and responsibility.

## RDI activities: Creativity and cooperation skills

At the moment, the field of universities of applied sciences is somewhat fragmented in how strongly sustainability and responsibility are reflected in their activities. In some higher education institutions, systematic work has been carried out for years, while in others, the work is only just beginning, and practices are being established. Terminology is also slightly diverse. Sustainability is traditionally divided into ecological, economic, social and cultural sustainability. In addition to sustainability, responsibility can be discussed separately. In addition to these, the terms 'corporate responsibility' or 'ethical practices' are also used, especially in the business world. Whatever terminology is used, many schools need to discuss what sustainability and responsibility mean in RDI work at a university of applied sciences. The aim is to open up these problems at Arene's sub-group focusing on the RDI activities of the sustainability and responsibility working group, in which a "set of criteria" for RDI work is being prepared to facilitate the consideration of sustainability and responsibility in the RDI work of higher education institutions.

What skills are required of RDI personnel? The policy for sustainable development in the administrative branch of the Ministry of Education and Culture states that "Finland stands out in international comparisons as a nation whose success is based on creativity, competence and innovation capacity." Staff competence requirements vary greatly depending on the position and role of the employee. The competence required of senior management is different from the substance competence required in a project related to producing renewable energy or mitigating climate change. However, at least one common denominator can be seen regardless of the role: willingness to cooperate and cooperation skills. Without cooperation and different partnerships, many good ideas remain only at the level of an idea. Cooperation must be carried out with both higher education institutions and other actors to ensure that the necessary experiments to test new ideas and put them into practice are carried out to a sufficient extent. In her speech at the Arene Sustainable Development Webinar at the beginning of February, Neste Oyj's Salla Ahonen also called for cooperation. The key skills in research and development also include systemic and critical thinking, which have been highlighted as important targets for the development of personnel skills, including the UN's learning objectives for sustainable development education.

The responses to the personnel sustainability and responsibility survey of RDI actors highlighted themes related to sustainable industry, innovation and infrastructure as well as cooperation and partnerships. The need for knowledge and education in sustainable development was clear for those working in RDI tasks. In particular, concrete instructions and practical tips as well as good practices from other higher education institutions were needed to support one's own work. The RDI working group aims to respond to these challenges with the RDI criteria which are being developed and which highlight perspectives for both practical work and decision-making by the management. Partners and parties funding RDI projects already have their own criteria, in which case it is important that those engaged in project planning and decision-making understand what these requirements mean in practice in RDI work at the higher education institution. An important part of the indicative criteria will be examples and good practices for taking sustainability and responsibility into account in the school's RDI work, as was hoped in the responses to the survey.

## Carbon footprint calculation: Towards a carbon-neutral university of applied sciences

Based on the completed survey, the personnel of universities of applied sciences believe that universities of applied sciences must act in an exemplary manner in promoting sustainable development. We must follow the same principles ourselves when we teach or perform our RDI work. Reliable calculation of one's own carbon footprint and working towards carbon neutrality and further carbon positivity is important because of the measurability of one's own actions. According to Arene's sustainable development programme, universities of applied sciences will be carbon-neutral by 2030, and some will be carbon-neutral by 2025. In the respondents' opinion, the exemplary nature of their own activities is essential, and a rapid reduction in the carbon footprint is also particularly important in this sense. There are plenty of good practical ideas available, and the ideas should be quickly included in the practical operating methods.

A carbon-neutral university of applied sciences is created by carrying out basic tasks responsibly and sustainably. The calculation of the carbon footprint on the same grounds reveals the most important measures to reduce the carbon load. Reducing the carbon load of the university of applied sciences shall be done in a goal-oriented manner each year. Comparing with the results of other universities of applied sciences may also promote the rapid adoption of one's own effective measures. Sharing good practices provides excellent examples of sustainable development teaching and also arouses the interest of staff and students in personal changes to reduce their own carbon footprint.

The most significant sources of carbon footprint in universities of applied sciences are related to commuting, real estate, food services and procurements. The objectives and ideas for reducing the carbon load in these matters are clearly reflected in the survey responses. On the other hand, some of the personnel also highlight the importance of smaller everyday activities in achieving the SDGs. The responses mentioned, among other things, acquiring charging points for electric cars on campuses and changing personal eating habits in the direction of vegetarian food. These are good examples, but the debate on the significant impact of the measures on carbon footprint must be systematically highlighted, and the focus shall be on essential issues. The starting point is that reducing emissions is a priority and inevitable, but if not all emissions can be fully reduced, they must be compensated for. Unless it is possible to reduce all carbon emissions, the decision on carbon neutrality will cost a great deal.

In 2019, the carbon footprint of 22 universities of applied sciences (two universities of applied sciences have not yet calculated their load) was approximately 41,000 tonnes for real estate and commuting. Of course, the carbon footprint must include other parameters, and there is an active discussion on them in both the Arene carbon footprint group and the university sector. At least the impacts of the purchase of services should be taken into account in the calculation. The carbon footprint of staff and students should also be included in the calculation. In addition, investment activities may have a very large carbon footprint, and attention should also be paid to trips between the home and the workplace. It is therefore not simple what to include in the calculation of the carbon footprint and on what grounds possible compensation fees will be paid in the future.

The price of carbon tonnes in EU emissions trading was over EUR 40/tonne in spring 2021 and is expected to rise to EUR 100 per tonne by 2030. Based on data from 2019, compensation for emissions from the UAS sector in terms of commuting and real estate should cost EUR 41,000 x 40, or a total of EUR 1.64 million. By 2030, the price could be up to EUR 4.1 million. In spring 2021, the Ministry of Education and Culture has outlined that universities of applied sciences cannot use their State funding to compensate for the carbon footprint. The funds for paying compensation must therefore be available in other external revenues. It is now worth taking measures to reduce emissions. For example, by purchasing all external services in a carbon neutral manner, universities of applied sciences can avoid high additional costs in the future.

## Summary

The programme for the sustainable development and responsibility at the universities of applied sciences is based on the UN's Sustainable Development Goals. According to the respondents of the personnel survey, the most important goals for education at a university of applied sciences are *good education, sustainable industry, innovation and infrastructure*, and *health and well-being*. When asked the same question on research, development and innovation activities, *sustainable industry, innovation and infrastructure, cooperation and partnership*, and *sustainable cities and communities* received the most mentions.

The answers are not surprising. High-quality education is at the core of activities at universities of applied sciences, and its quality is systematically monitored using different indicators. In terms of RDI activities, the responses are largely in line with the current priorities of RDI activities at universities of applied sciences. From the perspective of education and RDI activities, the current objectives of the programme in line with the answers are probably steps in the right direction, but from the perspective of development, it is necessary to consider openings that promote sustainable development more extensively. For example, a lot of public debate has recently been held on how safeguarding biodiversity and mitigating the loss of biodiversity have been left behind in the debate on climate change. Could the education offered by universities of applied sciences and RDI activities play a greater role in solving these issues? Overall, the answers to the survey carried out can be used to help direct the learning objectives of RDI activities and education towards sustainable development.

The survey examined how sustainable development teaching and learning should be implemented. In the view of a clear majority, the SDGs should be integrated into all education. Almost half of the respondents considered it important to implement sustainable development teaching and learning in connection with lifelong learning. The views are in line with the promises and measures of the KeVa programme for universities of applied sciences. According to the programme, "we reinforce the role of sustainable development and responsibility in each curriculum and take into account the competence of sustainable development and responsibility in the lifelong learning we provide". The next step is to redeem promises; sharing good practices between universities of applied sciences, creating well-functioning processes (KeVa in curriculum work, planning, implementation and evaluation of teaching) and establishing the activities.

The personnel's views on the means of reducing the carbon footprint are in line with the KeVa programme of universities of applied sciences. In accordance with the programme, data on the carbon footprint of universities of applied sciences in terms of real estate and commuting have been collected, and the calculation will be specified in accordance with the availability of the data to include other areas of activity as well. The aim is to achieve emission reduction measures so that universities of applied sciences will be carbon neutral by 2030 at the latest. It is also important for staff to enable flexible and functional remote work and study arrangements in the future, regardless of the pandemic situation. Open, encouraging and transparent management and the operating culture are of great importance, because even though the personnel have the motivation to promote sustainable development, there is a need for reinforcing and encouraging their own competence and its development.

It is still early to assess how universities of applied sciences will meet their sustainable development goals and promises. It is excellent that action has been taken and that universities of applied sciences share the joint concern and challenge of building a sustainable future. The programme for sustainable development and responsibility and the involvement of staff are an excellent start for the work, but it

must be remembered that continuous discussion and reflection are needed and activities need to be developed. Universities of applied sciences should ask themselves whether they do their best to solve the sustainability crisis or whether they are satisfied with shaping their basic tasks in a more sustainable direction. It is also necessary to consider what kind of sustainable development universities of applied sciences aim to promote. Agenda 2030, which forms the basis of the programme for universities of applied sciences, has received a lot of criticism of its anthropocentric or human-centred approach to sustainability. Sustainable development is about working within the limits of the planet's capacity and preserving the entire planet for future generations. Agenda 2030 refers to human generations, but sustainable development should also be taken into account from the perspective of nature and all living creatures essential for ecosystems.

Universities of applied sciences play an important role in promoting sustainable development and eco-social education. Eco-social education helps to perceive the global interdependence of humanity and nature and to identify the impacts of human activities on a sustainable future. It is important to find solutions that respect ecological constraints while delivering economically and socially sustainable results. The goals of sustainable development form a whole, so it is essential to understand systemicity and to act accordingly. It is about perceiving and reconciling the different dimensions of sustainability. Universities of applied sciences play a key role together with business operators in developing these solutions, creating sustainable innovations and at the same time promoting ecologically sustainable business activities and employment.

## Sources

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# Attachments

## Data visualisation

<https://app.powerbi.com/view?r=eyJrljoiZj02Y2FjYz0tZDQ3OS00MTI2LWI5ZTkzMDBiM-zYzMjkyY2FhliwidCI6ImZiZDZmMDQ1LWlzNGMtNDY3My05NTM0LTNmMjM3NDM1NWNIYyIsImMiOjh9>

## Personnel survey on sustainable development and responsibility for the UAS

### 1. At which university of applied sciences do you work? \*

### 2. In what capacities do you primarily work? \*

Education

RD and innovation

Administration and support services

### 3. If you are working in a specific field of education, select your primary area

Care and education sector

Arts and culture

Humanities

Social sciences

Business, administration and law

Natural sciences

Data Processing and telecommunications

Technology

Agriculture and forestry

Medicine

Health and Welfare

Service sector

Other, please specify

### 4. Your gender \*

Woman

Man

I do not want to identify my gender

**5. The UN Agenda goals number a total of 17. In your opinion, which of these goals are most important from the viewpoint of the education that your university of applied sciences offers? You need to make 4 selections in order to proceed. (For more information, visit the website of the UN Association) \***

- 1 No poverty
2. No hunger
3. Health and well-being
4. Good training
5. Gender equality
6. Clean water and sanitation
7. Affordable and clean energy
8. Decent work and economic growth
9. Sustainable industry, innovation and infrastructure
10. Reducing inequality
11. Sustainable cities and communities
12. Responsible consumption
13. Climate action
14. Underwater life
15. Terrestrial life
16. Peace and justice
17. Cooperation and partnership

**6. In your opinion, which of these goals are most important from the viewpoint of the RDI work carried out at your university of applied sciences?\***

- 1 No poverty
2. No hunger
3. Health and well-being
4. Good training
5. Gender equality
6. Clean water and sanitation
7. Affordable and clean energy
8. Decent work and economic growth

9. Sustainable industry, innovation and infrastructure
10. Reducing inequality
11. Sustainable cities and communities
12. Responsible consumption
13. Climate action
14. Underwater life
15. Terrestrial life
16. Peace and justice
17. Cooperation and partnership

**7. How should teaching and learning on sustainable development be implemented at your university of applied sciences? Select up to three of the most important. \***

The sustainable development goals should be integrated into all education

In connection with continuous learning

As part of compulsory sustainable development studies

As part of optional sustainable development studies

In the master's degree specialising in sustainable development

In the sustainable development degree programme

In some other way:

**8. To which of the following should your university of applied sciences pay attention when the goal is to reduce the carbon footprint of your university of applied sciences? Select 3. \***

Travel and modes of transport

Properties (e.g., water, energy, heating) Recycling

Waste management

Procurement

Restaurant services

Information management services (e.g., the usability of information systems in remote work)

Other, please specify:

**9. How can your university of applied sciences best promote social, cultural and economic sustainability? Select 3. \***

Flexible remote work and study arrangements

Accessibility and availability

Welfare services

Responsible financial management

Promotion of multiculturalism

Promotion of equality

Transparent working culture

Responsible, open and encouraging management

Active communication

Other, please specify

**10. How well can you apply the goals of sustainable development and responsibility to your work? (More information on the goals of sustainable development and responsibility of the universities of applied sciences) \***

1=Not at all, 5=Really well

**11. What kind of help or support would you need to be able to better apply sustainable development and responsibility to your work?**

**12. What kind of training would you need to be able to better apply sustainable development and responsibility to your work?**

**13. How can a university of applied sciences promote sustainable development and responsibility?**

# STAFF OF UNIVERSITIES OF APPLIED SCIENCES PROMOTING SUSTAINABLE DEVELOPMENT AND RESPONSIBILITY

