KANSALLINEN KOULUTUKSEN ARVIOINTIKESKUS
NATIONELLA CENTRET FÖR UTBILDNINGSUTVÄRDERING
FINNISH EDUCATION EVALUATION CENTRE

AUDIT OF METROPOLIA UNIVERSITY OF APPLIED SCIENCES

Författare **Andreas Breinbauer, Birgit Kraus, Ilkka Pollari, Mari Ruadze, Marja-Liisa Saarilammi & Niina Nurkka. Self-evaluation of Metropolia University of Applied Sciences (eds.) Virve Kentta, Eeva Viitanen & Anna Zaikova**
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Audit of Metropolia University of Applied Sciences

Abstract

Title of publication

Audit of Metropolia University of Applied Sciences

Authors

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Self-evaluation of Metropolia University of Applied Sciences edited by Virve Kentta, Eeva Viitanen and Anna Zaikova

The Higher Education Evaluation Committee’s decision

The Metropolia University of Applied Sciences passed the audit on 31 March, 2023.

The Quality Label is valid until 31 March, 2029.

The audit team’s evaluation of the evaluation areas I-III

I: HEI creates competence: *good* level

II: HEI promotes impact and renewal: *good* level

III: HEI enhances quality and well-being: *good* level

HEI as a learning organisation – evaluation area chosen by Metropolia University of Applied Sciences

IV: Innovation Hubs in RDIL perspective

Theme and partner for benchlearning

Theme: Student and personnel well-being

Partner: Dutch Hogeschool van Amsterdam (HvA) University of Applied Sciences

Key strengths and recommendations

Strengths

- Innovation Hubs, the HyMy Village and the MINNO project provide a very good link between RDI and education, which is beneficial to the students working on it and to the working life partner as well, solving concrete problems with research.
- Metropolia has a clear focus on the aims and results of societal impact. The societal impact is firmly rooted in Metropolia’s strategy.
- Metropolia has a clear strategy, and it is well-known among employees. The quality system is based on the setting of strategic objectives.
- Innovation hubs strengthen phenomenon-based learning by combining learning with working-life solutions.

Recommendations

- Metropolia uses many surveys and feedback channels. Feedback collection should not be limited to quantitative methods but comprise qualitative methods. This mix could be more favourable to concrete enhancements, which would be more transparent and visible to create an even stronger incentive for student participation.
- The growing number of focus areas increases the risk of poor consistency. Realistic resource planning is vital for ensuring sufficient resources for strategic actions.
- Metropolia should reduce the complexity of the quality management system and communicate goals, instruments, and roles distribution with the staff more intensively.
- The staff of Metropolia is motivated by phenomenon-based teaching and learning. However, new projects and activities need resources which are not necessarily sufficiently available. The audit team anticipate the possible risk of conflicts due to resources shared between RDI, especially the innovation hubs and teaching, which should be observed carefully.

Tiivistelmä

Julkaisun nimi

Metropolia Ammattikorkeakoulun auditointi (Audit of Metropolia University of Applied Sciences)

Tekijät

Andreas Breinbauer, Birgit Kraus, Ilkka Pollari, Mari Ruadze, Marja-Liisa Saarilammi ja Niina Nurkka

Virve Kentta, Eeva Viitanen ja Anna Zaikova Metropolia Ammattikorkeakoulun itsearviointi (toim.)

Korkeakoulujen arviointijaoston päätös

Metropolia Ammattikorkeakoulun auditointi on hyväksytty 31.3.2023

Laatuleima on voimassa 31.3.2029 asti.

Auditointiryhmän arvio arviointialueista I-III

I: Osaamista luova korkeakoulu: *hyvä* taso

II: Vaikuttava ja uudistava korkeakoulu: *hyvä* taso

III: Kehittyvä ja hyvinvoiva korkeakoulu: *hyvä* taso

Oppiva korkeakoulu – Metropolia Ammattikorkeakoulun valitsema arviointialue

Innovaatiokeskittymät TKIO-näkökulmasta

Vertaisoppimisen teema ja kumppani

Opiskelijoiden ja henkilöstön hyvinvointi

Kumppani: Dutch Hogeschool van Amsterdam (HvA) University of Applied Sciences

Keskeiset vahvuudet ja kehittämissuositukset

Vahvuudet

- Innovaatiokeskittymät, HyMy-kylä ja MINNO-projekti muodostavat erittäin hyvän yhteyden TKI-toiminnan ja koulutuksen välille. Tämä hyödyttää sekä opiskelijoita että työelämäkumppaneita, jotka pyrkivät löytämään ratkaisuja käytännön ongelmiin tutkimustoiminnan avulla.
- Metropolia keskittyy selkeästi yhteiskunnallisen vaikuttavuuden tavoitteisiin ja tuloksiin. Yhteiskunnallinen vaikuttavuus on vahvasti juurtunut Metropolian strategiaan.
- Metropolialla on selkeä strategia, jonka työntekijät tuntevat hyvin. Laatujärjestelmä perustuu strategisten tavoitteiden asettamiseen.
- Innovaatiokeskittymät vahvistavat ilmiöpohjaista oppimista yhdistämällä oppimisen ja työelämän ratkaisut.

Kehittämissuositukset

- Metropolia hyödyntää monia kyselyjä ja palautekanavia. Palautteen keräämisen ei tulisi rajoittua vain määrällisiin menetelmiin, vaan siihen tulisi sisällyttää myös laadullisia menetelmiä. Tämä yhdistelmä voisi avata mahdollisuuksia entistä avoimemmille ja näkyvimmille konkreettisille parannuksille sekä luoda entistä vahvemman kannustimen opiskelijoiden osallistumiselle.
- Painopistealueiden kasvava määrä lisää riskiä johdonmukaisuuden heikkenemiseen. Realistinen resurssien suunnittelu on olennaista, jotta voidaan varmistaa riittävät resurssit strategisille toimille.
- Laatujärjestelmää kannattaa yksinkertaistaa ja sen tavoitteista, työkaluista ja roolien jaosta viestiä entistä tiiviimmin henkilöstön kanssa.
- Metropolian henkilöstö on motivoitunut ilmiöpohjaisesta opetuksesta ja oppimisesta. Uudet hankkeet ja toimet edellyttävät kuitenkin resursseja, joita ei välttämättä ole riittävästi käytettävissä. TKI-toiminnan, erityisesti innovaatiokeskittymien ja opetuksen kesken jaetut resurssit voivat aiheuttaa riskin, jonka toteutumista tulee tarkkailla huolellisesti.

Sammandrag

Publikationens namn

Auditering av Metropolia Ammattikorkeakoulu (Audit of Metropolia University of Applied Sciences)

Författare

Andreas Breinbauer, Birgit Kraus, Ilkka Pollari, Mari Ruadze, Marja-Liisa Saarilammi och Niina Nurkka

Virve Kentta, Eeva Viitanen och Anna Zaikova (red.) Metropolia Ammattikorkeakoulus självvärdering

Beslutet av sektionen för utvärdering av högskolorna

Auditeringen av Metropolia Ammattikorkeakoulu godkändes den 31 mars 2023.

Kvalitetsstämpeln är i kraft till och med den 31 mars 2029.

Auditeringsgruppens omdöme för utvärderingsområdena I-III

I: En kompetensskapande högskola: *god* nivå

II: En nyskapande högskola med genomslagskraft: *god* nivå

III: En utvecklingsorienterad och välmående högskola: *god* nivå

En lärande högskola, utvärderingsområdet som Metropolia Ammattikorkeakoulu valde

Innovationshubbar ur FoUI-perspektiv

Tema och partner för kollegialt lärande

Tema: Studerandes och personalens välbefinnande

Partner: Dutch Hogeschool van Amsterdam (HvA) University of Applied Sciences

Centrala styrkor och rekommendationer

Styrkor

- Innovationshubbarna, HyMy Village och MINNO-projektet utgör en mycket bra länk mellan FoUI och utbildningen. Studerande och samarbetsparter inom arbetslivet gynnas genom att man försöker lösa konkreta problem med hjälp av forskningsverksamheten.
- Metropolia fokuserar tydligt på mål och resultat med anknytning till samhällspåverkan. Samhällspåverkan är fast förankrad i Metropolias strategi.
- Metropolia har en tydlig strategi som personalen känner till väl. Kvalitetssystemet grundar sig på fastställda strategiska mål.
- Innovationshubbarna stärker fenomenbaserat lärande genom att kombinera lärande med arbetslivslösningar.

Rekommendationer

- Metropolia använder sig av många enkäter och responskanaler. Responsinsamlingen bör inte begränsas till kvantitativa metoder, utan även omfatta kvalitativa metoder. Denna kombination skulle vara mer gynnsam för konkreta, mer öppna och synliga förbättringar som också skulle gynna ett ännu starkare incitament för studerandes deltagande.
- Det växande antalet fokusområden ökar risken för bristande konsekvens. En realistisk resursplanering är avgörande för att säkerställa tillräckliga resurser för de strategiska åtgärderna.
- Auditeringsgruppen rekommenderar att man minskar kvalitetssystemets komplexitet och att man utvecklar en tätare kommunikation om målen, verktygen och rollfördelningen med personalen.
- Metropolias personal motiveras av fenomenbaserad undervisning och fenomenbaserat lärande. Nya projekt och verksamheter kräver dock resurser som inte nödvändigtvis är tillräckligt tillgängliga. Auditeringsgruppen ser en möjlig risk som kräver uppmärksamhet beträffande resursfördelningen mellan FoUI, särskilt mellan innovationshubbarna och undervisningen.

The premise and implementation of the audit

The Finnish Education Evaluation Centre (FINEEC) has conducted the audit of the Metropolia university of applied sciences. The work of FINEEC is based on the principle of enhancement-led evaluation and producing impactful information that contributes to the enhancement of education.

The purpose of the FINEEC audit framework is:

- to evaluate whether the quality work in the HEI meets European quality assurance standards,
- to assess whether the quality system produces relevant information for the implementation of the strategy and the continuous development of the HEI's activities, and whether it results in effective enhancement activities,
- to encourage internationalisation, experimenting and a creative atmosphere at HEIs, and
- to accumulate open and transparent information on quality work at Finnish HEIs.

The principles of the audit framework are described in the audit manual.

The implementation of the audit

The four-member audit team carried out the audit. The members of the audit team were:

- Rector, Professor **Andreas Breinbauer**, Fachhochschule des BFI Wien, Austria (chair)
- Sc, Strategic advisor **Birgit Kraus**, TU Darmstadt, Germany
- Sc, eMBA, pensioner **Ilkka Pollari**, Finland
- Student **Mari Ruadze**, Ilia State University of Georgia, Georgia

Marja-Liisa Saarilammi and **Niina Nurkka** from the Finnish Education Evaluation Centre acted as project managers of the audit. The audit is based on the material submitted by the higher education institution, a self-assessment report, additional material requested by the audit team, and the audit team's audit visit to the institution between 23 and 24 November 2022. The audit team also had access to essential digital materials and systems. The main stages and timetable of the audit were:

Agreement negotiation	3 December 2021
Appointment of the audit team	15 June 2022
Submission of the audit material and self-assessment report	31 August 2022
Information and discussion event at the HEI	2 November 2022
Audit visit	23-24 November 2022
Higher Education Evaluation Committee's decision on the result	31 March 2023

Publication of the report	31 March 2023
Concluding seminar	19 April 2023
Follow-up on the enhancement work	2025

Evaluation criteria

The evaluation areas I–III are each assessed as one entity using the scale *excellent, good, insufficient*.

The level *excellent* means that the HEI shows evidence of long-term and effective enhancement work. The HEI's enhancement activities also create substantial added value for the HEI, stakeholders, or both. The HEI presents compelling examples of successful enhancement activities.

The level *good* for the evaluation areas I–III is described in appendix 1.

The level *insufficient* means that the HEI shows an absence of or major shortcomings in systematic, functioning, and participatory procedures in the evaluation area (I–III). There is no clear evidence of the impact of quality management in the enhancement of activities.

In order for the HEI to pass the audit, the evaluation areas I–III should reach at least the level *good*.

The organisation and strategy of the HEI

The organization and strategy of the HEI

Metropolia is an international and multidisciplinary university of applied sciences in the Helsinki Metropolitan Area, educating future professionals in the fields of Culture, Business, Health Care and Social Services, and Technology. It is the largest UAS in Finland. It forms a community of nearly 17,000 degree students, approximately 21,900 students of lifelong learning and 1,000 personnel representatives. In addition, approximately 2,700 people attended paid continuing education. In 2021, Metropolia offered

- 42 Bachelor's programmes, six of which were provided in English
- 27 Master's programmes, eight of which were provided in English

In terms of attractiveness, Metropolia ranks at the top of the universities of applied sciences in Finland: 4.09 primary applicants per study place in 2021. During the same year, the number of Bachelor's degree graduates was 2,711 and that of Master's degree graduates was 516. Lifelong learning students completed 79,905 ECTS credits. The rate of employment among the Bachelor's and Master's degree graduates is nearly 90% one year after graduation.

Metropolia wants to be a bold reformer of higher education and expertise and function as an active partner building society and a sustainable future by putting people first. The strategy leans on Metropolia's values: transparency, community spirit, high quality and expertise. At the core of the strategy are *lifelong learning* and *phenomenon-based innovation hubs.* Metropolia implements them through three intersecting themes: *sustainable development and growth, people and culture,* and *digitalization*. The strategic themes form a systemic, open entity in which various contributing factors influence each other (figure 1). Metropolia's international actions support the implementation of the strategy for university of applied sciences and encompass all operations. The objectives are laid out in the International Action Plan.



Figure 1 Metropolia's values and strategic themes

At the core of Metropolia are ten schools and five innovation hubs (figure 2). In their respective fields of education, the schools are responsible for the performance and quality of Metropolia's core functions, i.e. education, research, development and innovation, and business activities. RDI activities are carried out through five innovation hubs. The RDI activities and Education make use of the campuses' collaboration platforms which offer opportunities for experimentation, testing and piloting. The Continuing Education and Enterprise Services bring the competence of the schools to companies and other external clients. The Services support all Metropolia's operations.

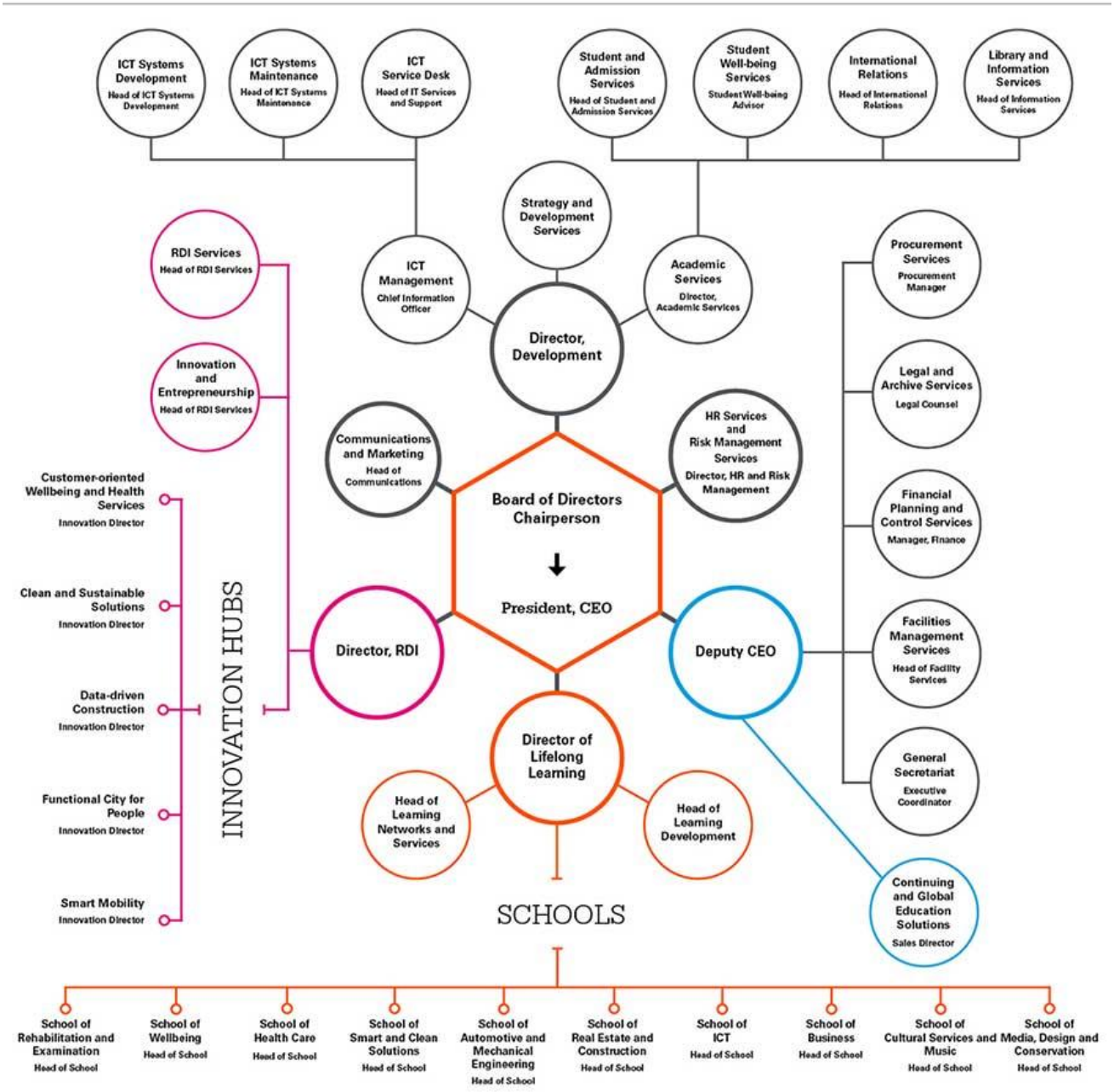


Figure 2 Metropolia’s organization

Metropolia is a limited liability company owned by the municipalities of the Helsinki Metropolitan Area. Revenue in 2021 was EUR 119.7 million, up by 7.3% from the previous year. The total volume of the RDI activities in 2021 was EUR 18.9 million, in line with the previous year.

Metropolia’s strategy is approved and the operations are directed by the Board of Directors. A management group supervises and monitors the implementation of the strategy regularly and provides quarterly reports to the Board and publishes public impact reviews. Management group members have a direct responsibility for the five themes included in the strategy. A leadership forum facilitates interaction between the management group and middle management. For

individual people, the strategy directs development discussions and increases personal understanding of how work is linked to the implementation of strategy.

1 HEI creates competence

- Auditeringsgruppens bedömning

The evaluation area I assesses the procedures which support student-centred, working-life oriented planning, implementation and enhancement of education, which is based on research or artistic activities.

Based on the audit team's evaluation, the evaluation area I is at the level *good*.

The audit team identified the following as the main strengths and recommendations:

Strengths

- Innovation Hubs, the HyMy Village and the MINNO project provide a very good link between research and education, which is beneficial to the students working on it and to the working-life partner as well, solving concrete problems with research.
- Metropolia has a well-planned process for developing its degree programmes.
- Working life is well integrated into education development. These close relations ensure that Metropolia offers programmes highly demanded by the local job market.

Recommendations

- Metropolia uses many surveys and feedback channels. Feedback collection should not be limited to quantitative methods but comprise qualitative methods. This mix could be more favourable to concrete enhancements, which would be more transparent and visible to create an even stronger incentive for student participation.
- External stakeholders and students should be more involved in the evidence-based enhancement of degree programmes.
- Regarding recognising prior learning (RPL), Metropolia should ensure common understanding and consistency among administrative and academic personnel.

1.1 The planning of education

- Högskolans självvärdering

Education planning guided by strategy

Education planning at Metropolia is guided by the strategic theme of *Lifelong learning*, which covers all degree programmes and other learning solutions (figure 3). Education planning is also guided by pedagogical principles and other strategic themes.

Phenomenon-based learning takes place in innovation hubs. *Sustainable development and growth* guides Metropolia to incorporate the UN's Sustainable Development Goals in all education. The *People and culture* theme supports the Metropolia community on its journey towards an agile learning culture and bold experimentation. *Digitalization* guides the use of digital tools in the development of learning. In education planning, a need for more systematic development has been identified. The degree programmes will draw up development plans by the end of 2022 for the implementation of the pedagogical principles and strategic themes. In addition, the steering group of the Open UAS began operating in the beginning of 2022. HEI-level coordination of preparatory education for specialization students and immigrant students will be launched at the group's initiative in the autumn of 2022.



Figure 3 At Metropolia, all learning is lifelong learning.

The education planning at Metropolia has been consistently taken in a more learner-centric direction (see 1.4). The concept of *lifelong learning* covers all education ranging from studying for a degree to other learning solutions. Learning is based on the Metropolia Match® model (figure 4) which brings together an individual's competence needs, societal needs and professional life, as well as flexible learning solutions and guidance services based on demand (see 1.4). The goal is to smooth out transitions between educational levels, maintain and renew competence, support career changes, strengthen entrepreneurship, promote employment, and strengthen inclusion.



Figure 4 The Metropolia Match® model

Curriculum work ensures the quality of education

Metropolia has an established **process of curriculum work** in place. In accordance with the degree regulations, the curriculum defines the learning outcomes, contents, prior knowledge requirements and evaluation criteria as well as the scheduling and scope of the studies. The curriculum work is guided by strategy, pedagogical principles, relevance to professional life, internationalization goals, as well as the alignment with the international degree framework and education-related norms and regulations. Various types of feedback from students is applied in the curriculum work. Development trials on using artificial intelligence have been carried out in the curriculum work (see 1.4). The trials include the assessment of professional relevance for the curricula, learning contents of sustainable development and the recommendation of studies that supplement the learner's competence. Using artificial intelligence in curriculum work will be processed further in a project that develops predictive capabilities.

Metropolia's curricula are **competence-based.** The learning outcomes and the competence to

be accumulated during the student's study path have been defined. This supports the student-centric education, the recognition of prior learning (RPL), the preparation of evaluation criteria and planning of course implementations. In accordance with the Metropolia Match® model, curriculum work also takes into consideration the needs of non-degree-awarding education for different customer groups, e.g. the offering of the open UAS, specialization studies and preparatory studies for immigrants.

The curricula are updated annually. The extensive curriculum reforms are scheduled in line with strategy periods. The curriculum work in the degree programmes is the responsibility of the heads of schools, who are supported by the management teams of their respective schools. The director of Lifelong Learning approves the curricula and the extensive study modules. The head of school approves the field-specific study modules. The smooth progress of curriculum work is supported by the Learning Development Unit through instructions, support measures and personnel training. The Learning Networks and Services unit as well as the Student and Admission Services direct the planning of solutions in non-degree-awarding education.



Figure 5 Process for establishing new degrees

The process for establishing new degree programmes has been renewed and will be implemented in the autumn of 2022 (figure 5). Development needs have been identified in the study place process. Process renewal is under way. The management group discusses the proposals for new degree programmes/educational provisions and study places and submits a proposal for the Board of Directors to consider. The Board of Directors makes the decisions regarding the number of study places and the new Master's degree programmes. The change proposals related to educational provisions (Bachelor's degrees) are submitted to the Ministry of Education and Culture.

In education planning, the opinions of Metropolia's stakeholders are mainly received through **advisory boards.** The majority of schools and some of the degrees have their own respective advisory boards that process the curricula. The majority of the advisory board comes from the business world while the rest of the members are personnel and students. The advisory boards have a long history. As a consequence, there is some inflexibility and need for renewal, such as increasing the participation of students in education planning.

Planned learning support

The **implementation and evaluation plan** for individual courses is based on the course descriptions in the curricula. The planning covers practical solutions concerning teaching and learning, learning environments, study materials, work format and workload, teaching methods, alternative completion methods and principles and methods of evaluation. The study workload is measured with ECTS credits. A collective form has been created to support workload planning and to ensure consistent quality. Pedagogic staff members consisting of experts and teachers experiment with and promote good practices in a collegial manner.

The RDI activities and artistic activities have been integrated into teaching in various ways. All degree programmes include an Innovation project. The students are offered work placement and studification opportunities through the innovation hubs' collaboration platforms and RDI projects, and the Turbiini Campus Incubator offers entrepreneurship studies.

The two-phase operating model formed by the curriculum and the implementation and evaluation plan is quite flexible. It allows the teacher and the team of teachers to make changes and adjust the operations based on the students' needs. The operating model gives the teacher the freedom to plan the implementation and evaluation in the best possible way in any special circumstances as well. This became quite important in navigating the change requirements caused by the Covid-19 pandemic in the spring of 2020.

Strengths	Enhancement areas
Defining lifelong learning to include all learners and their learning paths in full.	The planning process for the provision of non-degree-awarding education should be simplified.
The process for curriculum work in degree-awarding education is transparent and adopted across the board.	A systematic approach on the HEI level in the planning of degree programmes and a strong link to the strategy; completed development plans for degree programmes by the end of 2022. More extensive utilization of artificial intelligence in the development of education.
A flexible, two-stage operating model for the planning of education specific to each degree programme.	Renewal of advisory board functions; involving the business world in the education planning. Students' opportunities to participate in the planning should be increased.
The activities of the pedagogic staff members incorporate the view of teachers and experts in the pedagogic planning and collegial activities.	

1.1 The planning of education

- Auditeringsgruppens bedömning

Educational provision is available for a large variety of target groups

Metropolia University of Applied Sciences (henceforth Metropolia) offers degree programmes in both Finnish and English at bachelor's and master's levels as well as a wide range of programmes aiming at various target groups. Among the latter, there are so-called pathway studies for international students in English to enable them to pursue a higher education degree in Finland. There are also 'open classes' for teachers enhancing their professional skills or employees from working life wishing to acquire new skills for their careers.

Degree programmes and other educational provisions are well-described in the study guide on the institution's website. Samples from these descriptions indicate that Metropolia puts the envisaged competence-based approach into practice, as the intended learning outcomes include not only subject-specific knowledge and skills but also target subject-independent competences, particularly transversal skills. According to the study guide and the self-evaluation report, the learning outcomes comply with national and international standards.

The educational provision at the HEI matches the institution's strategy and considers working life appropriately. As stated in the audit material, the HEI has renewed its planning process in accordance with its degree regulations and pedagogical principles, which are available on the intranet in Finnish and English. These principles comprise topics characteristic of the higher education institution type, such as learner-centredness, phenomenon-based learning and open-mindedness to manifold target groups. All information on education planning is available on the intranet.

There is very close contact with companies through, for example, external advisory boards, but also strong connections to the owners and the municipalities of the capital area. These close relations ensure that Metropolia offers programmes highly demanded by the local job market, such as in the fields of health and information technology.

The audit team particularly highlights the SIMHE project. A forerunner in the field of education for immigrant students, Metropolia provides not only education but also, for instance, support for working life insertion to this target group. This project is designed with a holistic approach and meets urgent individual and societal needs within a European agglomeration. It may set standards for the successful integration of immigrants into a job market demanding a highly qualified workforce.

The audit team appreciates the ambitious goal to update curricula annually but would advise the

institution to reconsider this rhythm after gaining experience with this process. Major adjustments sometimes need time to have a more thorough effect, and considering the degree programmes' amount and variety of fields, this approach might prove too agile in the long run.

Internationalisation bears a high potential for further enhancing education

The planning process will take account of internationalisation by cooperating with foreign universities and providing educational opportunities for international or immigrant students. Metropolia profits from its extensive network of international partners. According to the discussions with staff, there are approximately 300 institutions. At present, there is no systematic approach to the choice of partners. Still, according to the website, Metropolia is part of various subject-specific networks and is a member of the Urban Research Education and Knowledge Alliance (U!REKA).

The degree regulations name Finnish as the main language of instruction but offer the possibility to arrange for teaching and learning in other languages if complying with the curricula. Finnish classes shall support international students' integration into society and the job market.

The website features 13 degree programmes in English aimed chiefly at international and immigrant students. The METKA student union actively integrates international students providing all information in Finnish and English. Yet, the audit team sees high potential for internationalisation at home activities involving international students, especially those who are part of the SIMHE programme. More double-degree programmes would also be a valuable tool for creating a more accommodating learning environment for outgoing and incoming students and contribute significantly to creating strategic partnerships with institutions abroad or enhancing already existing ones.

Metropolia's degree regulations comply with the Finnish National Frameworks for Qualifications (FiNQF). They are available to the public in Finnish and English on the website.

Metropolia's strong connection with the job market serves as an integral part of education

Students at Metropolia profit from a strong job market orientation, which is an integral part of the HEI type. Each bachelor's programme comprises an innovation project of 10 ECTS, the so-called MINNO, which can be considered a Metropolia 'trademark'. Samples from the curricula of the various degree programmes show that the institution ensures the acquisition of transversal competences from the beginning, and various assignments in class help to practice academic working patterns. According to the interviews, staff members sometimes can even link teaching and research and sometimes not. The MINNO project and the HyMy Village (cf. Chapter 2) are particular highlights of a very authentic working life environment.

Students and external stakeholders participate in education planning, mainly on the advisory boards of degree programmes and schools. Discussions during the on-site visit showed that their voice is heard and taken seriously. A concrete example was given concerning distributing certificates by mail during the pandemic, which initially caused additional student costs. It was then taken aback following student complaints at the advisory boards. However, the advisory boards are still a relatively new instrument with a high potential, which is not yet used systematically in all schools and programmes. Metropolia should pay special attention to a more systematic implementation of advisory boards.

The role of the advisory boards may vary as well. The audit team considers that the role of the advisory boards should be defined more clearly, especially since the advisory board members' involvement in evidence-based enhancement of the programmes bears great potential, which has not been sufficiently used so far (cf. chapter 1.3 as well).

Innovation Hubs, the HyMy Village and the MINNO project also provide a very good link between research and education. At its best, such an innovation project results in a high-quality outcome, which is beneficial to the students working on it and to the working life partner as well, solving concrete problems with scientific methods. In addition, there is positive public visibility for the company and the higher education institution.

MINNO enhances students' transversal skills in real-life professional situations and ensures learning about innovation and development activities. The audit team particularly highlights this pedagogical approach as an excellent demonstration of skills and cooperation between research and working life.

A process approach ensures systematic education planning

According to the audit material, Metropolia has created a collective form to support workload planning. The teaching staff experiment with these forms to check whether the workload is appropriate. Metropolia uses the principles of the European Credit Tansfer and Accumulation System to define the workload of students. However, student discussions during the audit indicated that the actual amount of tasks might largely depend on the individual teaching staff and their pedagogical competence. Apparently, this is mainly due to a lack of time for sufficient class planning, as many teachers have a big quota themselves. At the same time, students perceive teaching staff as competent and responsive to their target group's needs and receive helpful feedback on individual learning progress.

The rules of procedure and the degree regulation guide the approval of all degree programmes and curricula. In the audit material, Metropolia presents the recently renewed planning process for degree programmes: In an initial phase, the head of the school and the director for lifelong learning develop first sketches of a new educational provision, which eventually the management board and the president approve before the school implements the new offer. This approach

ensures the inclusion of organisational views into degree programme development and an enhancement from outside the field of studies. Discussions during the audit indicate that the institution has put the suggested plan into practice.

The audit team explicitly appreciates the institution of advisory boards as a practical model to connect studies with labour market needs. However, this particular feature should be communicated even more effectively. According to the audit material and interviews, the students are already represented on all boards and could be more actively involved in annual planning processes. As Metropolia has recently adjusted processes and guidelines, there is a further need for adjustment and thorough establishment of these procedures.

1.2 The implementation of education

- Högskolans självvärdering

Goal orientation supported in various stages of studies

Metropolia has created various tools and practices to strengthen its student-centered approach. Degree students participate in an **orientation** specific to each degree programme to strengthen their study skills. **Competency matrices** linked to the curricula offer a competence-based description of the development of expertise during education. Study Guide describes the curricula and individual courses. The **implementation and assessment plans** that are in line with the curriculum describe the practical arrangements for teaching and learning. During the courses, students have the right to receive **feedback** on their performance, have access to their evaluations and receive information on the evaluation criteria. The feedback methods vary by sector and degree programme.

Students can **flexibly choose** courses from the CampusOnline catalogue and from the offering of an extensive partner network (3UAS, 5UAS, cooperation with Aalto University and the University of Helsinki, international partners, U!REKA) and accumulate studies through work-based learning or RDI projects. An international aspect for the studies is provided in the form of student exchange, work placements abroad, optional language studies, foreign-language teaching and tutoring international students, for instance. There are student exchange agreements in place with approximately 300 foreign HEI partners.

During studies, students develop their working life skills and strengthen their connections to the business world through **a work placement** (part of the studies), **thesis work** and **multidisciplinary innovation project studies (MINNO**, 10 credits). The thesis work process is supported by the digital Wihi system. Connection to the business world is also achieved through degree-specific means, such as active alumni connections or in futures seminars attended jointly by students and representatives of professional life.

Metropolia offers advanced **learning environments** to students on all campuses (figure 6). The environments provide opportunities to organize simulations of various fields of education and to practice in environments that fully correspond to working life environments. Students have actively participated in designing these facilities. One example of these is the HyMy Village (see 2.4). There are also digital learning environments, such as Moodle.

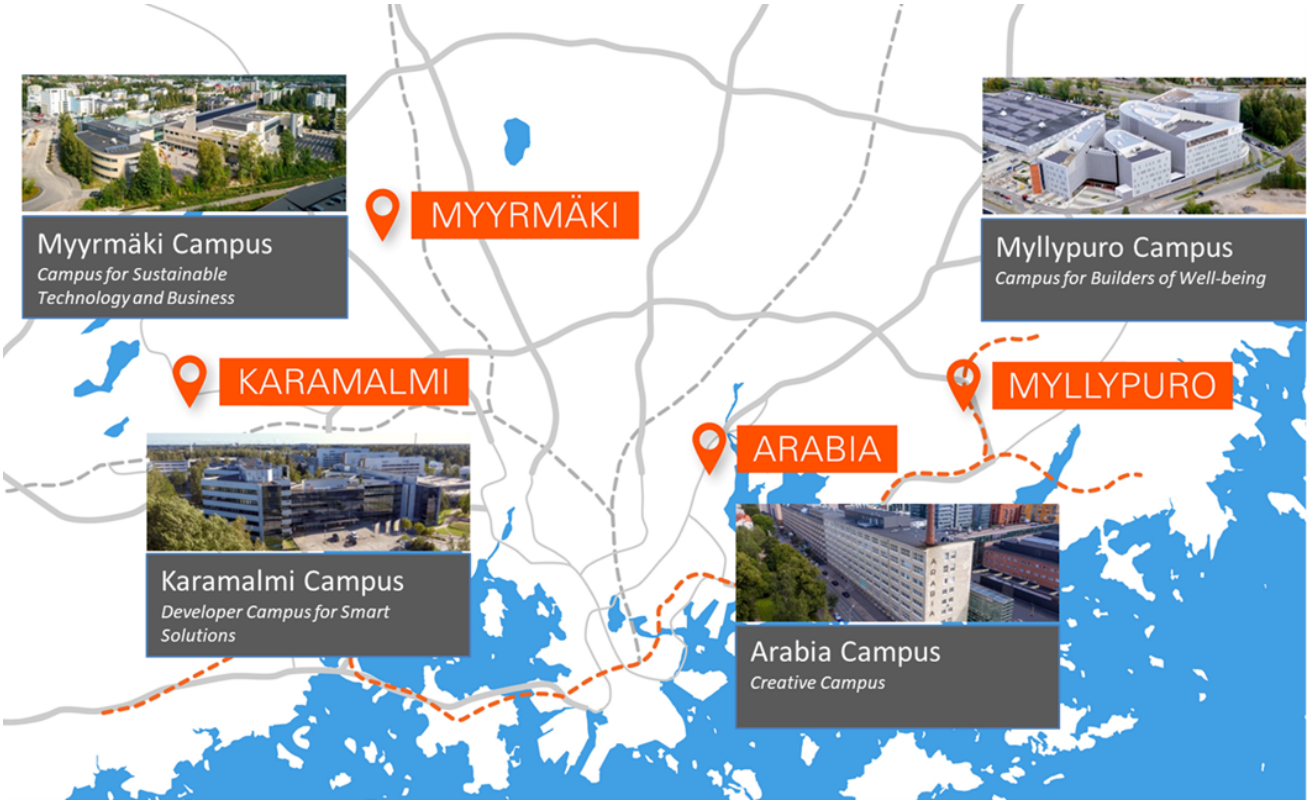


Figure 6 Metropolia's four campuses

Guidance and counselling and student services promote studies and maintain well-being

Students have been assigned PSP (personal study plan) counsellors for their degree programmes to help them progress in their studies. The counsellors conduct personal study plan discussions with the students. A PSP counsellor monitors the progress and refers the student to a student well-being advisor or a psychologist in the Student Well-being Services, if required. In addition, the student is provided support and guidance in their studies in the degree programmes (programme coordinators, academic tutors and study counsellors). Titles and practices vary between sectors and degree programmes. The Opo application, which is currently undergoing testing, helps a new student find information and receive guidance at the beginning of the studies by means of a service recommendation feature.

In a self-assessment, the need to monitor studies in a student-centered, more personalized and more comprehensive manner was identified. Doing so would make it easier to address a situation where the study progress is slower than planned, for example. An answer to this is provided by the **learning guidance model** (figure 7) which is being developed together with students as part of the Metropolia Match® model. The model makes use of existing good practices. The guidance model supports the student's active approach in self-development and in progressing

towards the direction they have chosen.



Figure 7 Student-centered guidance model at Metropolia

The student services coordinators in the Student and Admission Services provide study guidance to those interested in Metropolia's offering. SIMHE (Supporting Immigrants in Higher Education) guidance and services for the identification of prior learning are available to immigrant customers. The SIMHE service activities that are today provided nationally in various higher education institutions were initiated by Metropolia in 2016 to address the refugee situation of that time.

Metropolia's Academic Services, or **Student and Admission Services, Student Well-being Services, International Relations and the Library and Information Services,** serve applicants, students and personnel on all four campuses. Special needs teacher services are offered on a school-specific basis. The Student Well-being Services promote the well-being of students in cooperation with education. Student well-being advisors, psychologists and a well-being coach provide personal guidance via online discussions and on campus, facilitate small groups and distribute information related to student well-being. Metropolia's degree students are covered by student health care services (YTHS). University chaplains are also available to support student well-being.

Student admission and RPL are transparent

Student admissions are based on the national joint admission process for higher education institutions, developed under Metropolia's leadership, and a joint electronic entrance

examination. The responsibilities and processes related to student admission are included in Metropolia's degree regulations. The admission criteria for each study programme available for application are drawn up in the steering group for student admission, which ensures that applicants are treated equally. The Director of Lifelong Learning makes the decisions on the policies concerning student admission and the selection criteria. The Student and Admission Services apply a centralized method in the publishing of degree-awarding programmes and other studies that are available for application. Information on the criteria applied in any admission decisions and the admission criteria is available to applicants at Opintopolku.fi and Metropolia.fi. The student admission criteria related to the provision of lifelong learning and the open UAS studies are available in the Peppi system. This is also where applicants submit their applications for these options. An area of identified enhancement is the need to assemble all admission-related information in one place.

The degree regulations outline **the identification and recognition of prior learning** (RPL). The student initiates the process of RPL. A uniform electronic RPL form (eAHOT) is used to apply for the recognition of prior learning. Any prior learning shall be confirmed and acknowledged by the teacher responsible for the course or a person designated by the head of the degree programme. The degree-specific RPL principles are published in OMA (Metropolia's intranet). The RPL process is applied in studification. In self-assessment, it was recognised that there is a need to separate studification into its own process. This allows various methods of learning on the job to be identified and developed more systematically.

Strengths	Enhancement areas
Campuses equipped with modern, relevant learning environments, designed together with students.	A system for monitoring progress for both students and personnel.
Competency matrices are a part of curricula.	Process and methods for studification.
Admission criteria for each application period are prepared in a coordinated manner in degree programmes in line with Metropolia's policies and published before the application period begins.	Information related to admissions should be stored in one place.
Multidisciplinary and highly networked student well-being services.	
Extensive educational offering (see 1.4) provides degree programme students and other learners with numerous opportunities to study.	

1.2 The implementation of education

- Auditeringsgruppens bedömning

Metropolia supports transparent students' admission and competence-based flexible study paths

Metropolia has clear guidelines and procedures for student admission. All relevant information on student admission and the progression of studies is included in Metropolia's degree regulations so that the information regarding the recognition of prior learning is easily accessible and transparent on Metropolia's website—in both Finnish and English.

In the interviews, it also became evident that these regulations are primarily used in practice. A particular example is the SIMHE project, where Metropolia provides immigrant students with counselling and services for the identification of competences which could be subject to recognising prior learning (RPL). However, the auditors also received a few indications from the student interviews that the RPL is based on individual judgement and may therefore vary in accordance with the individual interpretation of regulations. Regarding recognising prior learning, Metropolia should ensure a common understanding and consistency among administrative and academic personnel.

Education supports target-oriented learning

According to Metropolia's strategy, the focus is on student-centred teaching, learning processes and the diversity of students and their needs. Interviews with teachers and students confirm that the intended learning outcomes and student life cycles are well organised. Metropolia offers students a sufficiently solid subject-specific core, which enables the students to reach the envisaged learning outcomes. This approach complies with intending to offer students different disciplinary perspectives.

The audit team learned that the flexibility of the curriculum and a good mix of compulsory and eligible modules, which the students appreciate, allows students to realise the programmes' intentions. Students can create their own course portfolios and choose classes from different disciplines or higher education institutions.

Studies are integrated well with working life through learning environments

The audit team acknowledges that study modules involve critical reflection on key topics, verbal discussion and the written analysis and interpretation of the relevant material. Lectures, staff-led

seminars and project work promote general intellectual and domain-specific skills. The audit team appreciates the contextual and phenomenon-based approach and the workshop-based teaching methods, especially through a work placement (part of the studies), thesis work and the already mentioned multidisciplinary innovation project studies (MINNO, 10 ECTS). Different stakeholders mentioned the latter during the workshops and interviews. Other examples are the HyMy Village and Helsinki XR Center, which enable students to gain first-hand experiences, giving the programmes a more practical dimension compared to other similar programmes.

The teaching-learning environment at Metropolia is very supportive of students' personal (transferable) skills development. The audit team applauds how students' critical thinking is developed, which the students and alumni confirmed during the site visit. The audit team highly values the modern, responsive programmes besides the advanced learning environments and facilities Metropolia has at its disposal. Its connections to national and European innovation environments through different collaboration platforms or hubs are highly valued.

The amount and variety of activities that the higher education institution carries out together with civil society are impressive. In the view of the auditors, this is a great asset for integrating students with professional life. All Metropolia students have the chance to be involved in research projects to improve their research capabilities, including data collection, data entry or database interventions.

From the audit team's perspective, Metropolia cares for its students and shows interest in their success: The HEI continuously observes the students' learning processes, and problems and difficulties are dealt with in cooperation between students, student services and academics with the help of the METKA student union.

METKA also plays an active role in making decisions to ensure student fairness. However, students stressed that there are still minimal actions from METKA concerning improving administration. The METKA student union plays an essential role in students' study lives. It can increase feelings of connection or engagement with the university, thus reducing the likelihood of study failure and dropout.

The well-being of students is promoted, yet there is some room for improvement

At Metropolia, students are assigned personal study plans and counsellors for their degree programmes to help them progress. In addition, tutor teachers monitor their progress and refer the student to a student well-being advisor or a psychologist in Student Well-being Services, if needed. The interviews revealed as well that teachers give regular feedback on learning achievements. Regarding students with special needs, support staff explained that their unique needs are included in the central database upon official registration as a Metropolia student.

The audit team also identified issues for improvement, particularly in terms of involving students actively in HEI life and enhancement processes. There are, for example, no English versions of questionnaires for certain degree-specific survey, which makes it difficult, if not impossible, for students with limited or no Finnish skills to express their opinions. Metropolia should ensure accessibility to active participation in student life for this target group in all degree programmes, especially if more international students are supposed to attend Metropolia in the future. Their voices should be heard as well.

1.3 The evaluation and enhancement of education

- Högskolans självvärdering

Multiple avenues for student feedback

Metropolia collects student feedback via several channels. Degree students may use various feedback channels at different stages of their studies (figure 8) and after graduation. Students in other learning solutions provide feedback at the end of their studies. In addition to course feedback, students can submit open feedback through the workspace in the OMA intranet. Twice a year, non-degree students provide feedback on how the customer process functions and on how willing they are to recommend the studies.

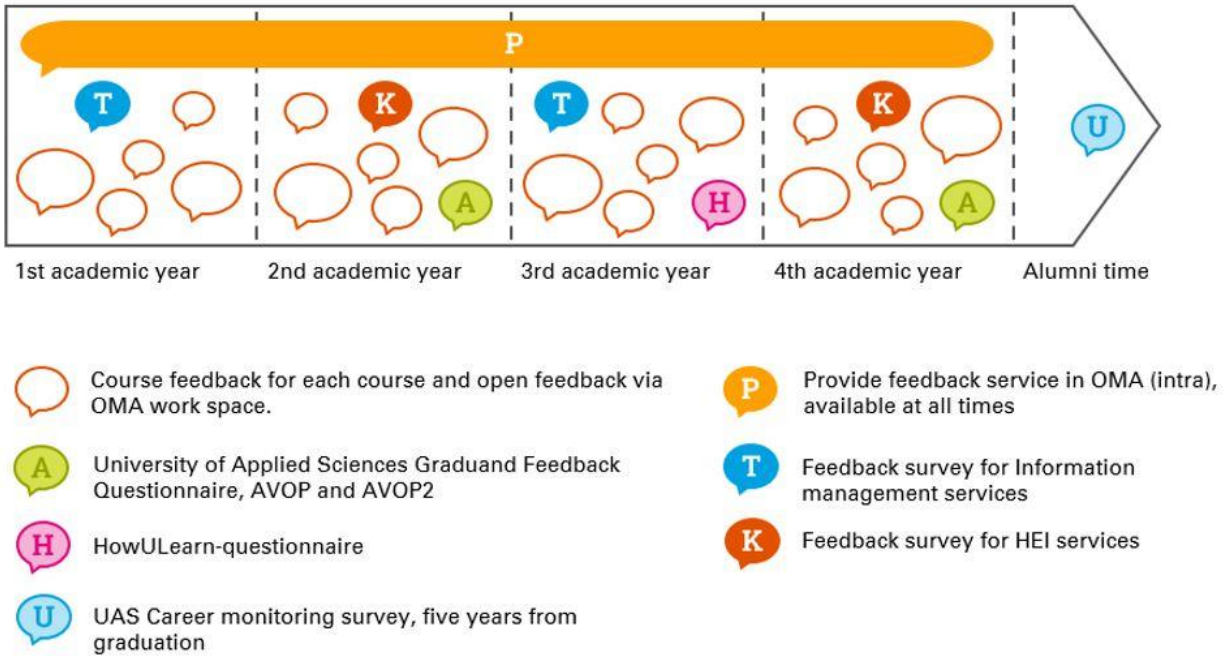


Figure 8 Metropolia's student feedback system

The response rate in the course feedback survey has been low, and the practices regarding reciprocal feedback are teacher- and degree-specific. The new course feedback will be implemented in the autumn of 2022. The process of reciprocal feedback is in place, but self-assessment has shown that it is necessary to reactivate it after the pandemic.

In 2019 and 2020, Metropolia tested the HowULearn questionnaire intended for all degree students. The questionnaire, based on theories of university-level learning and research on higher education, will be implemented in autumn 2022. Students answer this survey once during their studies. It provides information on students' learning experiences. It also enables the students to

receive personalized feedback and guidance that supports learning and studying. HowULearn includes a joint workshop for students and personnel.

Graduates provide feedback in the national UAS graduand feedback questionnaire (AVOP). To accelerate the development cycle of education, the AVOP questionnaire has been adjusted for students in their second academic year (AVOP2). The annual UAS Career Monitoring Survey gives information about alumni who graduated five years ago and are in working life. It describes the employment rate of the alumni, the career opportunities received through education and the alignment of the studies with the needs of professional life. It also offers the alumni an opportunity to influence the development of education.

Academic Services collect feedback from students and personnel on their services through questionnaires every two years. The feedback is processed in Academic Services' team meetings. Increasing cooperation between the Academic Services and Education has been one area of development. Information Management Services collect feedback from students and personnel regarding their services every two years.

In self-assessment, feedback system and culture as a whole were identified as an enhancement area. Open feedback provided by students and the feedback received through student associations indicates a concern that the given feedback has no impact. In addition, compiling feedback data from different sources requires the mastery of several different tools and the process for using the information in the development varies in degree programmes. Based on the self-assessment, the development of the feedback system has been selected as a focal point for the work of Metropolia's quality group (see 3.3) in autumn 2022.

Management systems and procedures support assessment and development

Education consists of ten schools and two development units that support the operations and are managed by the Director of Lifelong Learning. Operations are managed according to the PDCA cycle (figure 9).

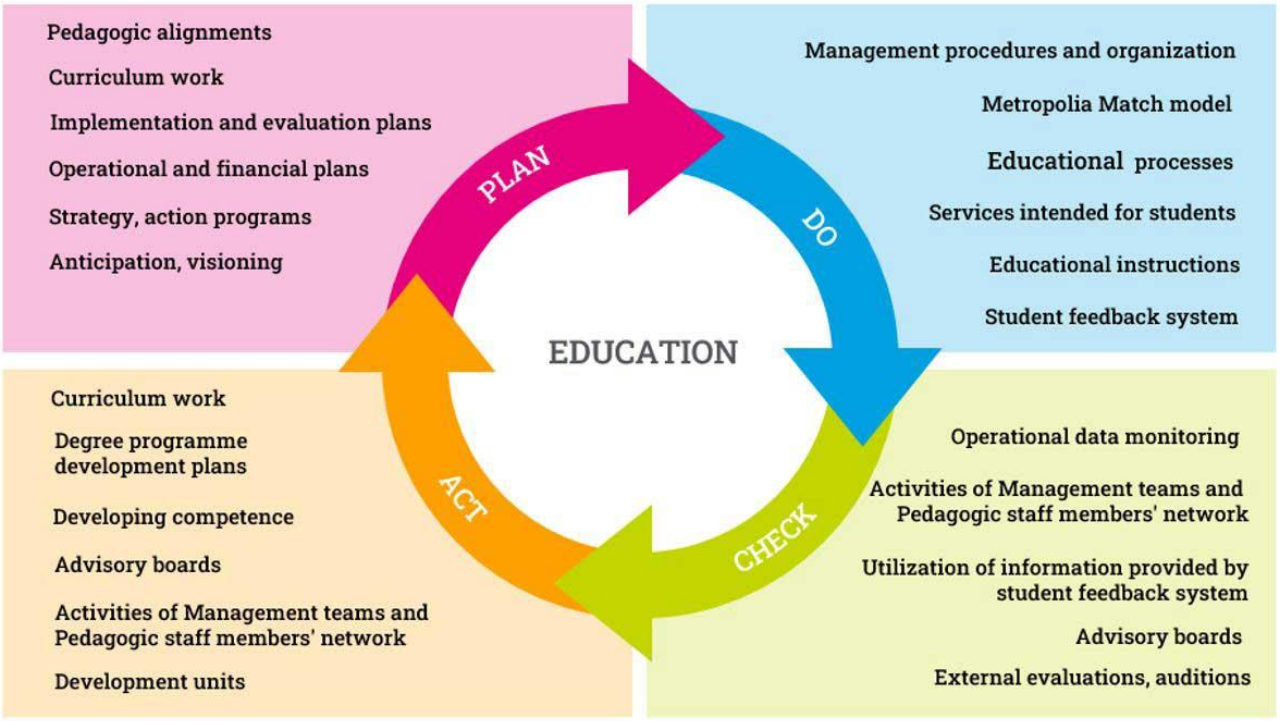


Figure 9 The management of education is interlinked to quality management.

Learning Development unit develops and coordinates internal shared processes of Education, and *Learning Networks and Services* focuses on Education services provided externally, such as the career services for immigrants. In addition, education development is supported by the pedagogic staff members' network for pedagogic development, consisting of school personnel, as well as the digital mentor network that supports the digitalization of education in particular (see 1.4). The systematic implementation of shared processes and operating policies throughout the area of lifelong learning has been identified as an area of enhancement.

Education processes the information provided by the feedback system. This concerns the management team of Lifelong Learning, the management teams of the schools and/or degree-specific teams. The processed information is then applied to the development of degrees and to pedagogic decision-making. Indicators describing credit accumulation, study progress and graduation in degree programmes and lifelong learning are used to monitor the study programmes. The data is accessible in the reporting portal. Development work to assemble the data into one platform (QlikSense) is in progress. Monitoring of the indicators is the responsibility of the heads of schools and heads of degree programmes. The information is reviewed by the management teams of the schools and during personnel development days. Each head of degree programme is in charge of assessing their respective degree programmes and identifying development needs.

The schools perform an annual pedagogic assessment and prepare a development plan, supported by the schools' pedagogic staff members. The plan will be integrated in the degree-

specific development plans in 2022. In addition, discussions on education development are conducted in the annual workshops for managers and heads of degree programmes. The workshops also include representatives of other units of the UAS, such as RDI, Academic Services and Business Activities. The development of the offering of non-degree-awarding education is coordinated in the Learning Networks and Services unit in cooperation with the schools. The monitoring and assessment of the offering by the open UAS is the duty of its steering group.

Students participate in the development of education by giving feedback and via their representatives in the METKA student union. The President meets them approximately once a month during semesters. The Director of Lifelong Learning meets METKA representatives and representatives of sector-specific student associations 3–4 times per year. METKA's representatives participate regularly in the feedback discussions in meetings of the Lifelong Learning management team. In addition, METKA develops peer mentoring and student activist operations in cooperation with the Student Well-being Services.

Needs of the business world are incorporated in the development of education through the activities of advisory boards, networks, and project activities as well as other RDI activities. Sector-specific alumni networks are strong. Information about the needs of the business world is obtained in connection with multidisciplinary innovation project studies, work placement, theses, as well as project activities and other RDI activities. The opinion of the business world is also heard by means of the RDI integration in innovation hubs and collaboration platforms (see 4). In addition, there is a forecast project under way at Metropolia. It models the future needs of the business world. Utilizing the needs of the business world and forecast data in the development of education systematically has been identified as an enhancement area.

Strengths	Enhancement areas
Recurring student feedback surveys (course feedback, AVOP, AVOP2, HowULearn, Career Monitoring Survey).	Systematic use of student feedback in the development of teaching, and the provision of reciprocal feedback.
Open and frequent dialogue with the METKA student union and sector-specific associations.	Systematic use of needs of the business world and forecasts as part of the development of education.
Services provided by Academic Services and Information Management Services are universally valued.	Adherence to common guidelines and agreed practices in all Lifelong Learning.

1.3 The evaluation and enhancement of education

- Auditeringsgruppens bedömning

Feedback collection occurs systematically and regularly

As mentioned in the audit material, the HEI systematically collects data regularly along the student life cycle, primarily on a quantitative basis. These collections include, for instance, course feedback, graduates' feedback, the HowULearn questionnaire, and a career monitoring survey. Within these surveys, Metropolia addresses learning experiences from classes, experiences concerning the degree programme and satisfaction post-graduation. Metropolia considers response rates a significant challenge, which, unfortunately, has become a common phenomenon in other countries. As already mentioned, survey participation of international students could be enhanced through questionnaires in English.

According to the self-evaluation report, the development and enhancement of the feedback system has been identified as an important assignment for the quality group, which was installed in the autumn of 2022. The audit team acknowledges these efforts but would like to point out that the portfolio for possible feedback methods goes well beyond surveys. As a large institution, Metropolia might consider surveys an obvious first choice. However, it might be more effective to collect feedback on a qualitative basis as well, e.g. through reflexive tasks in class or focused on a certain amount of classes every year only. The audit team would like to encourage Metropolia to experiment with different methods of data collection, which might also make both processing data and applying data-based measures easier.

Students should be provided with feedback on their feedback more systematically

Students are represented in various committees and working groups, where any feedback collected is handled. In addition, METKA representatives regularly meet with the president and the director for lifelong learning. The audit team highlights the open dialogue between university leaders and students, which cannot be taken for granted in such a large and diverse organisation. However, direct feedback through the student representatives works as well. Student interviewees from METKA gave concrete examples of issues that could be solved and where the measures taken were communicated to the students concerned. However, the university acknowledges that there is still a need to improve the visibility of changes based on feedback. Better visibility of concrete measures would strongly incentivise student participation in feedback. It would also include the teacher's feedback on class-level student feedback. The quality group has identified this issue, and the audit team wants to assure Metropolia to continue this discussion.

Metropolia monitors educational degree programmes in a systematic way

Data, which the HEI collects on various occasions, is discussed intensively on the degree programme and school level, as was mentioned during the interviews. There is also a close connection to the job market, represented in the various advisory boards. The School of ICT currently experiments with a document analysis of job offers by applying artificial intelligence methods to match the job market's needs with degree programmes. The audit team would like to highlight this innovative approach and encourages the school to communicate this good practice more thoroughly within the institution. As a result, the approach could be extended to other fields of study. As already mentioned, due to an extensive revision process of almost all specifications and guidelines and a readjustment of processes, many procedures are still considered new or have not yet been firmly established. The discussion of collected data with adjoining advisory boards would be an advantageous development of the monitoring process and enhance the advisory board's function.

The self-evaluation report and discussions during the audit visit underline the incorporation of feedback and the achievement of learning outcomes. Advisory boards, innovation hubs, other RDI activities and collaboration platforms provide first-hand information on how graduates perform in working life. This strong association provides Metropolia with all the information needed for school and degree programme levels. In addition, alumni keep in touch with the HEI and thus serve as role models for a successful transition to the job market as competent representatives of Metropolia's educational provision.

Degree programmes and other educational provisions offer endless possibilities for continuous learning, considering the various target groups and their unique needs at different stages during their studies. Students are provided with various subjects and teaching as well as assessment in compliance with the stage of their studies. Learning opportunities arise in the classrooms, within the innovation projects, abroad and during the thesis. Different learning methods and environments encourage the continuous acquisition of new competences.

Metropolia uses feedback and data for systematic education enhancement

Feedback and evaluation results are discussed on various levels within the institution: degree programmes, schools, units etc. The results are systematically used to improve and evolve educational provision. For instance, data from the recently installed HowULearn survey is handled in a joint workshop for students and staff, which is an important step to close the loop. The need for systematically establishing new procedures after revisions within the system and for visibility of improvements within Metropolia were already mentioned.

The university uses information from various surveys, e. g. the national graduate survey, but also direct feedback on performance to improve support services. The various units discuss these results on a team level, as was mentioned in the interviews during the visit. The audit team

acknowledges these efforts and would simultaneously encourage discussion and the implementation of measures across service units to gain a more common understanding of the different units' tasks and obtain a common idea of service quality within the institution. The quality group could be a starting point for such an initiative.

1.4 The HEI’s examples of successful enhancement activities

- Högskolans självvärdering

Digital Mentor activities in the development of personnel’s digital pedagogic competence

Metropolia has organised digital mentor activities for a long time. The work has been systematic and centralised since 2016 when digitalization became a focal point in the strategy. The objective has been to support and train teachers and personnel in the use of digital tools. Digitally inclined users have formed a team that has developed digitalization-related practices and solutions. Currently, there are ten digital mentors who form smaller digitalization teams on each campus. The mentors are managed by the Development Director. All work is supervised by the coordinator of the mentors. The digital mentors…

- provide digital pedagogic support for colleagues in the schools
- organise training
- share their views on the pedagogic use of various digital applications at Metropolia
- test new digital environments and applications
- actively follow professional discussion on digital pedagogy related to teaching and learning

During the pandemic, Metropolia had to rethink the provision of digital support directed to its personnel. The support was organised through a ‘Digital Clinic’ set up on Microsoft Teams. Metropolia’s Digital Clinic is a workspace available for all employees, teachers, and other personnel. The objective of the Digital Clinic is to offer services related to the development of digital competence in a low-threshold, communal online working environment. Everyone can ask questions and offer their solutions to issues. The provision and development of the Digital Clinic services is the responsibility of a steering group which, in addition to the digital mentors, consists of representatives of Education, Information Management Services and student activities. The Digital Clinic was received well. Currently, there are more than 600 members. The number of daily users is between 100–300.

The digital mentors have developed the Digiope 1–2–3 training concept for teachers’ digital competence. The Digiope 1 level focuses on the basic skills needed in online teaching. The Digiope 2 level offers tools for developing the quality of online teaching. It also helps in making teaching more varied with the help of different tools. The Digiope 3 level does not consist of actual training. It is rather a sparring level that supports innovative experiments related to teaching.

Using artificial intelligence in assessing the degree programme's relevance to the business world

The curriculum work in Metropolia's ICT degree programme has utilized artificial intelligence in assessing how the content of the studies aligns with the competence expectations of the business world and how relevant the content is to the business world. The key to using artificial intelligence is background data and its availability. In the curricula, the background data is readily available. The curricula include keywords of contents in different formats and various words that describe learning. In addition, artificial intelligence can be taught the variations found in the description of language and different terms used to describe the same thing.

In the autumn of 2021, two workshops took place. The contents of the curricula implemented in the ICT degree programme were compared to the available data regarding the labour market and competence. The outcome was quantitative data that describes the similarities between contents, labour market data and forecast data on competence needs. The results can be applied further by improving the quality and concepts of describing curricula to better meet the needs of the business world. It is important to find a common language for the UAS and the business world, by using the same competence descriptions that are used at workplaces, for instance. This will also allow teaching contents to be better aligned with the needs of the business world.

Artificial intelligence will be utilised in Metropolia's curriculum work. This means that when a new curriculum is published, the labour market eligibility of the curriculum's quality verification is ensured by e.g. comparing the courses included in the curriculum and their content descriptions with labour market data. Subsequently, a statement regarding the quality of the alignment shall be made. This is a positive addition to the qualitative work carried out on the curricula where the advisory boards of degree programmes provide their views on the labour market eligibility of the curricula.

Towards learner- and demand-oriented educational offering

Metropolia has tested and developed operating models and methods for a learner-oriented educational offering. Developing the educational offering is based on identifying various customer groups and defining and profiling their needs. Added value provided by the studies that meets the needs of the business world should also be identified. Thus, the planning of study programmes has moved from a product-orientation to taking the perspectives of the customer and demand into consideration. The operating practice will be refined further in the Metropolia Match® model. It includes the enhancement of both studies and guidance and counselling.

A good example of the practice is SIMHE services designed for customers with an immigrant background. The development of the services started with meeting asylum seekers in reception centres. Customer-oriented services were created based on the received information. These operating models have been expanded and developed further in cooperation with local

government trials on employment in the Helsinki Metropolitan Area, with regional networks and with representatives of the business world.

Another example is the AMKoodari programmer project where labour market data and artificial intelligence were applied in the preparation of the educational offering. Study programmes related to programming competence were identified in the educational offering by means of machine reading. Labour market data provided a real-time view of the sector's competence demand on national and regional level. A learner-oriented offering was prepared based on the information received. The learner starts the selection of courses by completing an electronic competence profile that identifies their specific competence. The competence was compared with the regional competence need of the labour force by means of artificial intelligence. Artificial intelligence identified gaps between the person's competence and the competence need and proposed courses from the educational offering.

Continued dialogue with companies and associations is also important in the development of a learner-oriented educational offering. One example is cooperation with the city of Vantaa. The city's competence management includes competence development workshops. In them, experts from Metropolia and the city jointly define competence needs now and in the future. Metropolia uses this as the basis for building an educational offering for the city of Vantaa.

2 HEI promotes impact and renewal

- Auditeringsgruppens bedömning

The evaluation area II assesses the procedures used to manage and improve societal engagement, strengthen the impact of the HEI's research, development and innovation as well as artistic activities, and support an innovative organisational culture.

Based on the audit team's evaluation, the evaluation area II is at the level *good*.

The audit team identified the following as the main strengths and recommendations:

Strengths

- Metropolia has a clear focus on the aims and results of societal impact. The societal impact is firmly rooted in Metropolia's strategy.
- Metropolia has shown a capacity for bold renewal actions. A good example is the rearrangement of the HEI's campus structure.
- The organisational structure is geared for concrete innovation within focus areas, which have been selected considering sustainable development and in accordance with regional actors.

Recommendations

- The growing number of focus areas increases the risk of poor consistency.
  Realistic resource planning is vital for ensuring sufficient resources for strategic actions.
- Metropolia should further support active two-way communication to share practices of streamlined information.
- The new campus infrastructures could be used even more in promoting Metropolia for attracting talented staff and motivated students.

2.1 Managing societal engagement and impact

- Högskolans självvärdering

Strategy guides Metropolia to provide solutions for societal challenges

Metropolia has a passion for solving challenges and its goals regarding impact and interaction are based on its strategy. For the theme of **phenomenon-based innovation hubs,** the intent is for Metropolia to be known for its innovative solutions for social and global challenges and also as an impactful, ecosystem-based actor.

Metropolia has five innovation hubs (figure 10). They are based on global and social phenomena, in which Metropolia has extensive competence and for which Metropolia's RDI activities produce solutions:

- Customer-oriented wellbeing and health services
- Clean and sustainable solutions
- Data-driven construction
- Functional city for people
- Smart mobility



Figure 10 Phenomenon-based innovation hubs and campuses' collaboration platforms at Metropolia

Metropolia's innovation hubs operate on **an ecosystem basis**: partners, students and personnel join forces in cross-sectoral cooperation (culture, business, social and health care, as well as technology). Learning, research, developing, and innovation are user-oriented. Solutions are found through experimenting and practical work. The **collaboration platforms** (see 2.3) of Metropolia's campuses provide a setting for open RDI activities and teaching. The platforms are used by innovation hubs and education partners, students, and personnel. The resources available on the platforms and Metropolia's partnership model provide a foundation for long-term ecosystem partnerships. (See 2.4).

The transformational philosophy of RDIL (RDI + learning) which renews the integration of the RDI activities and education and any related activities are based on this ecosystem partnership. Metropolia's goal is to have education, RDI activities and the campus collaboration platforms operated by the innovation hubs form functional, phenomenon-based entities (see 4.). The RDI activities and education are not split into separate operations. Students complete studies in RDI projects under the supervision of their teachers. The multidisciplinary innovation project MINNO (10 credits) has been a good starting point. The principles are student- and phenomenon-orientation, openness, systemization and sustainable development.

The activities are **managed** by setting strategy-based targets for the units and by acting in accordance with the practices of the management system and operations management (see 3.1). Support is provided by strategic roadmaps, such as sustainable development, development of the EU operations and RDIL, as well as the units' annual action plans**.** Management emphasizes systematization, dialogue and co-creation (see 2.3). Systematization supports the simultaneous consideration of several perspectives and the conceptualization of inter-dependencies. The management group monitors the progress of the impact targets in quarterly impact reviews (Vaikuttavuuskatsaus 1/2022, only in Finnish). At the moment, the most significant evidence of Metropolia achieving its impact target include Metropolia's sizable campus reform, the advancement of sustainable development goals (see 3.4), and the deployment of an innovation hub operating model.

Interaction with society directs the operations

Students are Metropolia's primary stakeholders. This is reflected by the close **interaction with Metropolia's student union METKA**. METKA and Metropolia engage in continuing dialogue with each other and their stakeholders. In recent years, METKA has assumed an increasingly active role in society as an advocate of issues important to students. For example, it has participated in a survey on the funding of student unions and in follow-ups to the survey. The survey is conducted by the Ministry of Education and Culture. It has also been involved in the implementation and development of the Tuudo mobile app serving the HEI community.

Metropolia has been named the higher education institution responsible in several socially significant projects (in Finnish only) in which Finnish higher education institutions promote

competence growth, employment, digitalization, and development of higher education institutions. Examples include the responsibility for the development of the Supporting Immigrants in Higher Education in Finland (SIMHE) services since 2016; the joint electronic entrance examination of the universities of applied sciences in which Metropolia has acted as coordinator, developer, and service provider; as well as the Digivisio 2030 project common to the entire HEI sector.

Interaction on a societal level transpires in the form of an ongoing dialogue with the actors and stakeholders from different sectors. Metropolia is an active operator and developer within the innovation ecosystem in the Helsinki Metropolitan Area. In particular, cooperation with the Helsinki Metropolitan Area municipalities and the Helsinki-Uusimaa Regional Council is strong and based on forecast data (see also 2.3). Each of the five innovation hubs (figure 11) has profiled its RDI project portfolio based on the themes arising from society's needs. The project portfolios of Metropolia's innovation hubs are linked, for example to the programme of smart specialization run by the Uusimaa region. They are also linked to the themes of the ecosystem agreement signed by the Helsinki Metropolitan Area with the Finnish government. An example of this includes the FAIR – Finnish AI Region innovation hub, part of the EDIH (European Digital Innovation Hubs) network. In the hub, Metropolia strengthens its connections to national and European innovation environments through its HXRC collaboration platform (Helsinki XR Center).

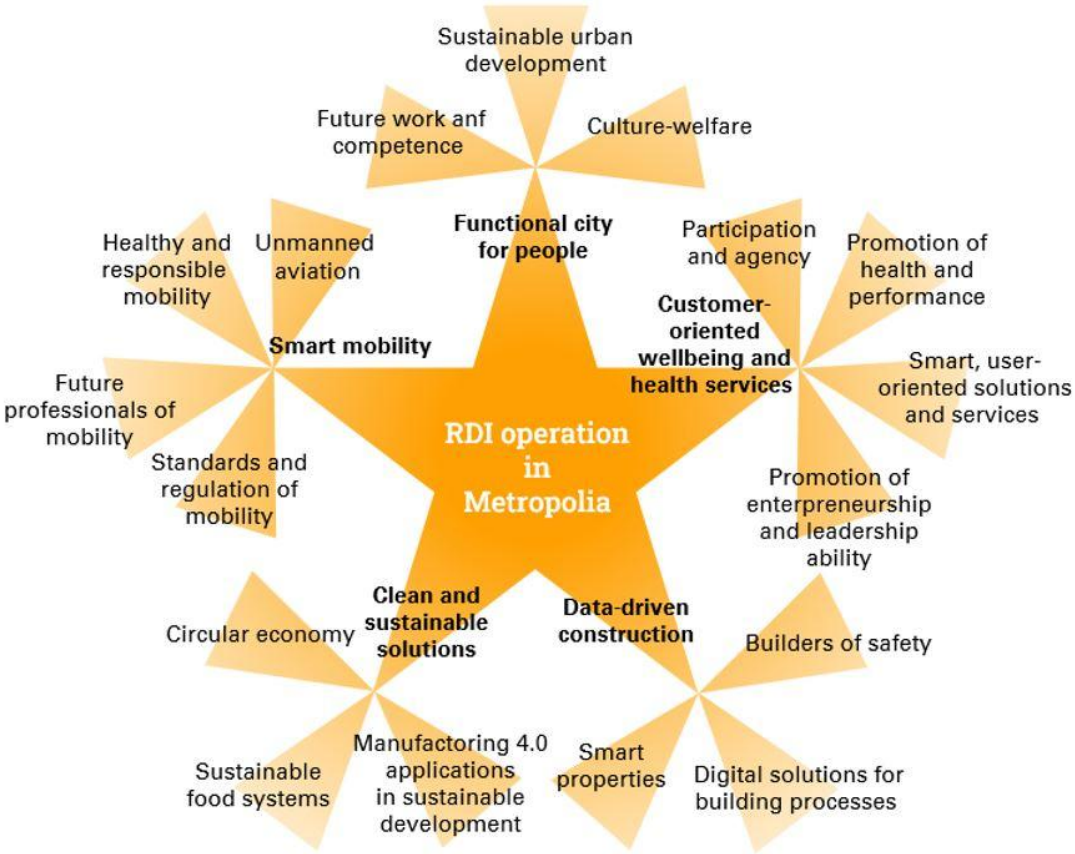


Figure 11 Phenomenon-based innovation hubs (points of the star) are profiled based on the themes arising from society's needs.

As Finland's largest UAS, Metropolia wants to lead the way in the EU activities of universities of applied sciences and have a passion for solving challenges also at the European level, in the arena of international phenomena. To promote international relations, Metropolia has in place an international action plan, in which the main goals include increasing Metropolia's impact, activity and visibility at the EU level. Metropolia also impacts globally in accordance with the goal of sustainable development through global education.

Interaction in society is managed through Metropolia's **partnership model**, which includes both ecosystem partnerships and bilateral partnerships. Since 2018, Metropolia has signed bilateral agreements on cooperation with 30 companies. The agreements aim to increase systematization and impact multidisciplinary cooperation with companies (in Finnish only). In society, the focus of the partnerships is shifting to strategic, long-term, and broad ecosystem work, and the partnership model is renewed accordingly. An indication of successful long-term work is the FAIR innovation hub in EDIH network, as mentioned earlier.

Strengths	Enhancement areas
Innovation hubs that enable effective and responsible innovation built on phenomena and partnerships. The innovation hubs form the foundation for co-creation and the building of ecosystems.	Sensitivity to change, made possible through internal funding (strategy funds), and more agile pilots for new operating practices.
A systematic approach in Metropolia's management that enables change processes, such as the implementation of RDIL.	Strengthening innovation hubs' communication and active participation in public debate.
Close and functional cooperation between METKA and Metropolia's management.	Knowledge management to support effective RDI activities.

2.1 Managing the societal engagement and impact

- Auditeringsgruppens bedömning

The new reorganisation for schools and innovation hubs supports the implementation of Metropolia’s strategy

Metropolia, Finland’s largest university of applied sciences, has recently been organised into a matrix structure of ten schools and five innovation hubs. The Board, composed chiefly of owners’ representatives, approves the strategy and principal investments and makes the highest level decisions. The president leads the management group responsible for the strategic themes: Phenomenon-based innovation hubs, Sustainable development and growth, People and culture and Digitalization. Metropolia’s Board has a lot of expertise from different sectors of society. The HEI could consider that the board should be exposed more deeply to the core plans and decisions beyond economic and financial aspects.

The reorganisation aims to enable the strive for innovation and create an innovative organisation. The audit team considers this a good start to increasing interaction between the different sectors.

The focus areas in the fields of customer-oriented well-being and health services, clean and sustainable solutions, data-driven construction, a functional city for people and smart mobility reflect well the current and expected needs of society. The owners—and the whole society—need skilled and motivated professionals for the relevant present and future areas of employment and entrepreneurship. The ten schools concentrate on education and learning in fields that are near to an ordinary person and will even gain relevance in the future. The interviews provide evidence that the new 4-campus structure is generally supported and is an excellent basis for enhancing the impact.

During the transition phase into a matrix organisation, attention should be paid to clear and regular communication with staff

The matrix organisation of schools and innovation hubs focuses well on enhanced impact renewal through innovation. Sharing limited resources within the organisation is a demanding task and requires attention. The goals of societal impact are well-defined and based on the analysis of Metropolia’s analysis of its operational environment. The strategic intent is communicated well. Metropolia has set strategy-based targets for units, and they monitor the achievement of the targets through real-time reporting and impact reviews. Appropriate procedures are in place within the management system leading the societal impact work, which supports the achievement of set goals and targets.

The organisation is in the transformation phase. Therefore, much work remains to be done to ensure that the whole organisation shares the vision and main strategies. Metropolia should further support the transformation with systematic, explicit, frequent and intensive, top-down and bottom-up communication. Attention should be paid to ensuring that management processes are consistent and flexible enough for the demanding transformation.

The quarterly impact reviews in the intranet present one good example of an open culture. In order to show and emphasise continuous enhancement and quality culture, the most critical metrics and statistics of progress could be more visible and used in communication.

The main actions reflect the strategy well: The new greenfield campus in Myllypuro is in line with the strategic intent of a ‘bold reformer’ and an ‘active partner-building society’. The Family Café on Myllypuro Campus is an excellent example of the societal aspect of ‘putting people first’. Metropolia UAS uses multilevel contacts with external stakeholders in its strategic planning. There is regular feedback from local employers and stakeholders to ensure relevance and future skills for the regional labour market. Being an active member of national and international peer networks is essential in forecasting current and future trends. High-level scenario analysis could be useful for both the Management Board and staff to visualise the future and show direction.

2.2 Research, development and innovation activities as well as artistic activities with impact

- Högskolans självvärdering

RDI and artistic activities renew the society

The innovation hubs produce projects, education implementations, MINNO studies and services on the campuses' collaboration platforms. Special focus is placed on entrepreneurship services and the deployment of innovations in practice as part of the Helsinki Metropolitan Area's Campus Incubators programme and the 3UAS Entrepreneurship Society. The operations of Turbiini have expanded to all campuses, and access to Turbiini has also been granted to actors outside the HEI community. Metropolia's artistic activities are intricately linked to the RDIL activities and the innovation hubs' themes. Close ties to education are manifested in opera education, for example, in which multidisciplinary RDIL activities enable opera productions.

Metropolia applies its extensive cultural sector and offers the know-how of the creative fields for use in other fields, which strengthens the societal impact of the creative fields. One of the first significant cooperation outcomes is the Creativity and Arts in Social and Health Fields – Master's degree, which renews the utilization of creativity, culture and art in health care and social services. Another example is the Mahdollisuuksien maisemia (Landscapes of Possibilities) event, which promotes taking the opportunities provided by creativity into consideration in various sectors and occupations of the business world. Metropolia has also integrated its expertise in creative fields and technology with the development of urban environments, and became the first Finnish UAS to be selected as a partner in the New European Bauhaus initiative (see 2.4.).

The management of the RDI activities and innovation hubs has been developed to meet the needs of systemic management and working in an ecosystem. Innovation Directors are responsible for the operations and development of the innovation hubs. The RDI Services unit supports the project activities, the funding applications, and the publishing activities. The Innovation and Entrepreneurship unit supports the operations of the innovation hubs and schools in the innovation ecosystems by developing the collaboration platforms and student-oriented entrepreneurial activities. The coordinators for the innovation hubs' thematic areas have been assigned themes that transform the contents of each innovation hub into a concrete form (Figure 11). They strengthen cooperation between the educational content and the innovation hubs.

Quality management supports the RDI activities

The *planning* of innovation hub activities is based on annual implementation plans and on school-specific RDI plans in Education (figure 12). Changes in the operating environment are monitored

through continuous dialogue with various actors in society. Information is gathered from the user/experience interface for the needs of new learning environments, education, and projects. In addition, international RDI and policy programmes and opinions are monitored and analyzed.

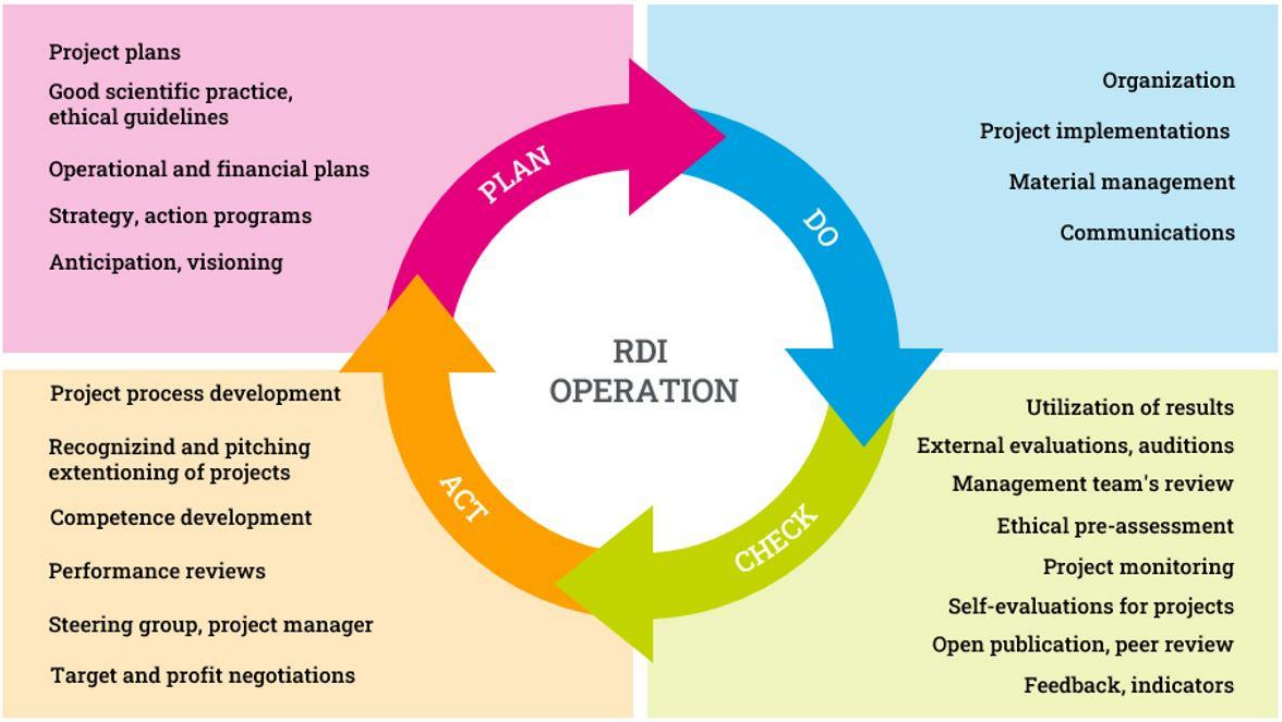


Figure 12 The management of the RDI activities and quality management are interlinked.

The *implementation* of the RDI activities has been described in the OMA intranet. The RDI projects and the project portfolio are managed in accordance with Metropolia's **project model**. They are monitored in the Halli management system. A significant portion of Metropolia's external funding is channeled via project operations. This is why using Halli supports Metropolia's financial management. Project management at Metropolia (only in Finnish) consists of progress stages and decision-making points, roles and any related responsibilities, as well as project management documentation. Project management guidelines are available in the OMA intranet, as are the instructions for other RDI project operations. Strategic selections and policies concerning intellectual property rights have been approved by the Board of Directors and published as the IPR Strategy. The innovation hubs **publish** scientific and popular articles in, among others, publication series, specialist blogs and podcasts. The library is responsible for the collection and reporting of the publication data.

Metropolia **communicates** information about research, innovations, and artistic activities to its stakeholders in newsletters and through social media channels and the Metropolia website. In the self-assessment, strengthening the hubs' communication was highlighted as an area of enhancement. It has since been addressed with new recruits for communications services.

The RDI activities are *assessed* by means of feedback surveys and feedback events aimed at

customers and collaboration platform partners. Projects are assessed at decision-making points included in the project model, in steering groups and with self-evaluations. RDI activity services collect internal feedback. Information on progress is entered in the Tsemppi system. It supports assessing the impact of the innovation hubs. According to the self-assessment, verification, and assessment of the impact of RDI activities should be more strategically managed and more consistent and open. Feedback collection practices should also be strengthened which has been taken into consideration in planning operations for 2023.

Current development targets of the innovation hubs are related to the RDIL activities, student entrepreneurship and cooperation with businesses especially on the campuses' collaboration platforms.

Metropolia is committed to promoting open science and responsible conduct of research

Nearly all of Metropolia's publications are freely available in the Open Repository Theseus. They are published under the open Creative Commons license. The Metropolia Research Data Policy document includes the promises, guidelines and principles to be implemented related to Metropolia's research data. Deploying good data management practices and open RDI activities in the operating culture is supported by means of data agents.

Metropolia is committed to complying with the guidelines of the Finnish National Board on Research Integrity on the responsible conduct of research and the processing of suspected violations thereof. Induction to responsible conduct of research and teaching research ethics are part of the studies. Every Metropolia RDI project manager peruses the RCR Guidelines and the principles and operating models of the open RDI activities as part of project manager training. Any suspected violations of the RCR by Metropolia's actors are dealt with an agreed process. The quality and functionality of the process for suspected violations of the RCR have been developed as part of the records management plan and the case management system. Metropolia employs two research ethics support persons, providing easy-to-access guidance and training on research ethics to RDI actors and thesis instructors. Metropolia is an active participant in the Human Sciences Ethics Committee of the Helsinki Region Universities of Applied Sciences and in the Finnish National Board on Research Integrity and its working group.

Strengths

RDI activities are based on responsible conduct of research which, in addition to the RDI services, is supported by the publications working group, project steering groups, project managers and project specialists. Cooperation with library and information services is strong.

Enhancement areas

A system of continuous feedback regarding the state of the RDI activities, including feedback received from stakeholders. The goal is to monitor impact and report on it more systematically.

Metropolia is committed to the higher education institutions' policies on open science and research by promoting an open operating culture, open learning and the openness of publications, research data and research methods.

The impact of creativity in society has been promoted with perseverance. The theme has been selected as one of the spearheads of the RDI activities.

In accordance with measures identified in the RDIL roadmap, actors are provided support so that they may act openly on collaboration platforms and further apply the results of project work.

Developing the role of coordinators for thematic areas to support cooperation between the innovation hubs and lifelong learning (RDIL).

2.2 Research, development, and innovation activities and artistic activities with impact

- Auditeringsgruppens bedömning

Metropolia is striving for innovation in areas supporting Sustainable Development

The RDI activities are managed by the director of RDI and their subordinates, the innovation directors of the five phenomenon-based innovation hubs. The Metropolia aims to enable phenomenon-based learning in innovation hubs and to link studies to RDI projects. The goal is to tackle societal phenomena through transnational cooperation. The starting point is, therefore, to grasp global challenges and trends rather than in separate skill sets. The hubs are supported by shared competence within key technologies, such as IT. The innovation directors are responsible for the operations and development of the RDI and their own innovation hubs. The RDI Services unit supports project activities.

Metropolia strategic goal is to be a bold reformer of higher education. The recent main strategic decisions and actions are evident. According to interviews, this is reflected in the new structure of four campuses and collaboration platforms with working life, such as the HyMy Village. A good example of acting boldly and quickly in an unexpected situation is the new Karamalmi campus. Management reacted to an unexpected construction problem in one old building by taking advantage of an opportunity presented by a collaboration network partner—Nokia. This led to the new Karamalmi campus. That decision and action have significantly impacted Metropolia and the society around the new campus.

Metropolia is actively seeking new RDI and artistic activities opportunities

Metropolia has a comprehensive and open view of RDI. The ‘ecosystem’ offers access to basic research through collaboration with partner universities, institutions and companies. Metropolia itself concentrates on applied RDI. In addition to its own research, innovation and development interests, Metropolia is involved in the activities of the 3AMK Alliance, which includes the two other big HEIs in the Helsinki metropolitan area. Here, Metropolia is responsible for the research theme. An established partnership model is used when forming more extended collaboration agreements.

The internet and other new technologies allow and enable employment and innovation in a fundamentally wider ‘stage’ than previously. Visual, audial and haptic elements are present in developing new products, services and buildings. For example, Metropolia’s HXRC, Helsinki Extended Reality Center, is an internationally respected technology platform with endless

opportunities for art professionals. Artistic activities are actively brought nearer to and into society. The open-for-public '*Mahdollisuuksien maisemia*' ('Landscapes of opportunities') event is an excellent example.

Artistic activity, however, still very much relies on highly individual skill and talent. Therefore the RDI aspect of the artistic field—also in Metropolia—relies primarily on high-quality education rather than on separate projects.

Systematic support for enhancing innovation

The 'Metropolia spirit' could be easily perceived in the audit interviews with staff. Metropolia's annual planning cycle includes and involves units in systematic development. Quality management supports the RDI activities, such as project management guidelines, monitoring and development, peer reviews, steering groups, good scientific practice, ethical guidelines and action programmes. There are set targets to monitor RDI and feedback surveys, and feedback events assess it. The RDI and artistic renewal and innovation targets are present in personnel's personal development discussions (PDDs). The bonus system is based on reaching targets, which are quarterly followed up in units' meetings. High agility, which Metropolia is proud of, can be best utilised if it is supported on all levels by a shared, flexible and actively used quality system. Work still needs to be done with the full implementation of systematic quality tools.

During the strategic period of 2017–2022, the whole Metropolia community, including students, was invited to participate in the development of operations. One example of the participatory approach is the '*Parru*' support service for dialogue and co-creation. This generated, for example, 50 sparring events in 2021.

Metropolia assesses the impact of its RDI activities through innovation hubs. Metropolia's self-evaluation report also describes an ambitious RDIL roadmap, written down to activity level. Student involvement is one crucial finding of it. The focus on impact and entrepreneurship is evident, e.g. in the 'Campus Incubator': This cooperation with Aalto University and the city of Helsinki aims to start 100 new companies annually by the year 2030.

The audit team recommends even more active communication of the innovation strategy throughout the staff. A common understanding of future scenarios and main actions is key in leading big organisations, especially innovation-focused entities. The new strategy and the 4-campus structure will undoubtedly be helpful for this.

The library plays an essential role in promoting open science

Metropolia has systematic procedures in place to ensure good scientific practice. Metropolia is committed to the Finnish National Board in Research Integrity guidelines and to the Human Sciences Ethics Committee of the Helsinki Region Universities of Applied Sciences. Research ethics are also part of curricula in Metropolia. There is a transparent process for any suspected

violations based on the responsible conduct of research (RCR). Metropolia employs two research ethics support persons and provides staff training in research ethics.

Metropolia's focus areas are very much in touch with the real challenges of society. Both RDI and education concern various fields of science. The interviews emphasised openness and transparency well; the extensive network of universities and other external partners supports openness. Collaboration projects with companies, of course, are usually confidential, which is considered in model agreements. New innovation projects will require careful consideration regarding public accessibility. Metropolia recognises that while the open science concept prefers disclosing all results and findings to the public, most private companies will prefer confidentiality.

The library is the traditional source for open data. Nowadays, a library's function goes beyond its collection of accessible books and publications. The information search and info network presence are organised under Metropolia's academic services. The ability to search, understand and interpret information obtained through the internet is an essential competence for a professional. As distance learning and international cooperation increase, the significance of critical information search is growing. The library of Metropolia provides projects with reliable sources of information, guidance and information retrieval services and support for materials management and publishing.

Metropolia has also recognised the risks of 'excessive openness '. The current needs for information security have been recognised and acted on. In the interviews, Metropolia reported around 100,000 hack attacks per day on its information systems. Metropolia is also prepared for these cyberattacks on its quality assurance system.

2.3 Promoting renewal through the organisational culture

- Högskolans självvärdering

Fostering a people-oriented operating culture is part of the strategy

People and Culture is one of the five themes in Metropolia's strategy. Metropolia's operating culture was renewed when the operations were centralized to four campuses during the 2016–2020 strategy period. In the renewal, a participatory work approach was added to the operating culture. The operating culture highlights dialogue, diversity, and openness as well as experiments to develop new operating models. **Regularly convening forums** (such as the leadership forum and the sparring forum for superiors) that are part of the management practice bring up topical matters for the community to discuss. The use of dialogue is supported by the **manager of dialogue** working in the Communications unit. The participatory work approach supporting dialogue and co-creation is promoted by the **internal process sparring service Parru** (see 3.4).

Metropolia is in strong interaction with society. This is manifested in making campuses available for local residents and companies and via Metropolia's operations as an HEI responsible. For example, many services provided on the innovation hubs' collaboration platforms are openly available and Metropolia's facilities can be used for a variety of activity. In this way, Metropolia strengthens communality in local areas and contributes to renewal.

Collaboration platforms enable experimental development

The innovation hubs' collaboration platforms located on campuses provide an opportunity to conduct experiments, tests, pilots and to learn new things. The platforms are physical environments featuring a diverse infrastructure for the use of education and RDI activities. To students, this is manifested as various implementation environments in the MINNO studies and as other joint projects. Platforms are also integrated with the surrounding city, offering services and events to city residents and partners.

The Myllypuro campus features the HyMy Village of well-being services (see 2.4) and the SmartLab development platform for smart homes, which is a flat designed for the development and testing of technology. The Helsinki XR Center on the Arabia campus is Europe's largest centre for augmented reality. The centre is a platform for research and enterprise cooperation and brings together teams, startup companies and larger XR actors and financers. In 2019, the Myyrmäki campus launched the Business Avenue service, which currently includes the following collaboration platforms:

- Urban Farm Lab – An ecosystem of indoor food production

- Electria Factory – Metropolia's electronics manufacturing plant
- Metropolia Workshop – Automotive and transportation RDI services
- Robotics and IoT – Digital solutions for industry

The innovation hubs' ability to support the experiments is strengthened by budget renewals. The goal of the renewal is to enable phenomenon-based operations and to clarify the cooperation between schools and innovation hubs. The renewal is being piloted as cooperation between two schools and one innovation hub. Annual planning and administrative procedures (e.g. work time planning and tracking) should be made even more flexible to ensure that their structures do not impede fast, experimental operations.

Metropolia cooperates in networks nationally and internationally

Metropolia is part of the Helsinki Metropolitan Area ecosystems. Their goals combine both Metropolia's needs and the social and economic objectives of the Metropolitan Area. The project portfolios of Metropolia's innovation hubs are linked to the goals of other agents in the area. Diverse participation in the operations of the surrounding ecosystems helps Metropolia renew its own networks. The objectives of network cooperation are included in the action plans of the innovation hubs and schools. The CRM system is used for the needs of the partnership model (see 2.1) and the ecosystem activities. Personnel play a key role in building national and international networks. They can develop their international competence through internal training and staff exchange.

The Myllypuro campus renewal was planned and implemented in cooperation with the City of Helsinki in such a way that the new higher education institution campus has also become a valuable resource for urban development. Coordinated by Metropolia, the Health Proof Helsinki (HPH) joint project with the Hospital District of Helsinki and Uusimaa (HUS) and the City of Helsinki is building an internationally networked entity of RDI services for the region's well-being and health technology companies (see 2.4). In the Campus Incubators programme run by the City of Helsinki, Metropolia develops business incubator operations for its campuses and supports student- and research-oriented entrepreneurship. Metropolia participates in the Urban Tech Helsinki incubator which focuses on clean and sustainable urban solutions, together with the University of Helsinki and Aalto University.

Metropolia is a member of the strategic 3UAS alliance of the three universities of applied sciences in the Helsinki Metropolitan Area. The alliance has strengthened Metropolia's RDI competence and prerequisites of receiving external RDI funding. It also has strengthened education paths between higher education institutions and shared use of the research infrastructure. 3UAS has a representative in the Uusimaa province's cooperation group.

Metropolia is a member of the European strategic U!REKA alliance of seven higher education institutions focusing on urban areas. U!REKA meets the research and innovation needs of large

urban areas and promotes the international development of pedagogy as well as international student and personnel mobility. The New European Bauhaus (NEB) initiative selected Metropolia as its official partner. This enables Metropolia to strengthen its role on the EU level (see 2.4). International networking is supported by the international action plan and the road map for the development of EU activities. This includes partner networks' development measures.

Alumni are part of Metropolia's network. Metropolia's alumni activities offer opportunities for networking between alumni and between alumni and current degree students. In addition, they provide the alumni with information on further study and continuing education opportunities and highlight alumni's career stories. The members of the alumni register receive a newsletter on Metropolia's topical matters 1–2 times per year. Alumni communications are centralized to the alumni portal and provided in both Finnish and English. Each degree programme and alumnus/alumna take the action they deem most appropriate within this framework. Sector-specific alumni networks are strong. However, according to the self-assessment, the alumni cooperation on the Metropolia level should be more diversified. The development responsibility for alumni cooperation was clarified by assigning it to the Learning Networks and Services unit in the spring of 2022.

Strengths	Enhancement areas
An operating culture based on dialogue.	Promotion of a consistent innovation culture throughout the organization.
The campuses' collaboration platforms as open innovation environments for students, personnel, and partners.	The application, further processing, and commercialization of RDI projects.
Metropolia is a highly desired cooperation partner, as demonstrated by HXRC, Metropolia Proof Health and NEB, among others.	Modern application of Metropolia's existing tools in the management of partnerships, such as the case management system, CRM, and Halli.
Functioning cooperation with innovation actors in the Helsinki Metropolitan Area and other higher education institutions.	Broader and more systematic use of alumni as working life experts in teaching and project operations.

2.3 Promoting renewal through the organisational culture

- Auditeringsgruppens bedömning

‘Metropolia spirit’ encourages a creative atmosphere

Metropolia is in the middle of a transformation process. Major internal renewal will apparently continue, as one of the strategic goals is to be a ‘bold reformer’. Obviously, the momentum of change can and should be used to further enhance processes and operations. The audit visit showed that the phenomenon-based approach, great facilities and the ‘Metropolia spirit’ encourage and enable creativity. This is essential for constant renewal; maintaining and developing this spirit requires attention. The audit team recommends that Metropolia ensure that encouraging the ‘Metropolia spirit’ is not tied too much to specific individuals.

Innovation is not possible without the ability to receive and understand weak and strong signals. The organisation should be geared to sharing and steering such signals inside the organisation for sources of ideas for improvement. Forecasting future trends together with the Technology Industries of Finland is an example. Using big data and artificial intelligence for job searches and other employment information for planning curricula is another example of Metropolia’s use of various ‘radars’ in its planning processes.

Metropolia is a preferred partner and collaborator

Being the largest university of applied sciences in Finland, Metropolia is a natural and desired collaboration partner for higher education institutions and schools in the region. The interviews showed that the main stakeholders, owners (cities), institutions and companies rely on Metropolia UAS with their needs of skilled and motivated professionals—or RDI services and results. Since 2018, Metropolia has established bilateral cooperation with hundreds of companies. Metropolia UAS is historically well-established in the region and is well-geared for multilevel contacts with all external stakeholders. The interviewees described the international presence, mentioning contacts with some 200 higher education institutions.

The whole organisation is geared towards active multilevel external contacts. On a national level, this certainly works, but the international network partners could be sources of more progress. The high-profile HXRC is an excellent example of networked success.

Eyes on the future

Forecasting is a more systematic approach to mapping future landscapes. During the interviews, the audit team learned about Metropolia’s approach to forecasting, including stakeholders (owners, industry associations and institutions).

Metropolia uses its partner and stakeholder networks well in its planning processes. There is a general multidisciplinary partnership model and, due to a long history of cooperation projects including many model agreements. Again, new opportunities are there to be found and enhanced in the international field. Metropolia keeps in touch with alumni through newsletters and social media channels. According to the interviews, alumni and lifelong learners' roles are essential sources of ideas and resources for Metropolia in their enhancement activities.

The interviews also confirmed to external stakeholders that Metropolia UAS is a big influencer and trailblazer on the national level. The audit team recommends that international networks could and should be emphasised more in the future.

2.4 The HEI’s examples of successful enhancement activities

- Högskolans självvärdering

New European Bauhaus (NEB) partnership

In the summer of 2021, Metropolia was selected as the official partner of the NEB initiative launched by the European Commission. NEB’s values – sustainable, inclusive, and enriching – as well as its operating practice and interdisciplinary and creative nature to solve social challenges are manifested in the operations of innovation hubs. The NEB partnership offers Metropolia cooperation networks with European cities, higher education institutions and civic organizations. This will enable Metropolia to both develop its competence and apply it to the implementation of A European Green Deal on the EU-level, nationally and regionally. The NEB partnership is a key method of strengthening Metropolia’s role as an actor in the EU.

The NEB Festival in Brussels in the summer of 2022, gathered together Finnish NEB actors and parties interested in the initiative jointly with Archinfo, the Finnish Association of Local and Regional Authorities, and the Helsinki EU Office. In the annual conference of the Eurocities network of large cities in Espoo in June 2022, Metropolia organised a NEB-themed co-creation workshop together with the City of Espoo to promote sustainable urban development.

As a NEB partner, Metropolia is a member of a European partner network to build future visions and operating practices. They expedite the adoption of a sustainable lifestyle. As an example of this, Metropolia introduced the results of the joint European Augmented Urbans project at the NEB Festival. The results indicate how the inclusion of urban residents in the planning of their living environment can be strengthened through technology.

The HyMy Village collaboration platform

The HyMy Village (Hyvinvointia Myllypurosta) is a learning environment and collaboration platform within Metropolia’s Customer-oriented well-being and health services. The HyMy Village started operating in 2020. Its establishment was based on a need to shrink the regional health gaps in East Helsinki and the role of the HEI as a provider of solutions to challenges emerging as a result of the health and social services reform. During the spring of 2021, the HyMy Village’s social and health services provided in connection with teaching was visited by more than 3,500 customers. More than 950 Metropolia students completed their studies in the HyMy Village.

The HyMy Village promotes well-being and health in East Helsinki, offers flexible solutions and unhurried services, as well as involves customers in the training of future social and health care

talents. Students receive professional practice in working with customers and in personalised service design and innovative development and entrepreneurship. The services and specialists are not separated into social and health care, but students practice multidisciplinary consulting during the studies. The Regional State Administrative Agency for Southern Finland granted Metropolia a license to provide private health care services starting from 26 March 2021. The provided services include physiotherapy, podiatry, osteopathy, optometry, occupational therapy, and dental hygiene services. They are provided at HyMy Village in conjunction with the social and health care studies.

Students are included in the development of new service concepts jointly with the partners. The most important developer partners are the city residents and communities. HyMy Village's Pit Stop provides low-threshold, free-of-charge counselling services for city residents, and the family café pilot has been developed jointly with the Mannerheim League for Child Welfare (MLL). During their studies, the students can apply for the role of the village manager. As the village manager, the student participates in a multidisciplinary developer team and is given more responsibility and a greater role in the development of the operational activities of the HyMy Village.

Operating in the Health Proof Helsinki ecosystem

Health Proof Helsinki (HPH) is a joint project coordinated by Metropolia. It brings together the RDI services of HUS, the City of Helsinki, and Metropolia Proof Health. The outcome is an entity which offers testing environments and specialist services for well-being and health technology companies. The HPH forms in the Helsinki area an ecosystem of well-being and health technology actors which supports the RDI activities and has international networks. In the ecosystem, Metropolia's task is to coordinate the cooperation and provide early-stage preclinical testing environments and expertise. The shared objective is to provide companies in the industry a smooth access to tripartite expertise and facilities in the various stages of their product development activities.

A part of the ecosystem, **Metropolia Proof Health (MPH)** , located on the Myllypuro campus, is an interdisciplinary collaboration and development platform engaging in RDI activities which provide preclinical research and testing services for companies and research institutions in the well-being and health technology sector. The MPH provides companies, research institutions and public sector actors a modern environment, flexible processes and extensive expertise in preclinical testing, piloting, validation, and verification. The MPH experts represent social and health care, technology, and digitalization as well as business and may also assume the role of teachers. The MPH supports early-stage brainstorming, conceptualization and testing in environments corresponding to authentic care facilities, for example in a simulation hospital. Product development in health technology (e.g. the development of medical devices) is regulated. It requires special expertise which companies and students can accumulate in the MPH.

Students in the social and health care sector, technology, and business work in MPH projects. Among other things, they participate in the projects through work placement, theses and the MINNO studies. Participation accumulates their RDI competence and ability to work in a networked setting. Students increase their understanding of medical research and research into medical devices and understand the interfaces and possibilities of basic research and applied research. The research to business chain becomes more familiar to them and provides the students with a view to entrepreneurship in authentic projects carried out with companies. They gain competence in the management of the ethical perspectives related to open science and product development as well as copyright and NDA matters. About students in the social and health care sector, it is important to note how digitalization and technology (robotics, remote services, AI applications) affect the competence needs in the social and health care sector. In the MPH, students strengthen their health technology competence and ability to assess, also critically, technological solutions in work with customers.

3 HEI enhances quality and well-being

- Auditeringsgruppens bedömning

The evaluation area III assesses the functioning and development of the quality system and how the system is used in strategic management. The procedures used to support the competence development and well-being of the staff are also assessed.

Based on the audit team's evaluation, the evaluation area III is at the level *good*.

The audit team identified the following as the main strengths and recommendations:

Strengths

- Metropolia has a clear strategy, and it is well-known among employees. The quality system is based on the setting of strategic objectives.
- Metropolia has an open and participatory quality culture, underlined by the unique position of a dialogue manager. Quality management covers education, RDI and societal impact.
- Metropolia's aim to put people first is reflected in its actions. The HEI offers a comprehensive and impressive range of well-being activities and support for its employees.

Recommendations

- Metropolia should reduce the complexity of the quality management system and communicate goals, instruments, and roles distribution with the staff more intensive.
- The audit team supports all of Metropolia's staff development and well-being efforts. As part of staff competence development, Metropolia should identify the competences needed, especially in the new area of strategic innovation hubs, where a new way of thinking and acting is required.
- Metropolia has done good branding work and is an attractive employer. Metropolia's external perception and visibility should be continuing improved to gain best national and international applicants.

3.1 Using the quality system in strategic management

- Högskolans självvärdering

Quality management and strategic management form an entity

Metropolia's quality policy is public, and the objectives and responsibilities of the quality system are described in section 5 of Metropolia's rule of procedure. The purpose of the quality system is to support the achievement of strategic and operative goals (figure 13). The responsibilities of quality management have been divided in accordance with the management system responsibilities. Management group members have a direct responsibility for the five themes of Metropolia's strategy. The different roles have been described and a responsibility matrix has been created to clarify the responsibilities and division of work between different positions and roles.

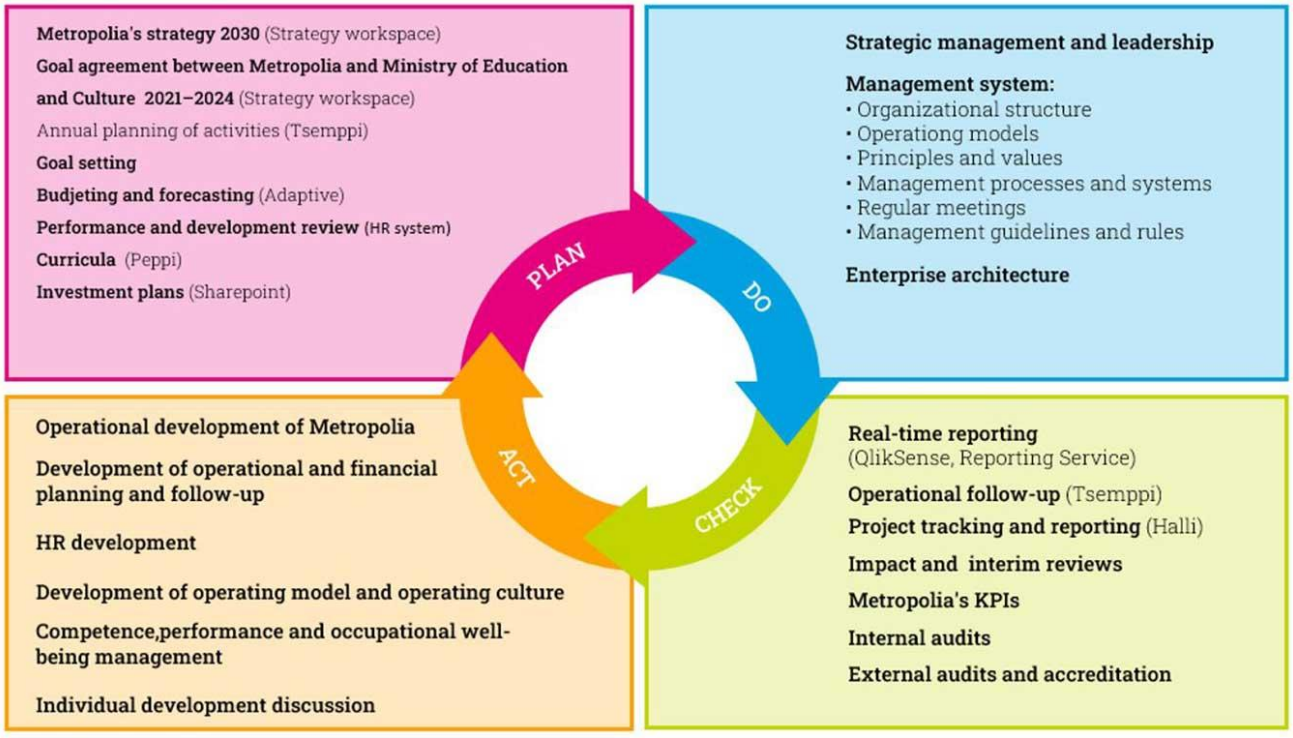


Figure 13 Management and the quality system form an entity.

Strategy 2030 defines the organization's strategic intent, strategic themes, and their key objectives for the strategy period. The strategy takes into consideration that different functions and units are at different stages of their life cycles with regard to the strategy and gives the units flexibility in the planning of their next steps.

To promote the various themes in strategy, documents have been created that help deploy the

strategy in practice, such as the road map for sustainable development and the RDIL road map. They help the units and people responsible conceptualize the measures that Metropolia needs to take to meet the objectives set in the strategy. These road maps, like the strategy, have also been prepared by means of participatory methods.

Strategy dialogue provides more insight into the strategy throughout the strategy period and in accordance with the management system. During strategy days, the management group and middle management, as well as personnel and student representatives, discuss the themes. The discussion continues in leadership forums. In KampusAkatemia events, the management and entire personnel discuss the themes of the strategy. The management briefings are used to communicate topical strategy-related matters and the development of indicators impacting performance bonuses. The strategy is also the starting point in the individual performance and development discussions conducted annually. The preparations for the discussion include the familiarization with strategy, action plan and the measures of the unit in question as well as an examination of one's own work in its context.

Practical quality management visible in operations management

Annual operations management incorporates strategy in the organization's daily activities (figure 14). Metropolia's operations and finance are planned and monitored in accordance with a shared annual planning cycle.

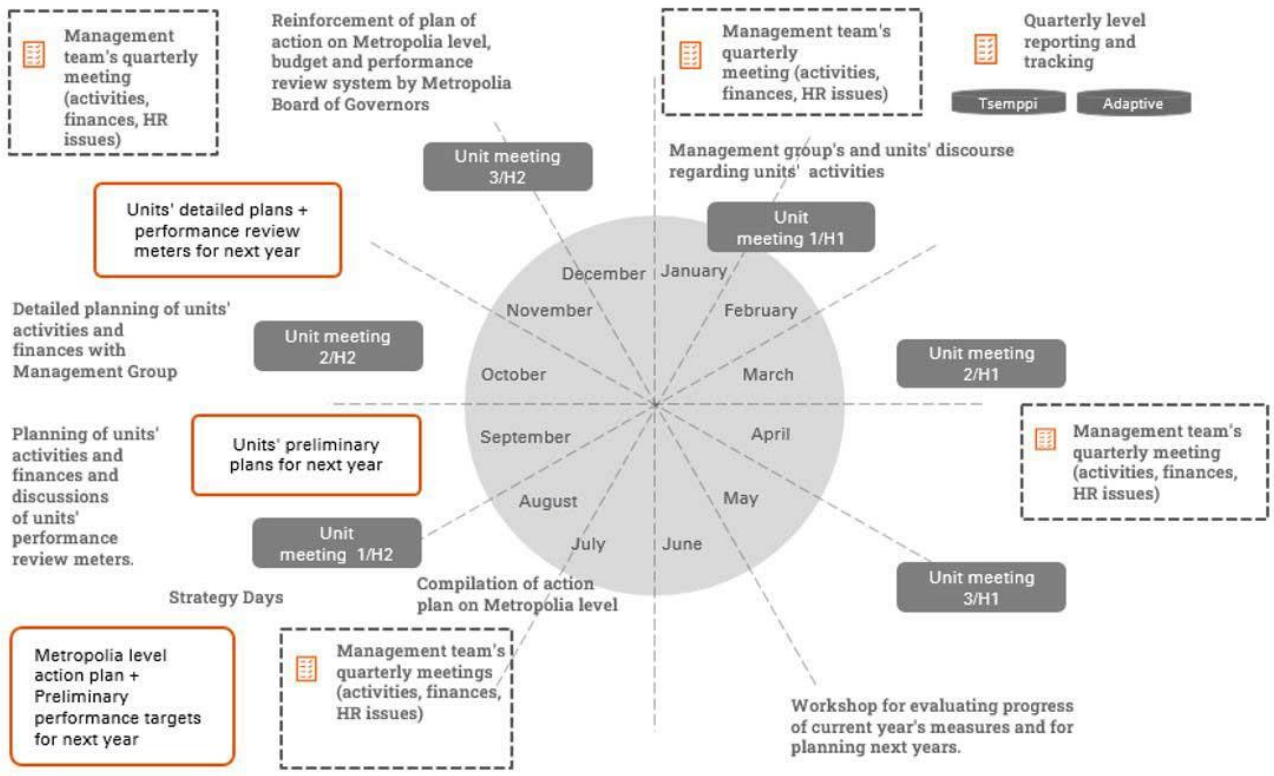


Figure 14 The annual planning cycle of the planning and follow-up of the operations and finance

The planning cycle of the operations and finance is launched late in the spring with assessing measures entered in the current year's action plan and progress of objectives. Guided by this assessment, the changes identified in the business environment and the strategy, the management group summarizes Metropolia's action plan for the following year and selects shared performance targets. The allocation of resources for the most important targets of the action plan are agreed in a centralized manner. The management group and middle management review the action plan and the shared objectives included in it during the strategy days held at the beginning of the fall semester. In addition, the event includes building a shared understanding of the strategy, its progress, and the action plan for the following year, as well as supporting the persons responsible in each unit in linking this entity to the planning of the operations and finance of their respective units. The units themselves select some of the performance targets.

Annual action plan and the units' measures are entered in the Tsemppi planning and follow-up system where they are accessible to the entire personnel. The persons responsible for the measures report on the progress at the end of each quarter. The management group regularly monitors the progress of Metropolia's action plan and targeted indicators. The information entered in Tsemppi is used in compiling impact reviews, published quarterly. Unit-specific progress is monitored by the units' management teams. The role of the unit management teams has been strengthened in operations management to support middle management and to develop cooperation, competence, and management.

Structures and procedures support management

Management and the achievement of the strategy targets is supported by means of appropriate tools and information systems. The enterprise architecture and operations management link the annual management processes to each other in terms of time and content. The development work completed on processes, schedules and information systems has made the planning round in the autumn smoother.

One of the main objectives of knowledge and data management has been to provide up-to-date and appropriate information to management for decision-making. For example, the Qlik Sense data visualization tool allows for monitoring the development of key indicators both on the level of Metropolia and each unit. Qlik Sense is currently being developed to support horizontal supervision of the core operations and the access to information by the unit management teams.

Metropolia's **enterprise architecture** offers a systematic approach to outlining the organization's operations and structures and to developing and administering them in a comprehensive manner. The enterprise architecture is connected to the processes of operations management and development. Applying enterprise architecture helps to ensure the

compatibility of operations and information and to avoid overlapping solutions (such as ICT systems). More detailed information on the development of the architecture is provided in chapter 3.4.

Project management is supported by means of a shared **project model** which defines the roles and responsibilities of project management and the decision-making process to complete the project. Following the project model ensures that the development projects and RDI projects to be implemented are appropriate and smooth. Challenges experienced in the implementation of the project model include the level of competence in project management, the frequency of data entry and the quality of data. Since June 2022, a prerequisite of working as a project manager in RDI projects is the completion of the project manager training.

Strengths

Metropolia's quality system supports the realization of Metropolia's strategic and operative goals. The management responsibilities related to the strategic themes have been described in the management system and divided in accordance with the quality system.

There are participatory opportunities for the entire personnel and students to engage in dialogue and have an impact in the strategy creation and implementation stages.

The enterprise architecture has been used actively in the development of operations, and the architecture is linked to and supports operations management and strategy implementation.

Enhancement areas

A more systematic collection and application of forecast information is important strategically and from the perspective of all core operations, and a related development project is under way.

Strengthening systematic operations management and knowledge management in management team meetings on the unit level. The practice is new and needs to be instilled in the operations.

Applying the project model and project management. In addition to training, project managers need more practical support.

3.1 Using the quality system in strategic management

- Auditeringsgruppens bedömning

The strategy is part of Metropolia’s quality system

Metropolia has a multilevel public quality policy. The quality system is based on the PDCA cycle and Metropolia´s Strategy 2030 and describes responsibilities and objectives.

The quality group is divided into a core group that monitors the quality system’s status and a support group that supports the core group’s objectives. In addition, each head of school, each head of the degree programme and each director in Metropolia’s management group is responsible for the quality of operation, its evaluation and development in their area of strategic responsibility. The overall responsibility for quality management lies with the president of Metropolia. The quality system is linked to the strategy through strategic, responsible areas: lifelong learning, phenomenon-based innovation hubs, sustainable development and growth, people and culture and digitalisation.

The quality management system is supported by the quality group (with the task force and support group) with representatives from different stakeholder groups, including the METKA student union. The quality group is led by the business architect, who reports to the director of development. Based on the interviews, one important aim is strengthening the link between quality development and processes. The quality group aims to focus more on key issues and make more concrete and detailed proposals for improving the quality system. The quality management (QM) responsibilities are well defined and have been divided in accordance with the management system responsibilities based on Metropolia’s strategy.

It has been evident from the interviews that the idea of continuous improvement is the everyday quality work of Metropolia. The general approach in Metropolia is that every staff member is responsible for implementing quality policy according to the PDCA cycle of continuous improvement and development.

Quality System still needs to be communicated to staff

Metropolia had renewed the practices of the quality group just before the site visit. From the interviews during the audit, a high level of individual willingness to improve quality in different fields could be observed. Continuous improvement is clearly part of every employee’s mindset. The tendency to generate suggestions for improvement on a low-threshold level and dialogical manner was also visible.

However, it also turned out that the interaction of the planned elements and processes was still

unclear to many interview partners. According to the interviews, the responsibilities within this complex quality management still need clarification. Quality management is not yet seen as an active tool on all levels in Metropolia. The audit team recommends more intensive communication about the goals, instruments and role distribution of the new quality system on the operative level.

Metropolia’s strategy serves the goals of the whole University of Applied Sciences

The interviews showed that the strategy is well-known and widely accepted among employees. According to the audit material, Metropolia collects feedback from students, staff and stakeholders to ensure continuous improvement with the university of applied sciences. The management uses the quality systems to support strategic development: Qlik Sense for visual data reporting, Tsemppi for operational follow-up and Halli for project tracking and impact reviews. Whether the quality management system (QMS) is affecting the stated goals will only become apparent in the coming months and years.

Metropolia has advisory boards for education development through which external stakeholders are involved in education development. The Board monitors the objectives of strategic goals; however, the Board’s role in strategic quality management should be strengthened.

3.2 Supporting the competence development and well-being of the staff

- Högskolans självvärdering

Competence needs are identified in dialogue based on strategy objectives

Personnel's competence needs are discussed in an **ongoing dialogue** in conjunction with the strategy process and the planning of operations as well as in permanent groups established for management (leadership forum, superior forum, unit management teams). They identify strategic needs (such as supervisory work with a coaching approach, sustainable development competence) and needs arisen from changes in the operating environment (e.g. teachers' digital skills and the practices of hybrid work). Sector-specific and substance-related competence needs are identified in connection with the units' and teams' annual objective setting and operations planning. In Education, the networks for pedagogic staff members, digital mentors and guidance assemble information on pedagogic needs and needs related to guidance competence.

The needs are specified further and transformed into development plans as part of operations management. These plans find their concrete form on the level of employees in **development discussions**. Metropolia has renewed its development discussions by switching from one annual performance and development discussion to the practice of two separate discussions. The autumn target and performance review include the targets for the past period and the upcoming period, performance and the related strengths and development needs. The spring development discussion focuses on the factors motivating the employee, their well-being as well as professional competence and development needs.

The most important method of competence development is **learning on the job.** Professional development arises from meaningful job duties, international mobility, job rotation and career orientation. In addition to degree teaching, the teaching staff can work in the education solutions within Continuing Education and Enterprise Services and in RDI projects, for example. This is also in line with the RDIL operating model (see e.g. 2.1). Employees learn from colleagues in both daily work and regular peer forums (e.g. the leadership forum and sparring forums for superiors). Competence development is supported through internal and external **coaching and training**. The units are responsible for procuring competence related to their own operations and substance. Training that supports key competencies (e.g. the Digiope coaching to develop the digital competence of teaching staff, project management training, sustainable development) is provided in a centralised manner. A policy is in place for supporting employees' independent training, and Metropolia's shared principles have been established, reviewed jointly and communicated to the superiors.

Proactive planning of recruitment

Metropolia's units can carry out recruitment that is necessary and in line with their confirmed budget by means of **proactive resource planning**. Proactive planning is linked to other annual planning and budgeting. This provides a shared and open view into HR planning matters. It helps direct the use of resources in such a way that it becomes more systematic and makes the permission processes of recruitment lighter. The units are supported in resource planning and recruitment by the designated HR partner and finance controller. The principles and operating practices of recruitment are described in the OMA intranet. As a rule, the positions are also opened for internal recruitment and internal applicants are interviewed, if possible.

Metropolia builds a sustainable way to work with balanced work requirements and resources.

At Metropolia, the proactive enhancement of well-being at work is intertwined with finding balance between the available work resources and the requirements inherent in everyday work. The main enablers in the development of workplace well-being are the superiors and the management with the support of HR but it is most important to involve all the teams and individuals themselves in the development work. Because the quality of supervisory work has a profound impact on workplace well-being, HR has launched regular sparring forums, coaching and peer activities to support the superiors as well as increased HR business partner services available to superiors. The main tool to monitor and develop employee experience and workplace well-being is the annual People Power personnel survey. Metropolia has invested in the *overall development of the* employee *experience* – and well-being at work – by ensuring that the People Power results are processed together and prioritized into 1-3 development measures on all organisational levels: teams, units and Metropolia. As a result of this process, the digital People Power reporting system has more than 100 different development measures which all aim to enhance everyday work conditions and well-being at work.

Metropolia's workplace well-being services can be roughly divided into more permanent type of **basic services** (see Table 1) **and more situational or changing well-being services** (interventions).

Basic workplace well-being services
Early/active support model: • OMA intranet materials, operating instructions • The Sirius tool for identifying risks to and monitoring work ability • Guidance and coaching for superiors on the application of early support
Services in accordance with *the occupational health action plan* which are more extensive than the statutory services: • Medical examinations; services provided by an occupational health physician, nurse, psychologist, and physical therapist; laboratory tests, imaging, mental health chat and sparring • Tripartite occupational health consultations (the person in question, their superior, HR and an occupational health physician) • Seeking solutions: changes in the person's work arrangements, rehabilitation, partial sick leave, work try-outs, alternative duties • Workplace surveys conducted by the occupational health services and the required corrective measures
Monitoring well-being at work: Regular mapping of the employee experience through the People Power personnel survey and the subsequent Results for action process, in which the development needs arising from the results are prioritized jointly, and development measures are agreed for them on all levels (Metropolia, units and teams), and the realization of the measures is monitored.
Working time solutions supporting well-being: • flextime, work hours bank, partial exchange of holiday bonus to time off, flexi-leave (administration and support services personnel) • part-time work and unpaid time off (e.g. study leave) • remote work option (the general policy is 50% of the working time)
Personnel benefits supporting well-being: • Smartum Plus benefits (massage, commute, exercise, and culture) • Zone exercise services, Break Pro application for exercise breaks during work, exercise facilities on campuses • Anniversary gifts, campus lunchroom, personnel events, informal coffee break meetings • Recreational subsidy granted by units

Table 1 Basic workplace well-being services

The more ***situational or changing services*** (situation-specific interventions and pilots) include *supervision/coaching for groups* during the pandemic*, short-term psychotherapy* and the low-threshold *Auntie* service being launched to support good mental health and stress management. Superiors and experts have been supported by means of the virtual *Onnistu hybridityössä* (Successful hybrid work) learning path. In addition, superiors have been provided with a regular *sparring forum*, and the team leaders have crafted their jobs in *Tiiminvetäjien työn muotoilu* (Job

Crafting for Team leaders) program.

Metropolia offers a wealth of services, models, and instructions on workplace wellbeing in a centralized manner. Their application and monitoring are the responsibility of the management and superiors of each unit. The HR partners assigned to the units could in future have a larger role in supporting the units. There are also plans for a ‘sounding board,’ consisting of representatives of HR and the units, to promote the dissemination of information, dialogue, and joint development.

The objectives and activities of equal and non-discriminating treatment are described in the Equality and non-discrimination plan that is updated bi-annually. The plan is drawn up by a working group consisting of Metropolia’s union representatives and the representatives of the occupational safety and health service, various personnel groups as well as students and HR. The measures in the plan and their implementation have been incorporated in HEI’s daily activities. The responsibility for implementing the measures is divided in accordance with management responsibilities. The success of the equality and non-discrimination work is the responsibility of the university community as a whole – every member of the community is responsible for their own conduct and actions. In 2021, a permanent equality and non-discrimination group was established to monitor the realization of the plan.

Strengths	**Enhancement areas**
Flexible solutions for balancing work, family, and leisure in various stages of life. E.g. flextime, a work hour bank, partial exchange of holiday bonuses with time off, and opportunities provided by hybrid work.	The identification of competence needs on various levels should be made more systematic by modelling or by describing the sources of identification and the process itself in greater detail. Unit- and team-specific, more systematic identification of competence needs might require some clarification and centralized support in the future.
A sound process increases the transparency and fairness of recruitment as the process implementation is harmonised in various parts of the organization in accordance with the agreed policies.	The development of proactive resource planning and related tools in connection with annual planning.
The process prioritising the results of the personnel survey (People Power) and converting them jointly into development measures regarding the team, unit, and company (the implementation of which is monitored in the Cixtranet system) is strong and functions well.	The units do not have resources expressly designated for well-being at work. Rather, launching and monitoring the operations is largely the responsibility of the busy superiors in each unit.
	In the future, instead of focusing on the basic recruitment process, more attention should be paid to applicant communication and the development of employer image and visibility. This would help recruit the best possible experts for each position. Internal employer image should also be improved.
	Organization of induction

3.2 Supporting the competence development and well-being of the staff

- Auditeringsgruppens bedömning

Metropolia’s management supports the development and well-being of its staff

Improving staff’s well-being at work is an essential strategic value at Metropolia. It became apparent during the audit visit and in the self-evaluation report that management supports the development and well-being of its staff in many different ways. The active support model aims to promote the well-being and health of employees, prevent the loss of ability to work, increase the functionality of working communities and positively impact the work atmosphere.

The competence management needs of staff are identified in individual development and performance discussions twice a year, which also address the well-being of staff. In order to develop the required and desired competencies in the best possible way, numerous measures are taken. Besides on-the-job training, a large variety of external and internal coaching and training is offered, as well as the possibility to learn from colleagues in regular peer forums.

Metropolia offers comprehensive occupational health care services, the possibility of flexible working hours, and many benefits, such as exercise possibilities, massage, culture and recreational subsidies granted by units. The situational services include short-term psychotherapy, coaching for groups during the pandemic and stress management. The well-being of staff at work is monitored and developed with a People Power survey.

Metropolia has an equality and non-discrimination plan, which addresses principles guiding equality and non-discrimination, objectives of equality and equal opportunities work, monitoring of the plan and annual calendar. Metropolia has good promotional material on these issues.

Metropolia pursues a proactive and transparent personnel recruiting and development system

Metropolia’s goal is to work in a people-oriented way and to create an organisational culture that values dialogue and diversity. The new position of a dialogue manager underlines these intentions. Metropolia pursues a proactive resource planning system. Based on the confirmed budget supported by the HR partner and finance controller, the units can recruit suitable personnel to achieve the strategic goals. Vacant positions at Metropolia are published in the OMA intranet job advertisement section for internal recruitment and on Metropolia’s website for external recruitment. In spring 2022, the recruitment process was made more transparent.

The hiring supervisor has an overview of the ongoing recruitment process and can view applications directly in the system ('TalentAdore' system). Metropolia's equality plan states that recruitment must strive for openness and transparency on all levels. At the same time, job applications and applicants' information received by Metropolia are treated with the utmost confidentiality. The remuneration of employees, as far as observable, seems appropriate.

In order to develop the required and desired competencies in the best possible way, numerous measures are taken. Besides on-the-job training, a great variety of external and internal coaching and training is offered, as well as the possibility to learn from colleagues in regular peer forums. The audit team supports the efforts to increase resources to identify competences needed on various levels in more detail and systematically. Although Metropolia has done good branding work and is an attractive employer, there is still room for improvement. Metropolia should improve external perception and visibility to gain the best national and international applicants, as Finland has intense competition for the workforce. As part of staff competence development, Metropolia should identify needed competences, especially in the new strategic innovation hubs, where a new way of thinking and acting is required. Due to the impressive quality and quantity of external connections in the field of research, teaching and third mission, the prospects for these endeavours should be good.

3.3 Functionality and development of the quality system

- Högskolans självvärdering

Quality system covers all operations

Quality management at Metropolia is based on the principle of continuous development. The quality system covers all operations (figure 15) and is linked to the management system and operations management. The quality management procedures have been adjusted to cater to the quality management needs of each function and to achieve the objectives. The procedures, monitoring, assessment, and development are described in the OMA intranet. The documentation of the operations is appropriately accumulated in various systems. For example, the development plans are available in Tsemppi and the impact reviews on the public website. The management and superiors of each unit discuss the quality of the operations and its development with their unit and team members. This is supported by the annual planning cycle, meeting practices and processes of operations management and the systems supporting them.

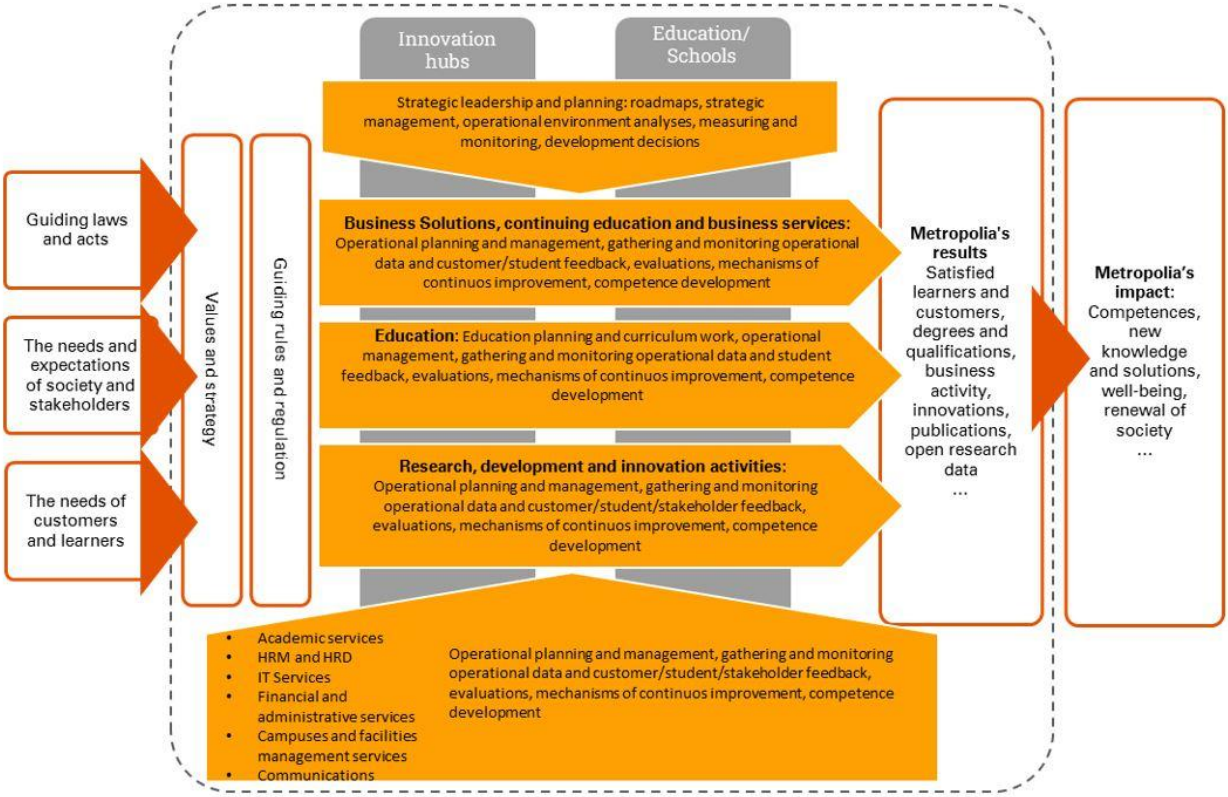


Figure 15 The quality system covers Metropolia's operations in accordance with the process map.

The **responsibilities** for the quality of the operations have been divided in accordance with the management responsibilities. At Metropolia, the Director of Lifelong Learning is responsible for

the quality of education, and the RDI Director oversees the quality of the RDI activities. The other directors in management group are responsible in their own area of responsibility for ensuring that the operations are planned, implemented, assessed, and developed in accordance with the strategy. The President and CEO bears the responsibility for the quality policy. Each superior is responsible for the quality of their own unit and the implementation of Metropolia's quality policy and procedures. All Metropolia's employees are responsible for implementing quality management in their job duties. Quality management is supported by the **quality group** which includes representatives of all functions.

Metropolia's quality management utilizes **enterprise architecture.** The architectural descriptions cover the operations of Metropolia: services and processes, roles and responsibilities and their interconnections. These descriptions may reflect the desired outcome and compared with the current state areas of improvement can be identified. Development projects are set up in accordance with the project model.

Metropolia's core operations collect feedback on their work. The decisions and measures related to the collection of feedback and the application of the feedback received are specific to each unit and function. According to the self-assessment, the practices of collecting and applying feedback should be strengthened and harmonized. The harmonization would also strengthen Metropolia's capability to apply the system more effectively as part of knowledge management.

Metropolia has been conducting **assessments** regularly. External audits and internal self-assessments form a continuum. The audits were based on the auditing model by the Finnish Education Evaluation Centre (FINEEC). This has ensured that the audit perspective is consistent and the results are easier to compare. The self-assessments were carried out as an evaluation survey targeting a large group of respondents, and the results were analyzed by the management of each function. The development work is based on the enhancement areas identified in the audit and prioritized by function. According to the self-assessment, there has been variation in how measures have been implemented.

Quality system is developed to serve distinct functions

Based on the previous audit, the quality system has been improved and quality management has been strengthened by developing the structures and procedures of **leadership** and **operations management**. Reporting solutions have been harmonized to enhance knowledge management. The development of the enterprise architecture and knowledge management has strengthened the ability to see the bigger picture of the operations. Resources have been added and competence in architecture work has been strengthened. According to the self-assessment, the development work has clarified quality management particularly on the management group, middle management, and unit level. However, it also became obvious that the capability of the quality system to support those carrying out basic tasks should be strengthened further. For example, procedures and operating practices could be more harmonized.

Awareness of quality management and the quality system has been improved across Metropolia. The former quality coordinator group in the core functions has expanded into a quality group with representatives from all functions of Metropolia. The quality group is led by a business architect whose other main task is to support the organization in the development and description of processes. According to the self-assessment, the quality group's operating model should be specified further. Also, the capability of the group to add quality management topics on units' agendas should be strengthened. Changes aiming to accomplish this will be completed in the autumn of 2022.

Development involves the entire HEI community

Metropolia's strategy instructs everyone to put people first. Students, employees, and stakeholder representatives participate in and contribute to developing solutions that concern them. For this purpose, Metropolia has created operating models and forums. The **Parru team**, described in greater detail in chapter 3.4, is often the party that develops and ensures participation. The Parru team is a process sparring team for the strategically most important development projects as prioritized by the management group. The team also helps with more operative functions as initiated by individuals.

The operating models support a participatory organizational culture and shared learning. The obtained baseline information and development ideas are diverse. The commitment to end results should also be strengthened. For example, strategy work has included participatory methods, such as crowd-sourcing surveys and workshops. In internal development work, the project groups to be formed include both key expert and client representatives. Students have representatives in the development groups, and there is a direct and regular connection between the student union and the HEI's management through dialogue.

The dialogue-based, shared **forums** strengthen inclusion and facilitate the sharing of best practices. The leadership forum is a monthly setting for the management team, middle management and student and personnel representatives that discuss topics related to Metropolia's management, objectives and progress. The forum is coordinated by the manager of dialogue. The sparring forum for superiors and the forum for heads of degree programmes are regular events for superiors and middle management in education. Examples of sharing good practices include strategy days, close cooperation with METKA and strengthening the impact of the student union, inclusion through the Parru team, and **digital mentors.**

Strengths	Enhancement areas
Clear and tangible division of responsibilities in quality management that is linked to the strategy.	Support for quality management must be strengthened on the operative level. Currently, there is too much variation in practices.
Structures are in place for inclusion and they are applied regularly and consistently.	Tasks and the operating model of the quality network must be clarified. Currently, the support for development is insufficient.

The assessment activities are regular and have been developed over the years.	Feedback channels, the quality system and feedback culture should be strengthened. Focusing the assessment operations on more specific themes, in addition to a ‘general’ assessment.

3.3 Functionality and development of the quality system

- Auditeringsgruppens bedömning

The PDCA cycle is well-known and integrated, but further development is still needed

Metropolia has an open and participatory quality culture, and the quality management system covers education, RDI and the needs of society and stakeholders. The quality system is based on setting values and strategic objectives. The PDCA cycle as a continuous development principle is a long-term cornerstone of Metropolia's quality work.

Metropolia renewed recently (autumn 2022) the practices of its quality group to strenghten ability to make concrete improvement steps in various areas. To achieve the strategic goals (by 2030), Metropolia provides a very differentiated set of methods within the quality management system framework to reach the different role holders in different areas and levels.

At this stage, the quality management system seemed to be complex and elaborately distributed across different roles. According to the interviews, the responsibilities and tasks of the people concerned do not seem to be sufficiently transparent. It also does not seem clear whether the effort involved in the time-consuming reports and meetings will bring the promised added value compared to the more informal current practices or whether streamlining these instruments will lead to more effectiveness and efficiency.

According to the audit material, the quality system is currently being developed by combining different types of data, visualisation and developing a feedback system in a more user-friendly direction. All this provides a promising basis for further development.

Metropolia's staff, students and stakeholders are committed to enhancement

The audit team observed an open and innovative culture. Many participants, including students, teachers, management and external stakeholders, showed a strong commitment and willingness to contribute to enhancement on different levels.

The quality culture is participatory. Everyone seems to have the opportunity to get involved in different ways and methods. Metropolia received particular praise from stakeholders in the interviews that Metropolia is open to new ideas and stakeholders are involved in the development processes. In particular, partnership agreements were mentioned as a good practice. Metropolia has created close cooperation and good communication with its stakeholders.

3.4 The HEI’s examples of successful enhancement activities

- Högskolans självvärdering

Sustainable development is integrated in Metropolia’s daily operations

Sustainable development is a intersecting theme in Metropolia’s strategy. This entity is the responsibility of the Development Director. The deputy CEO is in charge of sustainable growth. In the beginning of 2021, two new roles were established to promote sustainable development operations: the sustainable development manager is responsible for coordinating them and the environmental expert develops the organization’s environmental responsibility. In addition, three thematic teams – a sustainable development team, carbon neutrality team and training team – and a sustainable development network were established. During 2021, 15 experts from various parts of the organization participated in the teams’ operations. The network connects personnel and students interested in sustainability to accelerate change in the organization, and at the end of 2021, it had 90 participants.

In 2021, Metropolia prepared a sustainable development roadmap extending to 2030. The roadmap incorporates sustainable development from the strategy in daily operations. The entire HEI community was included in the preparation of the roadmap, and dialogue took place in theme workshops, in addition to the existing forums. Each roadmap theme has a designated director responsible whose task is to facilitate development work. The objectives and measures of the roadmap are part of Metropolia’s annual planning of operations. Sustainable development is included in Metropolia’s shared objectives, and each Metropolia unit has at least one objective related to sustainable development in the Tsemppi operations management system. In future, the measures will also be promoted by means of goal discussions and rewarding.

The sustainable development team created a basic course in sustainable development for Metropolia’s entire personnel and developed Metropolia’s carbon footprint calculation. In addition, the team built a methodology for the assessment of the status of sustainable development teaching. The assessment will be carried out in all Metropolia’s degree programmes in 2022. A new responsibility website was set up for Metropolia. The website also includes a visual presentation of the road map, and sustainability themes were communicated actively in the organization’s different forums and events.

From an ICT architecture to a strategy- and operations-based enterprise architecture

Metropolia has been developing the enterprise architecture in a consistent manner from an ICT-

oriented architecture towards strategy- and operations-based architecture in such a way that it serves operations management in the organization overall. In accordance with the architecture principles, the architecture should support the implementation of the operational objectives of Metropolia's strategy. Operations-orientation directs the architecture work in the development of services and processes and in ICT systems development and technology solutions. The enterprise architecture has, for example, supported the development and implementation of information and knowledge management, as well as case management and HR projects. The enterprise architecture work applies the Ministry of Finance public administration recommendation no. JHS 179 on the design and development of enterprise architecture as well as the TOGAF framework.

The enterprise architecture has been linked to data protection work since the very beginning. The needs identified in creating a data protection inventory and in work for the enterprise architecture were in many respects the same. Therefore, the architecture management system Arter ARC is also a management tool for data protection. Later, the same system was also implemented in the management of information security. The architecture description is also applied in the maintenance of the information management model defined in the Act on Information Management in Public Administration. This is because the enterprise architecture forms the core of the information management model. This structure was used in finalizing the information management model.

The benefits of enterprise architecture have been identified in the comprehensive development and the management of complexity in the organization. This is demonstrated by transferring enterprise architecture from information management to the function responsible for strategy and development. Work is well organised and resourced: an enterprise architect, business architect, information architect, and information system/technology architect ensure that Metropolia's processes, ICT systems and data form a functioning whole. The architecture is described and documented in the ARC. The enterprise architecture is also linked to quality management via the business architect. The architecture steering group and the architecture group manage the enterprise architecture work and its development.

Parru – a sparring team for inclusion and a participatory work approach

Numerous participatory methods were applied in Metropolia's development and in the promotion of the operating culture in the 2017–2020 strategy period. The encouraging results obtained motivated Metropolia to solidify the operating practice by establishing the internal **Parru** support service to support dialogue and co-creation. The Parru team motivates and encourages members of the Metropolia community to apply a participatory work approach and to enable inclusion in different situations. The team's approach is that of dialogue and co-creation and helps clarify the objectives of processes and to set up a road map for the meeting of the objectives.

For example, in 2021, the Parru team supported five strategic development projects through long-term planning and implementation of the participatory approach. In turn, short-term support was provided by planning and organizing approximately 50 individual events. Many of them were Metropolia's internal events, but the activities were also extended to external stakeholders by organizing a sustainable development online seminar for Arene and facilitation training for the personnel of the City of Vantaa. The Metropolia community's skills to apply the participatory work approach in practice was supported by organizing more than 70 brief sparring events. During the year, eight Dialoginuotio events were organised to support the dialogue between the participants.

The Parru support service is a three-year pilot, ending at the end of 2022. In the final year of the pilot, the goal is to assemble the lessons learned and insights gained. This package will then enable the organization to utilize what has been learned. The participatory work approach should become a part of the daily work for all members of the Metropolia community. Another goal is to build an operating model for a permanent and centralized Parru support service.

4 HEI as a learning organisation

- Auditeringsgruppens bedömning

The evaluation area IV assesses an area selected by the HEI where it wishes to receive feedback for the enhancement of its activities.

Metropolia has selected Innovation hub activities from the RDIL perspective as a topic under evaluation area IV, 'HEI as a learning organisation'

The audit team identified the following as the main strengths and recommendations:

Strengths

- Innovation hubs strengthen phenomenon-based learning by combining learning with working-life solutions.
- A strong emphasis on partnerships makes it possible to strengthen the Innovation hubs further.
- Students, staff and networked partners are well integrated into the reform and enhance the opportunity to learn in an authentic learning environment.

Recommendations

- The staff of Metropolia is motivated by phenomenon-based teaching and learning. However, new projects and activities need resources which are not necessarily sufficiently available. Possible risk of conflicts should be observed carefully due to resources shared between RDI, especially the innovation hubs and teaching.
- The role of innovation directors in the new way of organising should be further clarified.
- Lifelong learning needs to be thoroughly established and communicated in innovation hubs. It could also be a source of renewal ideas and actions.

4.1 An evaluation area selected by the HEI

- Högskolans självvärdering

HEI as a learning organization: Innovation hub activities from the RDIL perspective

Initial state

Metropolia has selected the innovation hub operations using the RDIL perspective as a topic under ‘HEI as a learning organization’. This has been done to receive feedback for the development of the RDIL activities. The objective of development is to strengthen Metropolia’s capability to build research, development, innovation, and learning (RDIL) connections in a new way to address the challenges in the operating environment and in accordance with Metropolia’s Strategy 2030. In 2021, the state of RDIL activities was explored with a review done by the participatory sparring team (Parru). After the review, a development project was launched. It provides a roadmap for RDIL development. The development of RDIL is linked to the development of the degrees and the project improving Metropolia’s forecasting capabilities.

Strengths identified in the review included the positive attitude towards RDIL development as well as the existing roles to which RDIL is connected. Concurrently, some operating models (e.g. RDIL in the curricula of certain degrees, the RDIL menu, innovation hubs’ collaboration platforms, and the MINNO studies) were found. The RDIL development work can be linked to them from the perspective of the innovation hubs. The review acknowledged ambiguous and unestablished roles and tasks for several actors, processes, and units. It was observed that the innovation hubs and the related platforms play a role in the implementation of RDIL. There were different views on what it would mean in practice and even a lack of awareness.

2022 action plans for schools and innovation hubs also indicated that the division of work, budget responsibility and operational RDIL practices between the innovation hubs, schools, lifelong learning services and RDI services are inconsistent and unclear. RDIL is implemented in many ways in cooperation with partners, schools, and innovation hubs. The progress of the systematic implementation of RDIL varies between degrees. Some of the observed shortcomings were corrected in the spring of 2022:

- Events to provide guidelines on entering RDIL credits were organised and the instructions were made clearer
- Communication from the learner’s perspective was added to the OMA intranet
- Four workshops were organised for discussions between responsible parties
- The RDIL development work was included in the job descriptions of the coordinators of the

innovation hubs' thematic areas
- RDIL was linked to the development plans of degrees.

Currently, the development of the RDIL activities includes incremental improvement needs as well as more profound needs related to the transformation of the current state and to a new kind of future. Some of the required steps for development can be planned ahead. At the same time, it is acknowledged that a considerable part of the measures can only be specified as the activities proceed.

Innovation hubs from the RDIL perspective in 2030

In the goal state, consideration is given to the objectives of Metropolia's Strategy 2030 and the challenges and opportunities arising from the operating environment. HEIs are expected to place strong focus on open research, development and innovation activities which are implemented in ecosystems crossing organizational, industry and sector boundaries. This requires that pedagogy emphasises learner- and phenomenon-orientation and a transfer to more phenomenon-oriented RDI activities in open learning environments. The perspective of innovation hub activities, the concrete manifestation of the goal state is as follows:

- Metropolia has an established role as an innovation and learning ecosystem actor in the Helsinki Metropolitan Area.
- Competence and innovative solutions for social phenomena are generated in ecosystems and on campus platforms in the form of cooperation transcending boundaries and through partnerships. Sustainable development directs the operations.
- Learning takes place in authentic learning environments on the collaboration platforms at Metropolia's campuses (HyMy Village, Smart Lab, Helsinki XR Center, Turbiini, Metropolia Proof Health, Urbanfarmlab, Robo Garage etc.).
- Metropolia is capable of responding quickly to changing competence needs.
- The number of new student- and RDI-oriented companies has increased, boosted by the Campus Incubators programme of the city of Helsinki.
- Technology competence in the HEI community and ecosystems has become stronger in all innovation hubs. New emerging technologies and Metropolia's technological platforms (such as Helsinki XR Center, RoboGarage and AIoT Garage) have gained a significant role in phenomenon-based learning and in the innovative solutions to phenomena.
- Metropolia's management system and operations management have been renewed to respond to the challenges experienced in phenomenon-orientation, openness, and systemization.

RDIL roadmap – how to reach the goal state

Metropolia wants to proceed towards the goal state through a collaborative and dialogical approach and reflection, continuously updating its situational awareness and roadmap. Essential to defining the steps in the roadmap is to identify the matters in which it is sufficient to develop the current state and those in which a more radical renewal is warranted. The Complex adaptive system model presented in Figure 16 is the guiding frame of reference.

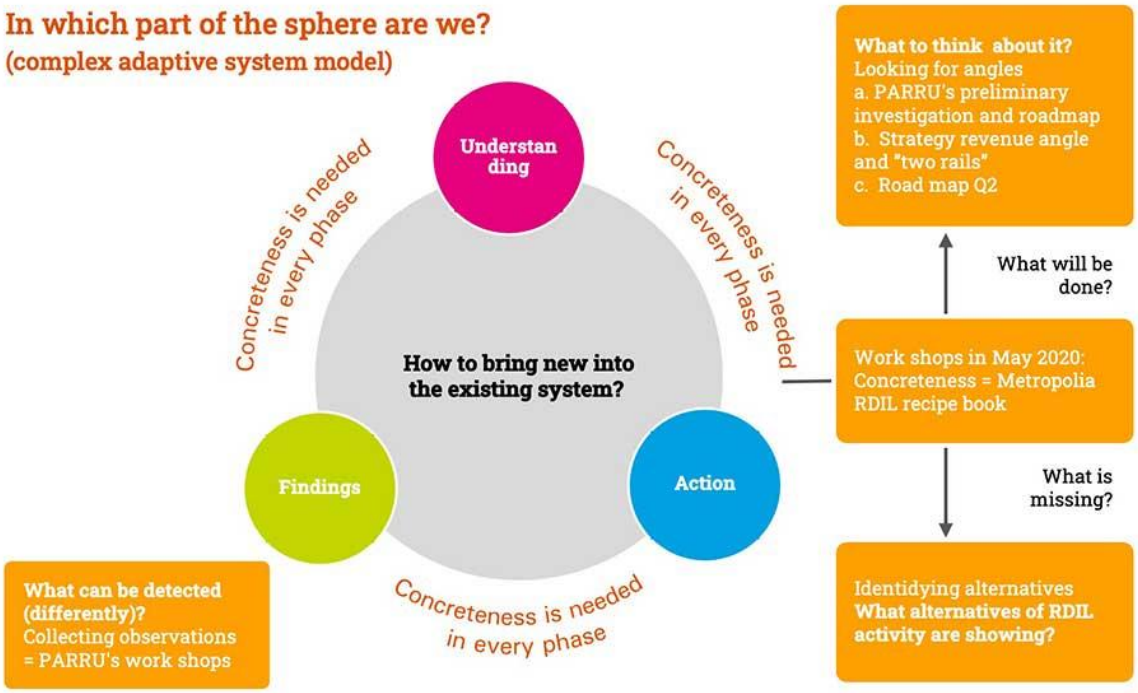


Figure 16 Complex adaptive system framework over the short term and long term in the RDIL development project.

From the perspective of **the current state**, emphasis is placed on making RDIL practices visible (the publication of a 'book of recipes' in the beginning of 2023), making use of good operating models, and facilitating cooperation between different actors. In addition, the needs and benefits of the RDIL activities to students, HEI personnel, companies and society are made visible. Table 2 presents the current key road map activities as they are perceived in the spring of 2022. Concrete measures are being worked on in dialogue between the RDIL actors.

Sharing best practices	Identifying, collecting, making visible and comprehensively utilizing the existing RDIL practices of the innovation hubs while integrating them in the perspective of the degrees and other flexible learning solutions.
Clarifying objectives, measures, and indicators	Making the annual action plans and indicators visible (including goals). Goals and measures are entered and monitored in the Tsemppi, Peppi and Halli systems.
Agency and cooperation	Clarifying and making visible the roles of RDIL actors (a role map and job descriptions) and intensifying cooperation between actors. Special focus on the role of thematic area coordinators as promoters of RDIL. Making the role map and job descriptions visible in the management system in the OMA intranet.
Projects and applying their results	Making the role and actions of students visible in projects (a project specific RDIL plan in Halli). Increasing the impact of the results and making them visible as well as communicating and utilizing them actively in learning, further research, and innovation activities.
RDIL in the internal development projects of innovation hubs	Students as project workers (the HyMy Village).
Innovation hubs and assignments from companies	Students as trainees and thesis workers, MINNO studies.
Clarifying the role of innovation hubs in relation to curricula and implementation plans	Making RDIL visible in curricula and implementation plans; pedagogical principles from the perspective of the innovation hubs and RDIL.
Clarifying the role of innovation hubs as an influencer	Defining and making visible the benefits offered by RDIL to students, companies, Metropolia and society.

Table 2: The current RDIL key road map activities in 2022

In terms of **transformation**, it is essential how the models of thinking and operating in the open RDI activities are integrated in Metropolia's daily operations. Table 3 shows themes and measures identified by 2030. Transforming them into RDIL road map activities happens through continuous joint development.

Ensuring a shared understanding of the objective and the frames of reference and lines of thinking in the open RDI activities	Verbalizing Metropolia's strategic objective 2030. The frame of reference of open science/innovation activities/learning and an open operating culture; open ecosystems as resolvers of challenges in society. Unlearning old thought patterns and adoption of new ones. Establishing the use of dialogue.
Establishing phenomenon-based RDIL activities	RDIL stemming from the challenges of society at the core of innovation hubs, phenomenon-based learning, innovative solutions; mission-orientation in directing and coordinating RDIL projects. Renewal of steering by the Ministry of Education and Culture (to accelerate RDIL).
Linking pedagogy to the identification of the operating environment and open phenomenon-based innovation activities	Learning in authentic learning environments as part of the innovation and research activities.
Management overhaul	Management is overhauled to make the phenomenon-based approach and strategic change possible. Renewal of the management system and operations management (phenomenon-based budgeting, shared management, partnership model, dialogic forums for RDIL discussion). Role assignments in innovation hubs and the enterprise architecture work to model the new management.
Forecast (information) in the building of links between management and RDIL	MEKY and RDIL projects are managed in parallel to ensure they are linked. Applying technology in forecasts (artificial intelligence and the AIoT Garage platform) in innovation hubs.
Establishing the use of platforms	Platforms to benefit learners, companies, and society. Innovation ecosystem cooperation with social impact is carried out regionally and locally. Strengthening the management of the innovation ecosystems and developing ecosystem services.
New corporate services accelerate the generation of new companies	Establishing the Campus Incubator programme cooperation between the City of Helsinki, Aalto University and Metropolia. The goal is 100 new companies per year.

Table 3: RDIL themes and measures identified by 2030

Strengths **Enhancement areas**

Strategy 2030
• A visionary and systemic strategy offers extensive opportunities for innovative RDIL solutions.
• The principles of thinking and action integrated in the strategy are in excellent alignment with the RDIL principles.

Investments in the preparation of RDIL
• The current state and needs of RDIL have been examined by means of a participatory process. This has also helped identify a clear motivation and commitment to the theme and the objectives.

Management of RDIL
• The directors responsible (RDI and Lifelong Learning) manage RDIL as a close-knit work pair in the RDIL spirit.
• RDIL work in the form of a project; the project is managed with a systemic approach (with the Three Horizons and CAS as the frames of reference).
• Operations management and the management system are renewed in such a way that enables the implementation of RDIL (among other things, phenomenon-based budgeting, the roles of coordinators of the innovation hubs' thematic areas and a platform coordinator, partnership model).

Enabling structures, infrastructure and practices already exist
• Several roles involving RDIL
• Innovation hubs and platforms
• Certain operating models, such as the MINNO studies
• Pedagogic guidelines have been updated (including phenomenon-based learning)
• Platforms have been made available for companies and students in upper secondary education, among others.

The Campus Incubator programme

Building a shared understanding
• Clarification of the RDIL entity and the vision of the future (current state, transformation, vision of the future; link to the strategy) and motivating the personnel (the first step: announcement in 2022).
• Making the need for and the multitude of benefits of the RDIL activities visible from the perspectives of students, companies, Metropolia and society.
• Defining concepts

Reassessment of lifelong learning practices
• Degrees based on professions and their phenomenon-orientation
• Degrees and innovation hubs as an entity with impact and providers of new and flexible learning solutions
• Learner-orientation and competence forecasts in lifelong learning
• The lifelong learning ecosystem of the Helsinki Metropolitan Area (the role of the innovation hubs)

Increasing the alignment and transparency of the activities
• Simultaneous development of RDIL both on a more comprehensive overall level and on a more specific concrete level.
  ◦ Taking the diversity of RDIL into consideration.
  ◦ Increasing the openness of the development process and decision-making (all key parties involved).
  ◦ Involving students and actors in Services.
  ◦ Clarifying the roles of the thematic area coordinators and platform coordinators.
  ◦ Strengthening shared management.
  ◦ Strengthening strategy-based operations management.
• Enterprise architecture work supporting RDIL

Enabling strategic change through
• the development of management, pedagogy, and the operating environment
• the development of the operating environment, competence, and capabilities of the HEI community.

Establishing business incubator cooperation (the Campus Incubator programme)

Strengthening the ecosystem and platform operations

4.1 Innovation hub activities from the RDIL perspective

- Auditeringsgruppens bedömning

Innovation hubs and RDIL thinking show promise in bringing strategic goals to life

In Metropolia Strategy 2030, Metropolia strongly focuses on RDI activities, which are implemented ecosystems functioning across the entire organisation. This significant change compared to the previous organisational model is clear proof of a learning organisation. Metropolia has boldly set out to reform its organisation in the direction of phenomenon-based learning and a solution-oriented approach. The key players in the development are staff, students and companies in the sector.

To strengthen Metropolia's capability to build research, development, innovation and learning (RDIL), the HEI has started creating a preliminary roadmap for RDIL development. The goal is that RDIL is linked to degrees and forecasting capabilities. The audit team praises that Metropolia has gotten off to a good start in systematically identifying the key roles and actions needed for the roadmap. In the interviews, the staff felt the phenomenon-based teaching to be inspiring and motivating, but at the same time, the change to a new mindset is perceived as time-consuming. In addition, staff has manifold tasks to perform, and new structures need resources that are not necessarily sufficiently available. The audit team anticipate the possible risk of conflicts due to resources shared between RDI, especially the innovation hubs and teaching, which should be observed carefully. No change is ever quick, and this is something to bear in mind with RDIL reform. In interviews, staff often mentioned that they see Metropolia as an agile organisation. This opens up good opportunities to drive innovation in an agile way within the organisation. The audit team noted and agreed that the new positions of innovation directors still need further definition.

According to interviews, the innovation hubs structure supports Metropolia's strategic goal to be a bold innovator of knowledge and a builder of a sustainable future. The audit team encourages monitoring the strategy implementation and following staff feedback as the new organisational structure is implemented. Feedback can be reflected in ready-made channels, such as impact reviews and leadership forums. This allows the whole community to participate and enhances Metropolia's achievement of its strategic goals.

Student-centredness is a part of the phenomenon-based learning

Innovation hubs provide a good development platform based on innovation and ecosystem thinking. Students are well integrated into the reform and have the opportunity to learn in

authentic learning environments, such as HyMY Village, Smart Lab, Helsinki XR Center, Turbiini, Metropolia Proof Health, Urbanfarmlab, Robo Garage etc. The students participating in authentic learning activities are in direct contact with everyday customers. This feedback opportunity should be systematically utilised.

Visits to learning environments showed that students are given responsibility and work relatively independently on some projects. The importance of good supervision becomes even more critical as the student's responsibility increases. As such, working-life skills, as in the HyMY village, are very much at the heart of learning. Students will get a good starting point for working on research projects and working-life projects. This pedagogical starting point gives them a sound basis for working in the future working world, using a solution-oriented approach.

Metropolia is a multidisciplinary and artistic community. This also provides an excellent opportunity to exchange ideas across sectoral boundaries. Metropolia also plays an essential role in society as a mediator of open science through its new openings.

Metropolia's strength is development through interaction

As a learning organisation, Metropolia uses early involvement of broad expertise and opinions in its decision-making processes. The leadership forum mentioned earlier exemplifies Metropolia's striving for interactivity. Another is the 'Parru' platform (internal dialogue and sparring). The participatory service focuses on dialogue and co-creation and is used for planning and goal setting. According to the self-evaluation report, the service supported five strategic development projects. For example, in 2021, approximately 50 participatory planning events, some of them with external stakeholders, were arranged. The 'open science' approach also extends to individual projects, where sharing resources and results are encouraged. Metropolia uses ad-hoc task forces for specific tasks and problem-solving.

Semi-annual personal development discussions include the whole staff and hopefully provide the organisation with relevant information on the staff's well-being, motivation and satisfaction level. The workload and individual energy (work/leisure) balance needed special attention during the pandemic and constant continuous attention.

The lifelong learning concept includes continuous learning for not only the students but also the organisation itself, e.g. through close interaction with alumni. This offers another new perspective on Metropolia's opportunities for the future. Metropolia recognises that the alumni interaction should be more diverse. Today, it still seems to work on a case-by-case basis rather than with a systematic approach. Lifelong learning needs to be thoroughly established and communicated in innovation hubs. It could also be a source of renewal ideas and actions.

Learning in the long run

The RDIL road map to 2030 is based on a ‘Complex adaptive system framework’, a variation of the PDCA cycle. The core question is how to bring new elements into the existing system. Improvement through new rather than incremental elements sets a higher demand for learning. This is an ambitious goal. The RDIL road map to 2030 includes several actions which require fundamental learning of new elements. The ‘Campus Incubator’ programme, a cooperation with Aalto University and the city of Helsinki, is one example of this. The aim is to be able to start 100 new companies per year by 2030.

The reform is off to a good start and has great potential. The audit team encourages further innovative reform.

5 Benchlearning

- Högskolans självvärdering

Student and personnel well-being through benchlearning

Benchlearning at Metropolia was implemented in cooperation with the Dutch Hogeschool van Amsterdam (HvA) university of applied sciences between the autumn of 2021 and the spring of 2022. The benchlearning topic (personnel and student well-being) is linked to the social sustainability goals of sustainable development and therefore to Metropolia's strategy.

The initially planned visit to Amsterdam was cancelled due to the pandemic and the benchlearning was implemented remotely. The HvA student advisor and an HR representative answered a few questions in writing and, based on the answers, Metropolia's student advisors and an HR representative wrote content to the benchlearning section. A Teams meeting was held in which Metropolia's and HvA's personnel who participated in benchlearning exchanged their views and discussed well-being during the pandemic more extensively. The following chapters describe the learning outcomes and the ideas to be applied. The core items have been listed in tables 4 and 5.

Personnel well-being: Identification of risks for well-being during the pandemic

Metropolia anticipated that the personnel having to switch to remote and hybrid work due to the exceptional circumstances would result in increased challenges in their psychosocial well-being. Based on the results of the 2020–2021 personnel surveys, the exceptional circumstances did not compromise personnel well-being to a considerable extent. Approximately half of the respondents felt that their well-being at work during remote work remained unchanged, while 25 per cent of personnel said their well-being had decreased, and slightly less than 25 per cent said their well-being had actually improved. More than a third of the respondents found that communality had suffered in the virtual environment.

Psychosocial risks were mapped in the exceptional circumstances by means of risk assessments, workplace surveys conducted by the occupational safety and health services, superior interviews, personnel health questionnaires and preventive medical examinations. The early support operating practice (monitoring of absences due to illness, early support discussions, support measures by the HR services and the occupational safety and health services) continued in the exceptional circumstances as well.

The assessment of psychosocial risks has been carried out since the beginning of 2022 in HvA as well. In addition, personnel are invited to preventive medical/health examinations during the

year. Both examinations pay special attention to the impacts of the changes caused by the exceptional circumstances on work and well-being at work. HvA did not mention personnel questionnaires or surveys as sources of information.

Good practices of your organisation	Good practices of the partner organisation
Early detection of risks in well-being at work • Personnel questionnaire, personnel survey • Assessments of psycho-social risks • Workplace surveys by the occupational safety and health services, including superior interviews, personnel health questionnaires and medical examinations • The early support operating model and system (Sirius) and providing superiors with coaching in using them • Occupational safety and health key figures and indicators • Occupational health cooperation (regular meetings, monitoring, case meetings, occupational health meetings)	**Early detection of risks in well-being at work** • Assessments of psychosocial risks • Preventive medical/health examinations • Special attention to the impacts of the changes caused by the exceptional circumstances on work and well-being at work
Support for well-being at work in the exceptional circumstances • A coronavirus task force established at the beginning of the pandemic: policies, guidelines, communication, and dialogue during the exceptional circumstances • Digital support for remote teaching (the teaching staff, in particular) • Webinars and network learning modules supporting well-being • Sharing experiences and practices in the sparring forum for superiors • Open work supervision groups (superiors, experts) • Short-term psychotherapy when needed (based on the occupational health team's assessment) • The Break Pro application to support exercise and recovery during workday for the entire HEI community	**Support for well-being at work in the exceptional circumstances** • Newsletters introducing personnel's methods to handle remote work amid the pandemic • A platform designed for personnel with a multitude of up-to-date information on well-being at work and the pandemic.
Near-term plans to develop personnel's well-being • The *Onnistu hybridityössä* (Successful hybrid work) learning path for superiors and their teams	**Near-term plans to develop personnel's well-being** • A game on the team's operating practices in hybrid work and for agreeing on the ground rules. • Work spaces are designed with multi-location work in mind and equipped for such work. • More meetings requiring participants to be physically present to strengthen the positive impact of social contacts. • Personnel training is increasingly provided online.
Future application of the peer partner's good practices, or practices already applied • Personnel communication during the exceptional circumstances and when returning to hybrid work could highlight personnel's/students' own stories: the methods they have come up with to handle the situation, and the positive things that remote/hybrid work has introduced to one's life. • A gamefied approach to agreeing on the team's shared working methods in the hybrid work model. • Meetings requiring the attendees' physical presence are organised in such a way that the physical presence is seen as useful and rewarding.	

Table 4: Comparison of personnel's well-being practices

Student well-being: Methods of early detection of deteriorating student

well-being

The goal of benchlearning was to examine how student well-being can be supported even before the student uses well-being services in HEI. Deteriorating well-being can be recognised at an early stage as part of the study guidance and counselling process, teaching situations and personal guidance and counselling meetings.

At the beginning of the studies, both Metropolia and HvA students completed a questionnaire to evaluate their need for closer guidance and support. Well-being issues can be recognised in groups in which teachers and study counsellors encounter students. The monitoring of the study progress, (mandatory) presence and the accumulation of credits has been found to be an effective method for early detection. Based on observations on benchlearning, guidance and counselling paths from such early detection occasions to numerous services as well as the awareness of these services must be strengthened.

In HvA's student info, students help each other in face-to-face and online meetings, on chat and via e-mail. At Metropolia, similar activities are provided by student tutors during the first semester. Students who developed student-oriented peer services in the autumn of 2021 proposed a Tutor Room where students would be available to assist other students. Benchlearning confirmed *that the Tutor Room is worth developing: the room could be a way to identify, at a very early stage, those students whose well-being with regard to their studies is deteriorating.*

The discussion events organised by HvA are comprehensively attended by members of the HEI community: the attendees may include members of the Board or a study psychologist. The practice has also raised interest in Metropolia. Hearing the students' views as part of the process to affect well-being should be made more systematic and increased.

Forms and tools of guidance and counselling

Metropolia provides guidance and counselling to students with a focus on group guidance and counselling: the students are supported by their designated PSP (personal study plan) / career counsellor in groups specific to degree programmes and in support workshops related to their studies. HvA's study guidance emphasises more individual guidance and counselling, where the student is referred to various services based on discussions.

Various forms of student tutoring are a central part of peer guidance and counselling and are implemented through the METKA student union and peer activities at Metropolia. Participating in hobby clubs, university chaplain's Friday respites for studying parents, and events organised by the student association are examples of peer get-togethers. HvA provides extensive peer guidance for various groups and financially supports student associations and unions.

Although peer-based meetings, groups and events have otherwise increased at Metropolia,

students' independent peer activities have decreased as the campuses were closed during the coronavirus pandemic. Students must be encouraged to engage in various forms of peer activity on the level of degree programmes, schools and Metropolia as a whole.

The availability and accessibility of digital services has improved during the pandemic in both Metropolia and HvA. The provision of study guidance for individuals and groups through Zoom and Teams that flexibly align with students' different life situations has become routine. To improve accessibility, briefings and guidance sessions are recorded and shared with students. Metropolia has increased the provision of webinars for students, and, in addition, the student's electronic desktop, a Wiki site and the thesis instruction facilities support communication and guidance. HvA offers its students a free-of-charge and anonymous access to an online platform with modules covering a variety of topics. At Metropolia, equivalent support is available in the form of webinars and courses. For example, credits can be earned from the course called '100 aktiivista hyvinvoinnin päivää' ('100 days of active well-being'), which will speed up the study progress. Benchlearning provided ideas about developing modules based on themes (e.g. stress, game addiction) online and for groups.

Good practices of Metropolia	**Good practices of HvA**
Early guidance and identification • Survey for new students • Orientation programme for new students • Small-group teaching • Support workshops related to the studies • Monitoring of attendance and study progress	**Early guidance and identification** • Survey for new students • A guidance path model for accessing various support services • Monthly guidance discussions • Student briefings • Discussions between the management and students on the degree level
Digital services • The OMA intranet • A Wiki web platform • Digital web platforms (e.g. Teams) in individual and group guidance • eHOPS (Peppi) • Theme-specific recorded seminars in the open UAS	**Digital services** • Digital web platforms (e.g. Teams) in individual guidance, in particular • Theme-specific modules, including ◦ stress management ◦ alcohol abuse • The SIS registration system
Peer guidance and counselling • Student tutoring • Thematic peer guidance and counselling groups • Student assistant activities (e.g. a mathematics and physics workshop)	**Peer guidance and counselling** • Thematic peer guidance and counselling groups: ◦ refugee students ◦ students from the Netherlands Antilles ◦ disabled students.
Example(s) of future application of the peer partner's good practices or practices already applied • More extensive mapping of the guidance path of support services, e.g. services provided by third-party actors. • Investigating the opportunity to implement student information activities in peer guidance and counselling. • Increasing interaction between the management and persons responsible for services with students. • Investigating the implementation of theme-specific electronic modules or a more systematic use of existing modules provided by external parties (e.g. depression). • Increasing thematic peer guidance and counselling groups.	

Table 5: Comparison of students' well-being practices

Audit team’s feedback

The chosen theme proved to be incredibly topical during the pandemic

Metropolia’s benchlearning project focused on the well-being of students and staff. The choice of this benchlearning topic resulted from Metropolia’s strategic social sustainability goals. The selected partner was the Dutch Hogeschool van Amsterdam University of Applied Sciences. Considering that the project’s implementation coincided with the pandemic period, it was incredibly convenient and beneficial to exchange best practices for the well-being of students and staff.

As staff had to switch quickly to remote and hybrid work due to the exceptional circumstances, there were increased challenges for their psychosocial well-being. The audit team considers the chosen theme topical and essential for education development and appraises the following future application of the results. For instance, according to Metropolia’s self-evaluation report, staff communication during exceptional circumstances and when returning to hybrid work could highlight their personnel’s/students’ own stories: the methods they used to handle the situation and the positive things that remote or hybrid work introduced to their lives.

The audit team appreciates Metropolia’s aim to apply the lessons learned from the project, such as the game-field approach to agreeing on the team’s shared working methods, particularly in a hybrid working environment. The plan to organise meetings requiring the attendees’ physical presence in a beneficial way is also considered an asset and an important tool to re-establish face-to-face relations after two years of the pandemic.

Metropolia is encouraged to share good practices from benchlearning visits

During the process, Metropolia has learned many good practices. In the interviews, it became evident that the topic is perceived as important within the organisation. Using personnel surveys, workplace surveys, and digital support for remote teaching, mainly teaching staff, Metropolia can anticipate risks concerning well-being at work. Concerning the students’ early guidance, the higher education institution has extensive experience using new student surveys, orientation programmes and student tutoring.

However, there is room for development by implementing (thematic) peer guidance and counselling, increasing interaction between the management and staff responsible for services with students and so forth. Unfortunately, results and potential deriving from the benchlearning project are still relatively unknown among staff. For this reason, the audit team encourages Metropolia to share good practices and further develop the ideas from the benchlearning visit to ensure this project’s systematic implementation of shared processes and operating policies.

Appendix 1. Evaluation criteria for the level good

1 Evaluation area I: HEI creates competence

1.1 The planning of education

The degree programmes and other provision are planned with clearly defined learning outcomes. The planning process ensures that the educational provision is in line with the HEI's strategy and relevant for working life. Aspects concerning internationalisation and continuous learning needs are ensured in the planning process. In terms of degrees, it is ensured that they correspond with the National Framework for Qualifications and Other Competence Modules. The education is planned so that the teaching methods, assessment of learning, and learning environments support the achievement of the learning outcomes. Students and external stakeholders participate in the planning of education in a purposeful manner. Research, development, innovation and artistic activities are integrated in the education in a way that links research-based information to the education in a relevant way. The students' workload is defined according to the principles of the ECTS (European Credit Transfer and Accumulation System). The HEI has systematic procedures for approving the plans for degree programmes or other study entities.

1.2 The implementation of education

The HEI applies the provisions and regulations concerning student admission, the recognition of prior learning, progress of studies and completion of degrees consistently and transparently. The education is implemented in a manner that supports target-oriented learning and the active role of students in their own learning process. Students receive feedback on their learning which helps them achieve the learning outcomes. The procedures connected with the implementation of education support the efficient progress and completion of studies as well as the integration of students with professional life. The well-being and equality of students are promoted throughout the student's study path. The HEI provides adequate resources, counselling and other services to support the progress of studies and learning.

1.3 The evaluation and enhancement of education

The HEI systematically collects and uses feedback data on the needs of students, the implementation of the education and the progress of studies in order to enhance the education. Feedback-on-feedback, i.e., information on changes introduced based on student feedback is provided to students in an appropriate manner. The HEI monitors and evaluates the degree programmes and other provision to ensure that they are up to date with regard to the latest research findings as well as the changing needs of the society and working life. Opportunities for continuous learning are ensured in the educational provision. In the degree programmes and

other provision, how well the intended learning outcomes are achieved is analysed. Feedback and evaluation data is used systematically in the enhancement of education. The needs of staff and students are considered in the development of support services.

1.4 The HEI's examples of successful enhancement activities

The HEI is able to present examples of successful enhancement activities.

2 Evaluation area II: HEI promotes impact and renewal

2.1 Managing societal engagement and impact

The HEI enhances its societal engagement and impact, and this is also supported by its management system. The HEI has defined goals for its societal engagement and ways in which it attempts to reach those goals. Information produced by the HEI's analysis of its operational environment is used to set the direction for its activities. Appropriate procedures help to ensure that societal engagement supports the implementation of the HEI's overall strategy.

2.2 Research, development and innovation activities as well as artistic activities with impact

The HEI's research, development and innovation activities as well as artistic activities contribute to reforming society. Targets have been set for the impact of the HEI's research, development, innovation and artistic activities. The HEI collects relevant information regarding the societal impact of research, development, innovation and artistic activities, and the information is used in the enhancement of these activities. The HEI has systematic procedures for ensuring the responsible conduct of research. The HEI enhances open science.

2.3 Promoting renewal through the organisational culture

The organisational culture of the HEI encourages experimental activities with partners and strengthens the conditions for a creative atmosphere. The HEI seeks opportunities to engage with stakeholders in activities which enable renewal and enhancement. The HEI has functioning procedures that support the use of the competences possessed by its staff and students. The HEI has target-oriented cooperation with its alumni and it utilises the alumni in enhancement activities. Collaboration with both national and international networks supports the enhancement of the HEI's activities. The HEI has well-functioning procedures for managing and updating its stakeholder relations and collaboration networks.

2.4 The HEI's examples of successful enhancement activities

The HEI is able to present examples of successful enhancement activities.

3 Evaluation area III: HEI enhances quality and well-being

3.1 Using the quality system in strategic management

The principles, objectives and responsibilities of the quality system constitute the HEI's quality policy, which is public. The quality policy forms a common basis for the quality work. The information generated by the quality system is used in the management of the HEI. The system supports the profile of the HEI, the achievement of its objectives related to the core duties and the implementation of its strategy. The HEI ensures that the staff recognise the connection between their own work and the goals of the HEI.

3.2 Supporting the competence development and well-being of the staff

The HEI has functioning procedures to identify development needs concerning staff competence and to support the development of staff competence. The HEI has transparent procedures for staff recruitment. The HEI has systematic procedures to support the well-being, equality and non-discrimination of staff.

3.3 Functionality and development of the quality system

The HEI has a functioning quality system which covers its core duties. The quality system helps the HEI to recognise development needs and to enhance its activities in a goal-oriented manner. There is evidence of the functionality and impact of the quality system on the enhancement of the core duties. The system is developed in a systematic manner.

The quality culture of the HEI is participatory and open. Staff, students and external stakeholders participate in the enhancement of the HEI's activities in a purposeful manner.

3.4 The HEI's examples of successful enhancement activities

The HEI is able to present examples of successful enhancement activities.