



Strategy of Research Organisation

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I. Introduction

The University of Hradec Králové (UHK) is making continuous efforts to develop its internal environment in the field of research activities. In the context of the project Development of Capacities for Strategic Management of Research at the University of Hradec Králové, the UHK has prepared this *Strategy of Research Organisation* (hereinafter referred to as the RO Strategy). The University had not had similar material so far and its preparation can be seen as significant also in the context of obtaining and maintaining the *HR Excellence in Research Award (HR Award)*.

The RO Strategy becomes part of the University's strategic documents. It builds on the *Strategic Plan of the University of Hradec Králové 2021+* (hereinafter referred to as the Strategic Plan), the preparation of which was completed by the University in 2021 and which is a key strategic document outlining the long-term strategy of the University for a ten-year period. The RO Strategy elaborates in more detail the key themes that are related to the activities of the UHK as a research organisation and are set out in the Strategic Plan, and sets more specific objectives to be achieved in the medium term, namely by the end of 2025 and in the immediate future.

The RO strategy includes six key topics: management and funding of research and development, methodology of evaluation of research and development, human resources management in a research organisation, development of early career researchers, internationalisation of research and development and development of technology transfer. Each topic is given a chapter describing the current state of the art in the field, aiming also to identify weaknesses that the strategy addresses and seeks to remove. It then sets out the objectives that the UHK should achieve in this area by 2025. The objectives are followed by the individual measures implemented to achieve the objectives. Indicators are also attached.

In formulating its objectives in individual areas, the UHK has taken into account not only its mission and vision, social demand, but also the broader context which is represented in particular by the policy of national funding and evaluation of research and development. Important documents that co-create the broader context include the *National Research and Innovation Strategy for Smart Specialisation of the Czech Republic 2021-2027* (National RIS3 Strategy). Its aim is to ensure the effective channelling of resources from European, national and territorial budgets to support oriented and applied research and innovation. The regional annex to the National RIS3 Strategy for the Hradec Králové Region lists, among others, key areas of change and strategic objectives for the region and priority topics. The UHK is one of the institutions involved in the implementation of the regional RIS3 strategy.

In developing its strategy, the UHK also reflected the expected measures formulated by the *Ministry's Strategic Plan for Higher Education for the Period from 2021 onwards* which was issued by the Ministry of Education, Youth and Sports of the Czech Republic (MEYS). In formulating its objectives and measures, the UHK also drew on the recommendations of evaluation and advisory bodies. These included the evaluation of research organisations in higher education including the evaluation by the International Evaluation Panel (IEP)

which took place in 2020, and the recommendations of the International Advisory Board (IAB) which is an international consultative body set up by the University.

In order to achieve a broad consensus for the individual objectives and measures, the RO Strategy was submitted to several bodies for discussion: the Rector's Board, the UHK Internal Evaluation Board and the UHK Research Board. Representatives of the academic community, the management of the faculties, as well as external experts and representatives of other institutions thus could comment on the VO Strategy content.

II. Management and Funding of Research and Development

Current status

Based on the research focus of the faculties and their research directions, societal demand and the results achieved in creative activities, the UHK set three common interdisciplinary research directions in 2019: Healthy Ageing and Quality of Life, Security and Sustainable Development in Digital Society and New Challenges in Education. The UHK intends to further develop these topics in addition to other research topics developed at the university. However, there is still a lack of specific forms of systematic support for these research directions, as well as other effective tools for university-wide support for creative activity. In terms of financial resources for research activities, the UHK has so far primarily drawn on public funding, mainly allocated from national sources (Long-Term Conceptual Development of Research Organisations – LTCDRO, earmarked support for research projects and development of providers in the Czech Republic, projects under the Operational Programme Research, Development and Education – OP RDE). The results of scientific activities are also reflected in the amount of the UHK budget as qualitative indicators. This performance component usually accounts for around 17% of the institutional funding of public universities. The amount of funding is thus related to the evaluation of the UHK and its outputs and to its success in grant competitions. The UHK uses intra-university incentive mechanisms for the distribution of funds based on qualitative criteria that contribute, among other things, to the development of its creative activities. In the last five years, the UHK has improved in obtaining special-purpose funding projects from national grant agencies (Grant Agency of the Czech Republic – GA CR, Technology Agency of the Czech Republic – TA CR) or individual ministries. However, the UHK considers its lack of participation in excellent international projects of European or global providers to be its weakness. In its research activities, the UHK has not yet fully exploited the potential for applied research and the development of research cooperation with the application sphere. The fact that a large percentage of high quality scientific outputs are produced by a relatively small number of researchers is another risk for the UHK.

What do we want to achieve by 2025?

- An effective system of university management and support for creative activity, aimed in particular at the development of priority research topics, interdisciplinary and inter-faculty cooperation and support for the development of research teams and strengthening the quality of their creative outputs;
- Improvement and strengthening of capacities within the administrative, organizational and consultancy background to support the preparation of projects for grant competitions, especially focusing on important prestigious international projects of European or global importance. By 2025, the UHK aims to obtain at least one excellent international team (EU Horizon Europa, MSCA) or individual (ERC) project;
- Increase in the number of projects obtained with international participation (binational projects) or national excellence projects, e.g. bilateral GA CR, CoFund TA CR, EXPRO, etc.;
- Expansion and improvement of the base of the UHK publishing staff with a focus on publications in the first quartile according to AIS (Article Influence Score) JCR WoS and prestigious foreign monographs;
- Intensification of the development of internationalisation of science with a focus on the arrival of promising international postdocs or visiting professors;
- Improvement of publication outputs of doctoral students at the UHK.

How will we achieve our goals?

- We will support research directions and continuously seek institutional tools for their systematic development.
- We will appoint a guarantor of each of the three research directions of the UHK and define their content and partial research topics in more detail. Within these, we will focus on identifying topics with the highest potential for excellent outputs, to which we will direct further support as a priority.
- We will develop other university programmes to support science and research (e.g., the Excellence Programme or Postdoc). We will implement internal grant competitions to encourage the strengthening of inter-faculty research collaboration.
- We will regularly evaluate and further develop the university's internal incentive mechanisms for the distribution of funds earmarked for creative activities (criteria for the LTCDRO distribution, quality bonuses within the UHK budgeting). We will increase the share of the LTCDRO incentive component in the distribution of funds from this source among the units.

- We will offer educational activities for academicians and researchers aimed at grant schemes relevant to their research.
- On the basis of a multi-criteria analysis based on bibliometric analysis, external evaluations by the GRDIC (Government Research, Development and Innovation Council) and project participations, we will identify the most successful scientists among the UHK academicians and researchers and provide them with appropriate conditions for the preparation and subsequent solution of important international projects.
- We will streamline administrative, organisational and advisory services for the submission and resolution of research projects, especially the international ones (see also Chapter VI.).
- In order to increase activities in contract and applied research and to increase the competence of staff in this area, we will offer training activities for managers, administrative staff, academicians and researchers focused on the contract and applied research and the commercialization of research results.
- We will develop opportunities for contract research by actively seeking opportunities and strengthening and expanding links with the application sector.
- We will develop intensive cooperation with the emerging Regional Innovation Centre (RIC) and other entities linking the UHK with the application sphere or implementing commercialization activities.
- We will announce open competitions for international postdocs and stabilize financial support for their employment (see also Chapter V.).
- By providing grants, regular training and improving the quality of supervision we will increase the quality of professional outputs of doctoral students studying at the UHK (see also Chapter V.).

Indicators

- Number of impacted articles in the first and second quartile of JCR Web of Science (or SCOPUS) belonging to the university-wide research directions of UHK;
- Number of monographs in prestigious publishing houses;
- Number and quality of outcomes assessed under Module 1 of the 2017+ Methodology with a score of 3 or better;
- Number of excellent international scientific research projects obtained (e.g., EU Horizon Europa, bilateral GA CR, CoFund TA CR, etc.) and projects supporting scientific research activities (MSCA, eDIH, international alliances);

- Number of scientific research outputs involving collaboration between institutions from at least three countries;
- Volume of contract research;
- Number of patents granted;
- Registered utility models;
- Volume of funding from licensing agreements and number of agreements per year;
- Number of spin-offs and start-ups with UHK participation;
- Number of methodologies used (applied in practice) by public administrations or authorities.

III. Strategy and Methodology of Evaluation of Research and Development

Current status

The UHK perceives the processes of evaluation of creative activity as a key activity enabling scientific and research progress and moving towards excellence. In this area, the University has set up new processes in recent years and embedded them in internal regulations. The UHK has also established the IAB which provides it with an external view and mediates international experience, not only in the field of R&D evaluation. However, the UHK is aware that its system for evaluating creative activities still needs to be built and optimised, in particular to strengthen the university-wide aspects of evaluation that do not yet form a fully coherent system and the common university mechanisms are rather weaker. In addition, there is a need to streamline the way in which data and evidence for evaluation are obtained, which will be helped, among other things, by the management information system (MIS) that is currently under preparation. The UHK is aware that the implementation of recommendations formulated on the basis of the results of, in particular, external evaluations is a key prerequisite for the development of its internal environment, and sees room for improvement in this respect. For example, the full implementation of some of the recommendations formulated by the IEP as part of the 2020 evaluation of research organisations in the higher education segment is still lacking.

What do we want to achieve by 2025?

- Setting up and developing a university-wide system of evaluation of creative activity reflecting both the national evaluation rules and international good practice;
- An effective way of data collecting and other evidence to evaluate individuals and research teams;
- Increased professionalisation of the administrative staff in the field of evaluation of creative activities and increased awareness of evaluation processes in this area at the UHK among academic and scientific staff.

How will we achieve our goals?

- We will adopt a new university management act, which, following the internal regulation, will set out more detailed rules for the evaluation processes of creative activities at the UHK, taking into account the needs of individual scientific areas.
- Two years after its adoption, we will evaluate the set system of evaluation of creative activities and adopt any changes so that the evaluation best meets the UHK needs.
- We will continue to organise regular IAB meetings at least once a year to obtain recommendations from foreign experts.
- In close cooperation of all relevant units, we will consider in detail the recommendations arising from the meetings of the key evaluation bodies such as the IAB, IEP, or the IEP EUA evaluation (*Institutional Evaluation Programme of the European University Association*), and implement those appropriate for the UHK environment so that the results of the evaluation can best serve the UHK for the improvement of its research environment and the results of creative activities.
- By introducing a regular system of meetings of representatives of the management and administrative staff of the university or the university and faculties, we will strengthen internal processes for the exchange of experience and sharing of good practice between the individual units in the field of evaluation of creative activity.
- By developing appropriate software tools, we will improve the efficiency of data acquisition for the evaluation of creative activities, especially for monitoring and evaluation of scientific results and outputs of individuals and research teams.

- We will provide for educational activities to develop the competences of the UHK administrative staff for the evaluation of creative activities, as well as we will offer educational activities on the UHK evaluation processes to the academicians and researchers.
- Every year, we will carry out benchmarking in the field of science and research, such as, in particular, the publishing activity and citation response of the UHK in the main databases (WoS, SCOPUS), creative activity providing commercialisable outputs of applied research. For these areas we will identify comparable universities within the Czech Republic, with which we will compare and look for examples of good practice.

Indicators

- New management act published, focusing on the evaluation of creative activity;
- The IAB meeting and its recommendations;
- Results of benchmarking;
- Educational activities in the field of evaluation of creative activities;
- Software tools for internal monitoring and evaluation of scientific results and outputs of individuals and research teams.

IV. Strategy of Human Resources Management in a Research Organisation

Current status

For a long time, the UHK has lacked a clearly defined policy in the area of human resources (HR) management and development. In January 2020, the university started preparations for the HR Excellence in Research Award obtaining with the aim of setting a high standard of HR policy management and obtaining in 2021 a European certificate confirming the quality of HR management. As part of the application process for the HR Award, the UHK defined weaknesses in the areas of development of human resources, the selection process and the process of recruitment, and onboarding. Human resources activities are still partly centralised but also decentralised and need to be streamlined and better coordinated.

The UHK is fully aware of the need to fully professionalize the human resources agenda so that the UHK, as a scientific and research institution, is a truly high-quality and internationally competitive employer in terms of facilities for scientists and researchers.

What do we want to achieve by 2025?

- Gradual fulfilment of the commitment to the HR Excellence in Research award in accordance with the EU Charter and Code and full institutionalisation of the HR agenda at the UHK;
- Full professionalisation of the recruitment and onboarding process in order to attract talented and motivated candidates, both domestic and international;
- Optimally set incentive schemes, especially in the area of remuneration for scientific and research results and employee benefits;
- Transparent and effective employee evaluation system;
- Comprehensive offers and continuous development in the field of education, personal and career growth of the UHK scientists;
- The position of the university as an institution ensuring high standards in the field of equal opportunities, safe and fair working conditions (not only) for the scientists and researchers;
- Maximum development of computerisation of human resource management processes to reduce the administrative burden on researchers and to streamline procedures and communication.

How will we achieve our goals?

- We will implement the outputs and recommendations of the process and staff audit conducted in 2022 to improve the functioning of the research institution.
- On the basis of key materials (HR Action Plan, UHK Career Code, etc.), we will prepare or update the Rector's acts dealing with the issue of reconciliation of work and personal life, support for returning from parental leave or adjustments to working conditions for other objective reasons.
- We will set up a university-wide *recruitment* process, computerize it to reduce the administrative burden and to streamline and unify the procedures.
 - We will professionalize the offer and presentation of information about vacant research positions, benefits, selection procedures and opportunities for development activities, especially in relation to potential international job applicants.
- As part of the onboarding process, we will prepare a standardized package for all incoming employees offering an introduction to the basic processes, structure and documents of the UHK in order to make the onboarding process more efficient and faster. The *onboarding* process will be set up fully for both the Czech and international employees.

- The onboarding process will be set up for all levels of positions, including the early career scientists. All relevant materials and activities will be available in both Czech and English to ensure smooth adaptation of international colleagues.
- We will prepare information material containing complete information for a smooth adaptation at the workplace, especially for the first period after joining the UHK. The information material will be updated regularly.
- We will also achieve a high level of onboarding through regular training of the senior staff and regular evaluation of the onboarding process.
- The professionalisation of the employee evaluation will be achieved through the computerisation of the development plan linked to some parts of the management information system (MIS) data warehouses. The effectiveness of appraisals will be enhanced by regular development of the managers' competences in the area of managing motivational and evaluation interviews with their subordinates.
 - The implementation of MIS and the computerization of the staff evaluation will help to reduce the unnecessary burden on the UHK staff and streamline the essential evaluation processes at the UHK.
- Every year we will update the offer of development and other educational activities for the UHK employees. These activities will be presented on a web portal focused on lifelong learning.
- We will develop a programme to support mental health care for the UHK employees.
- We will prepare a gender equality plan and start implementing defined measures to ensure safe, fair and motivating working conditions. We will continue to analyse the gender pay gap.
- We will implement the computerization of processes in the field of human resources management
 - We will computerise the recruitment and *onboarding* process.
 - By the management information system (MIS), we will streamline the processing of the evaluation outputs.

Indicators

- Earning and keeping the HR Award;
- Computerization and streamlining of processes in the field of human resources management (*recruitment, onboarding, evaluation – processing of outputs*);

- Implementation of new tools/SW digitalization and computerization and interconnection of agendas and processes;
- Share of international employees at the UHK;
- Number of visiting academicians and scientists;
- Set up onboarding process for international employees;
- Regular updates of the comprehensive evaluation system for the UHK employees;
- Number of managers who have received management competency training;
- Measures taken to reconcile work and personal life;
- Evaluation and reduction of any gender pay gaps;
- Introduction of a management information system;
- Number of incoming employee mobilities by type (physical, virtual, combined, etc.).

V. Strategies for the Development of Early Career Researchers

Current status

The UHK does not have a defined policy on the development of early career researchers (doctoral students and postdocs). In previous years, the UHK has taken some measures to improve the quality of doctoral studies. However, the uneven involvement of doctoral students in research projects and the lack of motivation to use the possibilities of support programmes to improve the quality of research work, including internships at universities abroad, remain weak points. Sufficient attention has not yet been paid to continuous education and training of doctoral students, especially in the area of ethical research standards, personal, professional and career development or teaching competences. The lack of systematisation of training programmes and qualification growth of postdocs is also a weak point. These shortcomings also apply to international early career researchers whose numbers the UHK wants to increase, and, therefore, it is necessary to proceed to the maximum bilingualisation of internal processes and documents.

What do we want to achieve by 2025?

- Creation of a comprehensive, internally interconnected system of support for the professional and career development of doctoral students and postdocs, including international students, and their integration into the UHK workplaces;
- Systematic anchoring of postdoctoral positions within internal documents and processes;
- Making the UHK environment as accessible as possible to international early career researchers by bilingualising internal processes and documents;
- A continuous and comprehensive system of training and education to contribute to the personal and professional growth of postdocs and doctoral students (including mentoring programmes);
- Set processes and tools to improve the quality of doctoral studies, especially in the areas of mentoring, research and internationalisation.

How will we achieve our goals?

- In order to integrate international doctoral students and postdocs more successfully into the UHK work team and to support the language skills of Czech doctoral students necessary for integration into the international scientific community, all relevant measures will be advertised and implemented also in English, or, in relevant cases, they will be advertised and implemented only in English.
- In order to systematize the postdoctoral position within internal documents and processes, we will incorporate the specification of the postdoc (conditions of inclusion, expectations, tasks, responsibilities) into the core university documents (Career System, Wages Regulations, etc.).
- We will organize annual *PhD Welcome Days* for all newly enrolled doctoral students, including international students, in order to successfully start their doctoral studies, to find their way in their doctoral duties and opportunities, and to familiarize them with the fundamentals of research work. The Welcome Days will include familiarization with the course of doctoral studies and the support offered at the UHK, discussion of different approaches to study and doctoral project through sharing good practice with older and successful doctoral students, presentations and workshops focused on the basics of research work (evaluation of science, ethics of scientific work, academic writing, project management, etc.) and the creation of a draft Individual Study Plan (ISP) as a basis for further elaboration in cooperation with the supervisor. The programme will also include an informal introduction to the school and the city and will be

attended by doctoral students from the upper years. The Welcome Days will also promote faster integration of newly arrived doctoral students into the academic community of the UHK.

- In order to support the academic, professional and career development of doctoral students from all years of both Czech- and English-taught programmes and postdoctoral students, including international students, we will organise continuously long-term and short-term courses, workshops and discussions focused on topics relevant to early career researchers. This will include activities aimed at developing the skills needed for both academic and non-academic careers in order to facilitate transitions between doctoral studies and graduate careers. Specifically, the offer will cover the following topics: soft and transferable skills, science and technology transfer, ethics and integrity in scientific work, writing research grant projects, conducting research grant projects, evaluating scientific work, lecturing skills, leadership competences, communication and presentation skills, stress management, time management, work-life balance, conflict prevention and resolution and workplace bullying. This offer will include:
 - Regular discussions on international mobility with colleagues from foreign offices and with early career researchers who have experience with different types of international mobility;
 - Regular academic writing courses in which participants will work on their publications related to their doctoral project or postdoctoral research.
- Within the ICCC, we will provide career consulting in the form of consultations or workshops with experts in career development for early career scientists and/or by engaging in mentoring programmes.
- We will support the development of a system of internships at domestic and foreign academic and non-academic institutions for doctoral students and postdocs. Internships will be designed both as a stand-alone activity and as part of mentoring programmes. In the case of doctoral students, the internships will be mainly aimed at facilitating the transition between doctoral studies and further professional life. In the case of postdocs, internships will be aimed mainly at developing research collaboration with other academic workplaces and practice in order to develop applied research.
- We will run leadership courses for supervisors and managers to support them in providing effective leadership to doctoral students and postdocs and in their ability to foster research collaboration within teams and departments. These skills will also be supported by involving senior academicians as mentors in the mentoring schemes described below.

- We will develop supervisor standards that will specify the scope of cooperation between the supervisor and the doctoral student and define their mutual rights and obligations in order to improve the quality and efficiency of the doctoral student supervision.
- We will create an effective electronic tool for advertising open academic positions in English for all workplaces of the university in order to make it more transparent and accessible to external applicants. We will promote actively postdoctoral positions on relevant social networks (LinkedIn, EURAXESS, etc.).
- We will continue to support the mentoring programme for doctoral students from all years of study, including international students. The aim of the programme will be to support the academic and professional development of doctoral students, to integrate them into relevant professional communities and networks, and to facilitate their transition from doctoral studies to other careers. To this end, mentees will have the opportunity to collaborate with mentors within and outside the UHK. Mentors will be Czech and international academicians (including postdocs) and professionals outside the academia. Gradually, a stable network of internal mentors will be built up. The internal mentors will be supported in the development of mentoring skills that can be further used in their own mentoring and leadership activities. The programme will combine elements of *one-to-one* mentoring, group and *peer* mentoring. It will be linked to short- and long-term internships abroad, internships in non-academic organisations and other development and networking activities for early researchers at the UHK.
- We will create information material for newly arriving doctoral students and postdocs in which they will be briefly introduced to basic information about the functioning of the UHK and about the city of Hradec Králové. The information material will be part of a broader onboarding system.

Indicators

- Advertising of measures and activities for early career researchers (also) in English;
- Specification of the postdoc category in the university's core documents;
- Number of implemented *PhD Welcome days*;
- Number of participants in *PhD Welcome days*;
- Number of activities (trainings, workshops, discussions, etc.) organized by the UHK to develop competences and knowledge relevant for doctoral students and postdocs;

- Number of participants in activities organized by the UHK for the purpose of developing competences and knowledge relevant to doctoral students and postdocs;
- Presence of information on the offer of various forms of career guidance for doctoral students and postdocs at the UHK on the ICCC website.
- Number of short-term and long-term international mobilities of doctoral students and postdocs;
- Number of doctoral students and postdocs who have completed internships at domestic and foreign non-academic institutions (e.g. companies);
- Number of leadership courses for supervisors and managers;
- Number of graduates of leadership courses for supervisors and managers;
- A document setting out the standards of a supervisor;
- Number of open academic positions advertised in English for all UHK workplaces through the electronic tool designed for this purpose;
- Number of graduates of mentoring programmes;
- Number of mentoring programme activities;
- Information material for new doctoral students and postdocs.

VI. Strategies for the Internationalisation of Science and Research

Current status

The UHK considers internationalisation, including internationalisation of science and research, as one of its long-term priorities. However, there are still many opportunities for further development in this area. The involvement of the UHK experts in international teams is still limited, as is the involvement of foreign experts in teams at the UHK. The university has not yet been involved in international projects such as the European Research Council (ERC), Horizon 2020 (H2020), etc. It lacks experience in preparing and solving such projects. Neither university-wide nor faculty departments have yet the staff capacity to support the submission and administration of international projects. Another limiting factor is that the number of experts from the UHK who could lead international projects is limited. In the previous period, support for the formation of international teams was mainly through projects to promote excellence at the UHK, postdoctoral projects and projects to support the mobility of researchers. The potential for attracting scientists from abroad to the UHK is limited mainly by the financial possibilities of the UHK. Therefore, the university needs not only to

obtain external financial resources to support them, but also to fully prepare its facilities for recruiting international staff and to set up all key university processes bilingually. International cooperation needs to be developed in university-wide interdisciplinary research directions and strengthened through intensive cooperation with strategic partners and also within the European University Alliance. In addition, it is necessary to anchor and support a unified, systematic and effective promotion of the scientific research activities of the UHK abroad.

What do we want to achieve by 2025?

- Anchoring of functional schemes that will systematically offer attractive positions for foreign researchers and academicians to work at the UHK;
- Greater involvement of international experts in the UHK research teams;
- Increase of involvement of the UHK experts in prestigious international research teams;
- Intensive development of research activities with strategic partners of the UHK and partners within the European University Alliance consortium;
- Development of international research cooperation in the university-wide research directions;
- Funding for research topics also from international grant agencies or in cooperation between Czech and international agencies;
- Setting up a functional project support system for submission and administration of international projects at the UHK;
- Creation of a fully international/bilingual background of the UHK for international employees;
- Setting up a comprehensive care for international employees and a functional process of support during their onboarding and adaptation to the UHK;
- Maintaining the UHK's position in international university rankings in which R&D is evaluated;
- Uniform, systematic and effective promotion of the UHK abroad and its R&D offers to partners abroad;
- Creation of quality standards for institutions abroad according to various criteria (e.g., international ranking of institutions, EU framework projects, bibliometric indicators).

How will we achieve our goals?

- We will update the Rector's decree defining the programmes of the UHK for the support of R&D. We will expand the portfolio of existing programmes to include programmes for visiting scientists and academicians and international teams.
- In line with the management and funding strategy, we will establish a programme of support for international teams linked to university-wide research directions.
- For both existing and new programmes to support the internationalisation of R&D, we will allocate funding from the institutional support for the long-term conceptual development of the research organisation (LTCDRO for the period 2022-2025). Within the LTCDRO, programmes to support the development of international teams, visiting scientists and academicians will be funded.
- We will support financially the creation of individual and institutional international contacts and the development of international scientific and research cooperation by supporting opportunities for meetings with international partners, stays abroad, internships and mobilities of researchers.
- We will prepare quality standards for foreign institutions according to various criteria (e.g., international ranking of institutions, EU framework projects, bibliometric indicators). We will make available (on the web interface) an overview of foreign institutions according to the set quality standards for the Rectorate and faculty offices for science and international relations.
- In the context of selection procedures for the travels abroad of the staff, we will also include the quality of the foreign host institution in the evaluation.
- We will secure higher financial allocations for the preparation of projects with prestigious partners under other internal schemes.
- We will ensure university-wide systematic monitoring of opportunities to obtain external funding for projects to support international R&D cooperation.
- In order to intensify the development of international teams and the submission of international research projects, we will identify the UHK experts with the potential to participate in international projects and we will regularly update their list. We will provide annual targeted seminars for these experts to support their awareness of the professional and formal requirements of international projects.
- We will develop opportunities to share experience in submitting foreign/international projects, and financially support activities of mutual sharing of information and good practice with domestic and foreign partners. We will organise physical or online workshops with domestic and foreign partners to share experiences with international project submissions.

- By specific settings within the LTCDRO budgeting at the university level, and at the same time by related faculty-specific incentive schemes, we will support joint publications and other creative results produced in collaboration with foreign top experts and scientists from strategic partner institutions.
- We will support research cooperation with institutions within the European University Alliance and with strategic partners.
- The 2022-2025 Programme for the Support of Strategic Management of Higher Education Institutions (PSSM) will support the preparation of project applications with strategic international partners where projects such as Erasmus+, Marie Skłodowska-Curie Actions (MSCA), European Economic Area (EEA) are not yet implemented, including support for joint publishing activities, conferences and other professional events.
- Through the university's Knowledge Transfer Office, we will monitor the results of the UHK suitable for commercialization abroad and prepare project sheets for them in English suitable for sharing with foreign partners.
- Within the Publicity and Communication Department (PCD), we will further develop systematically the international marketing of the UHK research activities.
- We will analyse regularly the results in foreign rankings according to individual criteria and implement measures to eliminate the weak points of the UHK. We will support financially the UHK promotional activities on foreign portals.
- We will provide organisational and financial support for the development of systematised services for international employees. These services will include pre-departure information, support in processing documentation for arrival to the Czech Republic and employment at the UHK, arrival information package, *welcome* centre services, support for the arrival of family members of international employees at the UHK (e.g., assistance in finding quality and affordable accommodation).
- On the basis of regular evaluation, we will expand and streamline the range of services and processes in foreign languages and access to materials and documents in foreign language at the university-wide or faculty workplaces of the UHK.
- For the effective integration of international employees into the work teams at the UHK, we will set up a systematic process of their *onboarding* and adaptation. As part of the new mentoring programme, we will prepare and provide mentor support for foreign employees. For more details see other parts of the RO Strategy.

Indicators

- Number of applications submitted by international applicants to the selection procedures for positions at the UHK;
- Share of international employees at the UHK;
- Number of visiting academicians and researchers;
- Number of foreign experts in the UHK teams (excluding the UHK academic staff);
- Number of new international teams at the UHK;
- Number of international projects submitted and got;
- Volume of external funding received from international grant schemes;
- Share of publications and other creative results in international collaboration;
- Number of incoming and outgoing employee mobilities abroad;
- Amount spent on promotion abroad;
- Ranking of the UHK in international university rankings.

VII. Strategy for the Development of Technology Transfer

Current status

Commercialisation, technology transfer and knowledge transfer in general are among the strategic priorities of the UHK. A unified commercialisation system has been in place at the UHK since 2011. In that year, a joint workplace called the Centre for Transfer of Biomedical Technologies (CTBT) was established as a shared workplace of the UHK, the University Hospital Hradec Králové (UH HK) and the University of Defence, Faculty of Military Health Sciences (UD FMHS). The CTBT started to implement activities related to knowledge and technology transfer for the said partners. Since 2020, the UHK has its own Technology Transfer Office (TTO) which provides support in the protection of intellectual property and in the implementation of research and development results into practice. The TTO is also able to provide high quality comprehensive legal services in the field of IP protection, but does not provide for patent application preparation.

There is a Rector's Decree on the management of intellectual property at the UHK. It defines the necessary processes, procedures and responsibilities at the UHK and tries to set up the process to be as transparent and efficient as possible.

The fact that high-quality scientific outputs with commercial potential are produced by a relatively small number of scientists is a risk for the UHK. This fact is supported by several network analyses and is also reflected in the composition of

teams involved in the supported *Proof of Concept* projects. This situation and the elimination of the risks associated with it must be the focus of the UHK management as there is a real risk that the development of technology transfer at the UHK will be stifled if key personnel leave.

Limited capacity of TTO is a weak point; dealing with companies clearly requires cooperation with external experts. As a consequence, part of TTO's services will be outsourced. In this sense, a search for a full-service commercialization provider was started in 2022.

What do we want to achieve by 2025?

- Developed comprehensive intellectual property education system for students, doctoral students, researchers and academicians to achieve a higher level of intellectual property literacy;
- Intensified cooperation with both the private and public sector in research and development activities and increased volume of contract research and applied research, including higher applicability of its outputs in the form of commercialization;
- Establishment of at least 1 additional spin-off company;
- Increased sales of intellectual property licenses;
- More significant involvement of social sciences and humanities in the area of knowledge transfer with the support of multidisciplinary networking, which will expand the commercial potential of the UHK.

How will we achieve our goals?

- We will introduce a training course in intellectual property and knowledge transfer for students, doctoral students, researchers and academicians. This course will be available online and will reflect different groups of researchers in relation to the extent and potential for commercialisation.
- We will provide a regular educational seminar for all doctoral students in the first year. The seminar will introduce them to the problems and pitfalls of cooperation with commercial companies, the application of R&D results by licensing or patenting, and the possibilities of supporting the *Proof of Concept* at the UHK.
- We will inquire about the needs of the subjects, identify their needs and propose suitable solutions with possible application impact.
- We will map out all potential areas at each faculty for the development of the *Proof of Concept* projects. We will identify suitable areas for multidisciplinary integration of humanities and IT disciplines.

- We will establish cooperation with experts who are established in their field, know the key companies, have an established network of valid contacts and are able to mediate fast and effective review of the *Proof of Concept* plans at the UHK, and, in the next phase, conduct negotiations with companies regarding the conditions for the application of R&D results. These staff will not be employed internally, but will be hired for specific cases of implementation of R&D results, especially where a real impact on the commercial sphere is expected.
- Through the TTO we will continue to map intellectual property at UHK on an ongoing basis – we will evaluate the licensing potential. We will involve experts in the field in this process.
- In order to streamline processes, we will seek to digitise the entire process of research results communicating.
- We will provide for professional advice on legislation and financing of spin-off companies.
- We will support the involvement of researchers in projects of the TA CR agency that are directed at applied research projects and bring results that can be applied in practice. We will organise motivational meetings with researchers who have succeeded in previous TA CR calls.
- We will search actively for grant schemes, not only within the Czech Republic but also international calls supporting applied research. We will alert research groups at the UHK to relevant calls.
- Through regular contributions and information in various media and other channels, we will ensure the visibility of the UHK research results and expand the awareness of the institution as a *driver of innovation* in the region.
- At least once a year, we will organise cooperation formats such as *Business meets Science* or *Transfer Days* that will be primarily focused on regional companies. This concept lays the foundations for joint activities, knowledge transfer and joint research projects between companies and the university. They will be designed and implemented in close cooperation with local business networks. These concepts will be applied in the framework of the Hradec Economic Days (HED) conference.

Indicators

- Number of successful graduates of training courses in the field of intellectual property and technology transfer able to answer key questions related to the field of technology transfer and commercialization.;
- Number of graduates of educational seminars for doctoral students on the problems and pitfalls of cooperation with commercial companies, the application of R&D results through licensing or patenting, and the possibilities of the *Proof of Concept* support at the UHK;
- Number of newly established collaborative or contract research partnerships with national and multinational companies;
- Number of *Business Meets Science* or *Transfer Days* concepts organised;
- Number of projects submitted for research and development of new products, production processes and services;
- Number of successfully obtained *Proof of Concept* grants;
- Volume of contract research;
- Number of licenses successfully sold;
- Number of new spin-offs;
- Number of applied research projects involving postdocs, young researchers and students;
- Number of media outputs that present the UHK as a *driver of innovation* in the region;
- Creation and maintenance of an updated catalogue of services and instrumentation of the UHK offered for the needs of companies;
- Number of entrepreneurs involved as mentors or experts to assess the market opportunity of start-up projects;
- Number of cross-sectoral and multidisciplinary projects.

List of abbreviations

CR	Czech Republic
LTCDRO	Long-Term Conceptual Development of Research Organisations
CTBT	Centre for Transfer of Biomedical Technologies
CUIP	Charles University Innovations Prague a.s.
EEA	European Economic Area
ERC	European Research Council
EU	European Union
EUA	European University Association
UH HK	University Hospital Hradec Králové
UD FMHS	University of Defence, Faculty of Military Health Sciences
GA CR	Grant Agency of the Czech Republic
HR	human resources
HED	Hradec Economic Days
IEP	Institutional Evaluation Programme
ICCC	Information, Counselling and Career Centre
ISP	Individual Study Plan
JCR	Journal Citation Reports
KIC	Regional Innovation Centre
TTO	Technology Transfer Office
IEP	International Evaluation Panel
MIS	Management Information System
IAB	International Advisory Board
MSCA	Marie Skłodowska-Curie Actions
MYES	Ministry of Education, Youth and Sports
OP RDE	Operational Programme Research, Development and Education
PCD	Publicity and Communication Department
PoC	Proof of Concept
PSSM	2022-2025 Programme for the Support of Strategic Management of Higher Education Institutions
TA CR	Technology Agency of the Czech Republic
UHK	University of Hradec Králové
R&D	research and development
RO	research organisation