

Krakow University of Technology

DEVELOPMENT STRATEGY OF PK KRAKOW UNIVERISTY OF TECHNOLOGY FOR THE YEARS 2026–2031

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MISSION

PK Krakow University of Technology, combining innovative research with practical engineering education, prepares experts who will help shape the economy of tomorrow and solve the most important challenges facing our civilization.

VALUES

PASSION

We value people with passion and help them develop it. We believe that passion is the foundation of innovation.

COURAGE

We are ready to face the real challenges of the world. We address topics that shape the future.

RESPONSIBILITY

We operate with a sense of responsibility - for the quality of education, research, and the University's impact on the world around us.

OPENNESS AND COOPERATION

Openness and cooperation are the basis of our approach to research, education, and the implementation of new solutions. We work together in teams within the University, develop international relations, and build partnerships with industry, local governments, and public institutions.

RESPECT AND KINDNESS

Respect and kindness bind our community together.

VISION FOR 2026-2031

PK Krakow University of Technology (PK) is one of the strongest research universities in Poland. It is here that ideas, technologies, and talents that shape the future are born. It is a modern technical university, strongly internalized, dynamically cooperating with the socio-economic environment in the region and the country, offering the highest quality of education and friendly working and development conditions for the entire academic community.

SCIENTIFIC ACTIVITY

PK Krakow University of Technology has strengthened its position in global science. The University's research profile is dynamic – regularly updated in response to new directions in scientific and civilizational development. The university focuses its research on the following Priority Research Areas (PRAs): *Innovative Materials and Advanced Manufacturing Technologies; Smart Cities and Future Mobility; Sustainable Technologies in Energy and Circular Transformation; and Information Technologies, Artificial Intelligence, and Industry of the Future.* The University develops a grant culture and builds international partnerships that enable participation in the most prestigious research projects of the European Union. PK increases the

visibility and impact of publications by leveraging unique research infrastructure at the highest global level. The University conducts research supporting Europe's technological independence, related to, among other things, the clean transformation and decarbonization of industry; the technological transformation of security and defense; health, biotechnology, and the bioeconomy; and the shaping of a sustainable, aesthetic, and inclusive living environment.

RESEARCH COLLABORATION WITH INTERNATIONALLY RENOWNED INSTITUTIONS

The University has built a strong network of international cooperation, developing a culture of openness to cooperation and active participation in the European Research Area, collaborating with leading research centers and industrial partners. It increases *internalization at home*, builds a multicultural environment, and provides professional administrative support for mobility. PK has strengthened its brand and recognition on the international stage, acting as an active member of the European University Alliance, co-creating research and development directions that are key for the European Union.

KNOWLEDGE AND TECHNOLOGY TRANSFER

PK Krakow University of Technology has become a significant center for knowledge and technology transfer. The University has developed a coherent commercialization system that provides clear and accessible procedures for both the academic community and business partners. The University has strengthened communication and cooperation with industry. It effectively protects intellectual property and raises awareness among researchers regarding the implementation of research results. Thanks to its modern, accredited laboratories, PK provides services and solutions at an international level, supporting technological transformation, sustainable development, and the country's and region's economic competitiveness.

EDUCATION OF STUDENTS AND DOCTORAL STUDENTS

PK Krakow University of Technology has improved the quality of education by strengthening quality assurance mechanisms and creating modern, flexible study programs tailored to the needs of the future economy. The University educates tomorrow's engineers in world-class laboratories and modern teaching facilities. Active research clubs are a platform for integrating education with scientific research. The university offers a wide range of courses in English, holds international accreditations, provides education across interdisciplinary fields, and runs joint programs with renowned international partners. The University provides students with a supportive learning environment and supports informed career-path decisions through targeted recruitment. Doctoral education develops doctoral candidates' research and implementation skills and prepares them for work in innovative sectors of the economy. PK graduates are leaders in technological and ecological transformation.

STAFFING POLICY

PK Krakow Univeristy of Technology has developed a mature human resources policy. It has strengthened its *HR Excellence in Research practices*, created transparent career paths for all professional groups, and offers competency support tailored to employees' individual needs. The University is developing an

implementation path for people involved in cooperation with the economy, and applies a consistent assessment and motivation system that supports development at every stage of their career.

UNIVERSITY MANAGEMENT

The University has modernized its management model, adopting a process-oriented approach that ensures transparency and efficiency. The University utilizes high-quality management information and digital tools in practice, including integrated reporting systems, analytical dashboards, and AI-based solutions that support decision-making, planning, and communication. PK Krakow University of Technology is developing a professional academic administration body and building a modern IT ecosystem that supports teaching, research, and security. The University implements the Campus Sustainable Development Strategy to create a functional, friendly, and sustainable environment for work, study, and academic life.

PRIORITY RESEARCH AREAS

PRA 1. INNOVATIVE MATERIALS AND ADVANCED MANUFACTURING TECHNOLOGIES

PK Krakow University of Technology develops advanced competencies in the fields of engineering, chemistry and materials science, chemical engineering, biotechnology, and modern manufacturing technologies. These activities focus on designing and creating innovative materials and products that support the development of medicine, pharmacy, cosmetology, energy, construction, and many other industrial sectors. Particular emphasis is placed on developing technologies to obtain new materials in accordance with the principles of green chemistry and sustainable development, thereby delivering real environmental benefits and improving society's quality of life.

The research conducted by the University's staff covers the entire life cycle of materials – from molecular-level design using computer modeling, through synthesis and characterization, prototyping, to implementation in industrial and clinical practice, and the development of recycling technologies. The focus is on nanomaterials, biomaterials, polymer composites, metamaterials, and functional materials capable of adapting in response to physical and biological stimuli. The research also covers materials used in electronics and energy (e.g., in fuel cells, solar cells, and batteries), as well as biomaterials used in regenerative medicine, implantology, packaging, and agriculture. Another important area of research is the development of technologies for cosmetology, pharmacy, and the production of medical devices, including controlled-release systems for drugs and active substances, biocompatible carriers, and processes for processing natural materials for use in the formulations of cosmetics, medical devices, and pharmaceuticals.

At the same time, work is underway on advanced technologies in construction, including eco-construction and smart building materials with a low carbon footprint, as well as on the development of mechanical engineering and lightweight structures for electromobility and aviation. Another important area of research is the development of materials with high mechanical, thermal, and ballistic resistance for military applications, supporting the development of modern protection and defense systems. Additive technologies (2D and 3D printing), micro- and nanofabrication, high-precision manufacturing, and coordinate metrology also play an important role in this area, enabling the creation of lightweight, durable, and personalized technical and medical components.

PRA 2. SMART CITIES AND MOBILITY OF THE FUTURE

The University has key research and implementation competencies in the field of integrated design, implementation, and management of smart cities and future infrastructure, combining spatial, technical, economic, environmental, and social aspects. It specializes in creating concepts, technologies, and systems supporting sustainable urban development, modern transport, and the effective management of all built landscape resources. A strong advantage is the promotion and implementation of an interdisciplinary approach, combining scientific and engineering knowledge with practical experience, in cooperation with local governments and industrial partners. Modern solutions developed at PK Krakow University of

Technology allow for the improvement of the urban environment and the optimization of transport and logistics processes, which contributes to improving the quality of life for residents.

Information and communication technology, integrated and effective management of smart city design and implementation processes, intelligent transport systems, autonomous mobility and electromobility, smart infrastructure and monitoring systems are key elements of our research, enabling the implementation of innovative urban services and data-driven management models.

In the area of research, we focus on innovative solutions for intelligent transport systems (ITS), autonomous mobility technology, and electromobility, supporting human- and technology-oriented construction, architecture, and urban planning. We are working on integrated data platforms, real-time infrastructure monitoring and management systems, and solutions that increase energy efficiency and the resilience of urban systems. We use advanced digital technologies - the Internet of Things, artificial intelligence, big data processing - to design, model, and optimize processes. We integrate infrastructure solutions with attention to environmental and social aspects and to improving the quality of space and the comfort of residents, enabling the creation of modern, flexible, and resilient urban structures ready to meet the challenges of the future.

PRA 3. SUSTAINABLE TECHNOLOGIES IN ENERGY AND CIRCULAR TRANSFORMATION

The University has strong expertise in the field of energy and environmental system transformation. It focuses on solutions for resource regeneration and full material circulation in the economy and construction industry. Interdisciplinary research teams combine expertise in water engineering, biotechnology, chemistry, energy, construction, and data analysis to respond to rapidly changing climate and economic challenges.

Research in the field of renewable energy sources (RES), nuclear energy, hydrogen technologies, electricity and heat storage, as well as the integration of hybrid energy systems, taking into account their flexibility, safety, and resilience in a turbulently changing environment. Particular emphasis is placed on developing expertise in integrating distributed energy with environmental infrastructure, conducting research on waste heat recovery, and modeling new-generation heating and air conditioning systems. These competencies are complemented by the development of technologies that use water as an energy medium, in particular hydrothermal processes and new forms of energy storage. A cross-sectional area is the area of environmental monitoring systems based on the Internet of Things and artificial intelligence, including sensors, data analytics, and process automation.

In the area of circular economy, the University conducts research on material recovery and recycling, the use of industrial and municipal waste in new production processes, and life-cycle assessment (LCA) as a tool to support strategic decision-making. Important areas in this regard include green building and civil engineering 5.0, the development of building materials with zero or negative carbon footprints, increasing the resilience of structures to climate change, and the digitization of construction processes, including *Building Information Modeling* (BIM).

The University is also working on advanced methods for eliminating micro- and nanopollutants. To this end, it uses modern sorbents, photocatalytic techniques, electro-oxidation and electrocoagulation processes, as well as trace analysis tools. Another important aspect in this area is the development of environmental biotechnology, from the design of microbial consortia to bioprocess engineering and the bioconversion of waste streams into innovative products. This also includes reclamation of degraded land, bioremediation, and the use of innovative recycled materials.

All these competencies form the foundation for a low-carbon and energy-efficient economy.

PRA 4. INFORMATION TECHNOLOGY, ARTIFICIAL INTELLIGENCE, AND THE INDUSTRY OF THE FUTURE

The fourth key strategic development direction of PK Krakow University of Technology concerns the development of modern digital technologies and their applications in industry, public administration, and healthcare. The solutions developed are based on artificial intelligence, in particular, machine learning and big data analysis, and are used to support process automation, build systems, including autonomous vehicles, and create intelligent decision-making systems.

The university has expertise in robotics and manufacturing process automation, enabling the design and implementation of integrated production systems aligned with Industry 4.0 and, ultimately, Industry 5.0 concepts. There is a strong focus on digital security, particularly in protecting critical infrastructure such as energy and water supply networks and industrial control systems. These solutions are used by industrial partners and public institutions to improve process efficiency, increase resilience, and support technological development and innovation.

Research is being conducted on the development of cybersecurity systems and the integration of digital solutions in complex industrial environments. The research also covers the design of distributed architectures, process simulations, the development of intelligent human-machine interfaces, and the construction and use of digital twins in simulations. A promising direction is the development of interdisciplinary digital technologies, supported by artificial intelligence, for medical and industrial monitoring and diagnostics.

All these competencies contribute to increasing the reliability, security, and scalability of systems necessary for the development of an innovative economy.

STRATEGIC PRIORITIES

PK Krakow University of Technology is one of the fastest-growing technical universities in Poland. Thanks to very dynamic scientific development in the University's previous strategic perspective (2020–2025), PK achieved results in various areas of research activity that were comparable to, and often even higher than, those of universities with a longer tradition and established reputation, including the winners of the first Excellence Initiative – Research University (IDUB) competition. The rapid pace of development is evidenced by: the high growth rate of citations of scientific publications in the Scopus and Web of Science databases and international cooperation indicators, a large group of employees on Stanford University's list of the most frequently cited scientists (World's Top 2% Scientists), and the results of the national evaluation of scientific activity, which are among the three highest in Poland.

The ambition of the PK Krakow University of Technology in its new strategic perspective, consistent with the second edition of the IDUB program (2026-2031), is to join the ranks of the strongest national research universities and become a significant scientific center in Central and Eastern Europe. The development towards becoming a research university will be accompanied by an increase in PK Krakow University of Technology's impact on the socio-economic environment. The University did not seek to excessively broaden its research and teaching profile, unlike some Polish technical universities, and thus did not fragment its resources. The research conducted at the University is strongly focused on engineering and technical sciences, covering almost the entire scope of these fields. The University will systematically and consistently strengthen its activities and resources within the Priority Research Areas (PRAs).

The University's goal is to develop a research portfolio that is not a random collection of topics, but a carefully selected set of areas in which PK Krakow University of Technology has, in addition to a high scientific level, proven competence, engineering experience, and implementation experience of its researchers. The University's research portfolio aligns with the strategic objectives of the European Union's framework programs and with national and regional smart specializations.

This portfolio is characterized by:

- a precisely defined, consistent profile,
- focus on practical and implementation solutions that respond to the needs of industry and local governments,
- focus on solving complex engineering problems and creating technological innovations,
- flexibility and adaptability to new scientific and economic trends.

The University will develop its potential to conduct world-class research in PRAs and to engage with the socio-economic environment by pursuing objectives aligned with three strategic priorities.

As part of PRIORITY I "Increasing the impact of the University's scientific activities on the development of global science" (S), PK Krakow University of Technology will:

- S.1. develop interdisciplinary cooperation within the University around PRAs,
- S.2. develop a grant culture,
- S.3. establish international partnerships that will enable effective applications for prestigious international grants,
- S.4. increase the impact of publishing activities,
- S.5. increase the efficiency of research infrastructure use.

As part of PRIORITY II "Strengthening research cooperation with internationally renowned scientific institutions" (I), PK Krakow University of Technology plans to:

- I.1. develop a culture of openness and readiness for international cooperation,
- I.2. increase internatiolization at home,
- I.3. improve the quality and accessibility of administrative support for participants in mobility programs,
- I.4. increase the recognition of the University and its brand in the international scientific community.

In PRIORITY III "Intensification of knowledge and technology transfer to the socio-economic environment" (T), the University will:

- T.1. increase the availability and transparency of commercialization support mechanisms for researchers and industrial partners,
- T.2. strengthen the effectiveness of communication with industrial partners,
- T.3. raise the level of protection of the University's intellectual property and the level of awareness among researchers regarding the commercialization of research results.

In addition to the University's significant research and application potential in PRAs, another important strength of PK Krakow University of Technology is its quality of education. The University specializes in educating engineers who meet the needs of socio-economic partners. The PK staff has great teaching potential: experience in project-based and practical education, long-standing relationships with industry, and professional qualifications. A strong research club movement is developing and growing at the University. Within this framework, students develop their passions and gain experience through collaboration with industry. The activities of research clubs are regularly recognized in national and international competitions – the achievements of students showcase the educational potential of PK Krakow University of Technology. The clubs' activities are supported, among others, by FutureLab – an innovative unit that has implemented over 100 student projects and has become a model for similar units at other Polish universities. Employer feedback, graduate satisfaction surveys, and numerous awards for student project teams, including international ones, confirm the high quality of education. The University will strive

to fully utilize its teaching potential by further developing practical and project-based education and by improving mechanisms to ensure the quality of education.

The University has made significant progress in the area of internalization of education: PK is a member of the European STARS EU alliance; it runs a rapidly developing joint education program in architecture and landscape architecture, which is a pioneering undertaking and also the largest project of its kind in the country; it has international accreditations for architecture, landscape architecture, and construction. However, internalization remains an area in which the University still faces significant challenges, while at the same time offering great, still untapped potential for development.

PK will realize its teaching potential by implementing the objectives in PRIORITY IV, "Improving the quality of education for students and doctoral students" (E). PK plans to:

- E.1. improve educational programs and develop the University's educational offer in line with the dynamically changing requirements of the labor market and the modern economy,
- E.2. strengthen mechanisms for ensuring the quality of education,
- E.3. implement AI-based solutions in teaching processes,
- E.4. internationalize the educational offer and increase its attractiveness to foreign students,
- E.5. improve the quality of the educational experience for students by creating user-friendly solutions and supporting the process of informed recruitment,
- E.6. provide doctoral students with training that meets the needs of research and international cooperation, based on a grant culture and flexible programs.

The implementation of priority objectives in the University's main strategic areas (research, internalization, education, knowledge and technology transfer) requires the addition of objectives in horizontal areas that enhance the University's overall capacity to operate. These are objectives relating to staff development and University management. In the area of human resources development, PK Krakow University of Technology began to implement a university-wide policy only at the end of the previous strategic perspective. In the area of management, the University has significant deficits resulting from an organizational silo structure.

As part of PRIORITY V "Professional development of academic staff" (D), PK Krakow University of Technology intends to:

- D.1. define clear academic career paths,
- D.2. ensure a consistent incentive system that supports the development of academic staff,
- D.3. provide systemic support for the development of academic staff competencies,
- D.4. develop a human resources policy consistent with *HR Excellence in Research.*

In PRIORITY VI "Improving the quality of university management" (M), the University plans to:

- M.1. improve the quality of management based on the process management model,

- M.2. ensure systemic support for the development of administrative and technical staff competencies,
- M.3. provide high-quality management information to support the decision-making process,
- M.4. Strengthen the effectiveness of communication with external stakeholders,
- M.5. strengthen the effectiveness of internal communication,
- M.6. build an IT ecosystem that supports education, research, and management, including security management,
- M.7. shape an attractive, functional, and sustainable university environment that promotes cooperation, learning, academic life, and nature.

STRATEGIC OBJECTIVES

PRIORITY I. INCREASING THE IMPACT OF THE UNIVERSITY'S SCIENTIFIC ACTIVITIES ON THE DEVELOPMENT OF GLOBAL SCIENCE

Maintaining the rapid pace of research development at PK Krakow University of Technology, which will enable it to become a leading research university in Poland and in our part of Europe, requires a long-term policy implemented across the entire organization. This policy should focus on a lasting change in research culture, encompassing three attitudes: openness to interdisciplinary and international cooperation, and actively seeking external sources of research funding.

S.1. DEVELOPMENT OF INTERDISCIPLINARY COOPERATION WITHIN THE UNIVERSITY AROUND PRAS

The benefits of interdisciplinary collaboration are well recognized in science studies: interdisciplinary research tends to have a greater impact on the development of research fields and allows complex social and economic challenges to be addressed. In the context of developing a research culture, interdisciplinarity also provides an opportunity to promote scientific excellence throughout the institution and concentrate resources on the most promising areas of research.

The SWOT analysis revealed that PK already has teams whose research has a significant impact on global science, the ability to attract external (grant) funding, and high socio-economic utility. At the same time, these areas of research are interdisciplinary in nature—in the context of a university specializing in engineering and technical sciences, this creates an opportunity to include researchers from all units in the teams and, as a result, to spread a culture of excellence throughout the University. PK will implement measures that will encourage and facilitate intra-university cooperation in Priority Research Areas. The ultimate goal of these activities will be to establish university-wide research centers.

The primary mechanism for supporting interdisciplinary cooperation will be a university-wide seed grant program. It will be aimed at researchers who have a chance of obtaining funding from renowned grant programs, especially framework programs. A prerequisite for obtaining funding will also be a development plan for the research team, including young researchers, and a proven interest in cooperation with foreign partners.

At the same time, the University is planning activities that will help researchers effectively search for collaborators at PK Krakow University of Technology to develop a given research area (e.g., creating a research competence platform, community networking events), as well as remove the main barriers to cooperation (e.g., university regulations that discourage cooperation).

S.2. DEVELOPMENT OF A GRANT CULTURE

Cooperation in research projects is one of the most effective methods for long-term development of the ability to conduct world-class research and collaborate with foreign scientific institutions and industrial partners. The SWOT analysis showed that the effectiveness of obtaining grants from national and international agencies is an aspect of PK's operations that needs improvement.

One of the strategic priorities will be the gradual development of a grant (project) culture. The target state will be a situation in which researchers treat applying for grants as the norm in scientific activity. The grant culture will be developed from the ground up. Doctoral students will undergo mandatory training on obtaining grants and will be required to submit applications to agencies. Young researchers will be involved in projects funded by the seed grant program. A series of grant training courses will be launched for all employees. The role of grant activity in employee evaluation will be increased and will be subject to assessment for promotion to academic positions. The transition to the group of research staff (exempt from teaching duties) will depend on obtaining funding, and the development of PRAs will be centered around researchers and teams who are most effective at obtaining funding.

At the same time, the University will develop financial incentives for grant activity and standardize rules protecting project managers' rights to indirect costs. Institutional support (development of the Project Support Center) and information support (use of IT tools, including AI, for project management) will be developed.

PK will introduce bridge financing solutions that will ensure the continuity of employment for active researchers during breaks between projects.

S.3. DEVELOPMENT OF INTERNATIONAL PARTNERSHIPS THAT WILL ENABLE EFFECTIVE APPLICATIONS FOR PRESTIGIOUS INTERNATIONAL GRANTS

Despite rapid scientific development, PK Krakow University of Technology has not yet managed to achieve recognition in the international community. This is one of the barriers to establishing successful partnerships when applying for prestigious grants, especially from framework programs. It is strategic for PK to gradually build its recognition, enabling the University to form consortia with strong partners and increasing its chances of obtaining funding. PK will build partnerships by using widening instruments.

These activities will also enable *organizational learning* from experienced partners in the areas of research management, institutional strategy building, human resources policy, processes, and administrative support structures.

S.4. INCREASING THE IMPACT OF PUBLISHING ACTIVITIES

The impact of publications authored by the University's employees increased significantly in the previous strategic perspective, as confirmed by citation metrics in international bibliographic databases. It is crucial for the University to maintain this trend. The University's strategy includes creating a central fund for employee awards for publications in the most prestigious scientific journals and for post-conference materials, replacing faculty funds. The total amount of the awards' fund money will be increased.

It is also necessary to create mechanisms that encourage and support ambitious employees and doctoral students who have not yet published in reputable journals to undertake such activities. Appropriate training support is planned for this group.

Open-access publications and publications with shared research data are cited more often than "closed" publications. The University will develop open science and implement an open access policy by providing funds for publication fees in the most reputable open access journals, effectively enforcing the obligation to deposit publications and research data in repositories, and developing professional support for researchers in research data management.

S.5. INCREASING THE EFFICIENCY OF RESEARCH INFRASTRUCTURE USE

PK has made significant investments in research infrastructure, enabling it to conduct world-class research and meet the needs of its industrial partners. The University will continue to invest in infrastructure while ensuring its optimal use as a result of:

- developing a catalog of open laboratories that support interdisciplinarity and accessibility for external partners,
- more effective and targeted promotion of industrial services,
- obtaining accreditation for laboratories,
- improving methods of recording infrastructure use,
- introducing uniform and inclusive rules for making infrastructure available to researchers and teams from various University units, doctoral students, and students.

The University will invest in developing Laboratories of the Future, including Ultra-Precise Coordinate Measurements, Environmental Aerodynamics, Extremely Low Temperatures, and the Professor Adam Grochowalski Laboratory of Trace Analysis. These are laboratories focusing on emerging interdisciplinary research areas of unique international significance, enabling *frontier research* that pushes the boundaries of contemporary science, carried out, among others, in cooperation with leading global centers such as CERN.

PRIORITY II. STRENGTHENING RESEARCH COOPERATION WITH INTERNATIONALLY RENOWNED SCIENTIFIC INSTITUTIONS

One key factor influencing the development of scientific research is internalization. PK Krakow University of Technology is a member of the European STARS EU university alliance, has been actively cooperating with CERN since the very beginning of the institution's history, and has been a partner of the Joint Research Centre (JRC) at the European Commission since 2025. The University will take further steps to support researchers in establishing research collaborations and increasing its international recognition. The objectives of research cooperation will complement the strategic objectives concerning scientific development and, in particular, will help build partnerships that enable applications for prestigious international grants.

I.1. DEVELOPING A CULTURE OF OPENNESS AND READINESS FOR INTERNATIONAL COOPERATION

The University will strive to achieve a state where international cooperation becomes the norm in scientific activity. Programs supporting short-term and long-term mobility will be developed, taking into account the development needs and travel opportunities of people at different stages of their careers. The University will remove formal obstacles to mobility. Mobility will be taken into account in employee evaluations and promotions, and will be mandatory for doctoral students. Employees will be supported and encouraged to form international partnerships, which in the long term will enable the University to successfully obtain prestigious international grants.

I.2. INCREASING INTERNALIZATION AT HOME

PK will strive to increase the incoming mobility of researchers who will contribute to the development of research, grant, and organizational competencies in research teams, particularly in Priority Research Areas. Tools supporting internalization at home will be launched, aimed at visiting foreign professors, young researchers in *post-doc* positions, and outstanding scientists who wish to take up long-term employment at the University.

I.3. IMPROVING THE QUALITY AND ACCESSIBILITY OF ADMINISTRATIVE SUPPORT FOR PARTICIPANTS IN MOBILITY PROGRAMS

The effectiveness of mobility activities requires improved administrative support. A *Welcome Point* will be developed to support both incoming and outgoing mobility (assistance with accommodation, onboarding, scientific mentoring, etc.). The Welcome Point offer will be addressed not only to academic teachers, but also to doctoral students and undergraduates.

The University will also strive to integrate international researchers more closely, among other things, by improving the availability of information and services in English.

I.4. INCREASING THE RECOGNITION OF THE UNIVERSITY AND ITS BRAND IN THE INTERNATIONAL SCIENTIFIC COMMUNITY

PK did not manage to build its recognition in the international community. The University will undertake activities aimed at building its expert position and strengthening institutional relationships with renowned international research centers. The plan includes organizing a series of international scientific conferences at each PRA and selecting scientists to serve as "ambassadors" representing the PRAs at scientific and industry events. The University will also strive to achieve effective positioning in international university rankings by appointing a unit responsible for conducting analyses and issuing ranking recommendations.

PRIORITY III. INTENSIFICATION OF KNOWLEDGE AND TECHNOLOGY TRANSFER TO THE SOCIO-ECONOMIC ENVIRONMENT

As a University strongly focused on the development of research in the field of engineering and technical sciences, with strong links to industrial and local government partners and modern research infrastructure, PK Krakow University of Technology has en!ormous potential for the transfer of knowledge and technology to the socio-economic environment. The University will achieve the following objectives, enabling a more effective use of this potential.

T.1. INCREASING THE ACCESSIBILITY AND TRANSPARENCY OF COMMERCIALIZATION SUPPORT MECHANISMS FOR RESEARCHERS AND INDUSTRIAL PARTNERS

The weak point of the current model of knowledge and technology transfer at PK is insufficient coordination between the units responsible for commercialization. Scientists find it difficult to choose the optimal path to commercialization and do not receive expert support that is adequate to the commercialization potential.

PK will develop a cooperation mechanism (the concept of a single "entry point") for organizational units involved in commercialization to ensure adequate support for scientists and increase their involvement in commercialization. One entry point will also serve industrial partners looking for researchers to collaborate with.

T.2. STRENGTHENING THE EFFECTIVENESS OF COMMUNICATION WITH INDUSTRIAL PARTNERS

One of the factors limiting cooperation between the University and the business sector is the lack of a coherent, attractively presented, and easily accessible offer covering research competencies, laboratory resources, and specialized services.

PK will prepare a comprehensive offer including research expertise, laboratory resources, expert and training services, and opportunities for joint projects. The offer will be available on the website, with separate entry paths for external and internal stakeholders, and will be supported by an AI-based search engine enabling quick searches for competencies, teams, and services.

A person will also be appointed to act as the University's representative, responsible for actively seeking out industrial and institutional partners and initiating projects in cooperation with them. The representative's task will be to connect scientists and entrepreneurs.

T.3. RAISING THE LEVEL OF PROTECTION OF THE UNIVERSITY'S INTELLECTUAL PROPERTY AND THE LEVEL OF AWARENESS AMONG RESEARCHERS REGARDING THE COMMERCIALIZATION OF RESEARCH RESULTS

Academic teachers and technical staff are often unable to assess the commercialization potential (industrial value) of research results and commercialization opportunities (pathways). Furthermore, the lack of systematic inventory and mapping of research results in relation to market needs makes it difficult to identify solutions with the greatest commercialization potential, which means that many research results remain unused.

The University will increase the potential of units responsible for supporting the commercialization process by acquiring and developing the competencies of patent attorneys and technology brokers.

PK will introduce regular, mandatory training in the field of knowledge and technology transfer. New academic staff will undergo onboarding training, while doctoral students will receive introductory training on the principles of knowledge transfer and cooperation with the socio-economic environment.

Funding will be provided to maintain the protection of European patents.

PRIORITY IV. IMPROVING THE QUALITY OF EDUCATION FOR STUDENTS AND DOCTORAL CANDIDATES

PK Krakow University of Technology has extensive experience in educating engineers who are highly valued by employers. The value of the University's educational offer stems from: the connection between its fields of study and high-quality research in engineering and technical disciplines; the broad competences of its teaching staff; and the implementation of innovative elements in the educational process, e.g., those carried out in FutureLab, which is a model incubator for student projects. The University will continue to enhance the value of its educational offering for students by strengthening the practical and project-based aspects of education and improving its quality assurance system.

At the same time, in the face of negative demographic trends, the University must cope with growing competition while striving to attract the most talented students, including intensifying efforts to recruit international students.

E.1. IMPROVING EDUCATIONAL PROGRAMS AND DEVELOPING THE UNIVERSITY'S EDUCATIONAL OFFER IN LINE WITH THE DYNAMICALLY CHANGING REQUIREMENTS OF THE LABOR MARKET AND THE MODERN ECONOMY

PK will develop and implement uniform standards for the design of study programs aimed at deepening their practical nature and the proper use of new teaching methods and techniques, including project-based learning, as well as streamlining the process of organizing teaching activities. These measures will enhance the consistency and modernity of the University's educational offer and expand graduates' practical skills, thereby contributing to their better adaptation to current labor-market requirements.

The University will develop research club activities as an effective and proven way to integrate research and education, fostering practical skills and innovative attitudes. Particular emphasis will be placed on the development of project-based learning, carried out in interdisciplinary teams and in cooperation with industrial partners, to allow students to gain experience aligned with the real challenges of the modern economy. PK Krakow University of Technology will provide appropriate organizational and personnel support as well as motivational tools for students and supervisors.

Support for FutureLab as a model unit promoting the activities of research clubs will be increased. The University will take steps to ensure funding for all student projects that meet the quality threshold.

PK Krakow University of Technology will improve mechanisms for cooperation with representatives of the socio-economic environment in the field of education, including by activating program activities with the socio-economic environment, organizing a series of networking activities, and creating a "stock exchange" of thesis topics in cooperation with industry.

Due to the requirements that project-based and practical education places on teachers, the University will develop a program to build teaching competencies in modern teaching methods (PBL, *blended learning*, AI in teaching), as well as interpersonal skills, communication, group management, and the ability to respond to unusual behavior.

An important component of modern engineering education is the development of competencies in the areas of management and entrepreneurship. The University will strive to provide a wide range of high-quality educational opportunities in this area at all levels, including postgraduate studies.

The University will also develop its offer in the field of micro-credentials and lifelong learning, responding to the growing labor-market demand for flexible, modular ways to improve qualifications. This will enable the creation of educational paths tailored to the individual needs of students and working professionals, supporting the idea of life-long learning.

E.2. STRENGTHENING MECHANISMS FOR ENSURING THE QUALITY OF EDUCATION

PK Krakow University of Technology will establish university-level structures for the education quality assurance system, ensuring maximum integrity, effectiveness, and transparency. The new system structure will enable more efficient monitoring of the education process, the initiation of improvement measures, and the faster implementation of corrective actions, allowing future efforts to obtain a comprehensive assessment from the Polish Accreditation Committee. These activities will require improvements to the system for reporting data on education planning and implementation as a means of supporting pro-quality and optimization decisions.

In the area of education, the University is undergoing a profound digital transformation that will enable effective management of the quality of education. The University will strive to implement an ecosystem of modern applications that comprehensively support education-related processes: from designing study programs, through monitoring their implementation and learning outcomes, to collecting feedback from students and the socio-economic environment. These systems will be integrated with the University database, enabling ongoing monitoring of quality indicators.

Effective action and decision-making in the education system requires support in the form of reliable and comprehensive data, analyses, and reports. The University will identify and assign responsibilities involving the preparation of analyses based on integrated information concerning recruitment, the course of studies, subject evaluations, staff workload, graduate outcomes, and labor market research. Modern analytical tools will be used to create interactive dashboards and periodic reports. In addition, an IT tool will be developed to analyze market competency needs based on public data and information from socio-economic partners.

E.3. IMPLEMENTATION OF AI-BASED SOLUTIONS IN TEACHING PROCESSES

The development of artificial intelligence poses significant threats and opportunities for teaching activities. On the one hand, the overuse of AI undermines the purpose of academic education, devalues the importance of formal criteria for determining professional competence, and reduces students' motivation to learn. On the other hand, incorporating AI into the education process enables, among other things, access to vast knowledge resources, instant information, individualized education, and the easy creation of interactive tasks. It also provides an essential response to the needs of employers who value efficiency. It is crucial for the University to develop creative and practical problem-solving skills, as well as competencies in analysis, synthesis, and evaluation.

The University will develop and implement solutions that will enable AI tools to be incorporated into the educational process in a controlled manner. These solutions will create conditions for taking advantage of educational opportunities while mitigating the misuse of artificial intelligence. PK Krakow University of Technology will work on changes to its educational programs, adapting them to the realities of a high-tech society. Education programs will place greater emphasis on solving real-world problems and applying knowledge in unique contexts. Assessment strategies that minimize the potential for cheating using AI will

be promoted. A training program on the use of AI tools will be created for those who conduct educational classes. Ethical standards for the use of AI tools will be defined, and tools will be provided to eliminate unfair use of available technologies.

E.4. INTERNALIZATION OF THE EDUCATIONAL OFFER AND INCREASING ITS ATTRACTIVENESS TO FOREIGN STUDENTS

In its previous strategic perspectives, PK Krakow University of Technology has made significant progress in the internalization of education. The University is an active member of the STARS EU alliance of European universities and holds prestigious international accreditations from RIBA EUR-ACE® (KAUT – ENAEE) and IFLA Europe. PK is a partner in one of the largest joint study programs at the International School of Engineering (ISE) with Tianjin Chengjian University (China), covering education in fields such as architecture, landscape architecture, and, in the near future, chemical engineering.

In order to increase the internalization of education and the quality of educational offerings, there are plans to implement an integrated program for the internalization of education. The program will be based on three main pillars: English-language studies, joint education programs, and international accreditations.

Three first-cycle degree programs will be launched in English, with interdisciplinary profiles integrating educators and competencies from various faculties. The University expects high interest in its educational programs based on PK's high positions in international rankings in specific disciplines and its market recognition. The fields of study will be in line with global technological and economic trends, covering IT skills, innovative technologies and materials for the modern economy and industry, and smart solutions for infrastructure management and development. The offer will complement the existing second-cycle programs taught in English.

At the same time, joint programs will be developed at the second cycle of studies, in the form of joint studies or double degrees, with particular emphasis on partner universities from the STARS EU network and other universities in attractive locations and with high prestige.

The third pillar of internalization will be obtaining international accreditations for technical fields of study, thereby increasing the competitiveness of the educational offer both nationally and internationally. Particular emphasis will be placed on accreditations from the Accreditation Committee for Technical Universities (KAUT), which is a member of the European Network for Accreditation of Engineering Education (ENAEE).

The internalization of the education program will be reinforced by complementary measures, including: developing a support system for foreign students (integration, efficient service), ensuring universal access to internalization (every first- or second-cycle student will have the opportunity to participate in physical or virtual mobility), and effective international promotion.

E.5. IMPROVING THE QUALITY OF THE EDUCATIONAL EXPERIENCE FOR STUDENTS BY CREATING USER-FRIENDLY SOLUTIONS AND SUPPORTING THE INFORMED RECRUITMENT PROCESS

Like other Polish universities, PK is facing the problem of drop-outs. The University will strive to minimize this phenomenon through activities that support student integration and adaptation (e.g., introducing the subject "Introduction to Studying" across all first-year, first-cycle programs).

The effect of conscious recruitment will be achieved through expanded cooperation between PK Krakow University of Technology and secondary schools. A centrally coordinated process for promoting educational opportunities in secondary schools will be developed and implemented. The promotion will be carried out primarily through the organization of activities in schools in Krakow and the surrounding region.

For three years now, PK has had an Academic Community Support Center (CeWSA), which deals with the prevention of psychosocial risks and provides psychological support to the entire academic community. The University's strategic goal is to maintain psychological support for students, including students with special needs and disabilities.

The University will also develop activities to ensure equal access to high-quality education for all students, including those with disabilities and special educational needs. PK will implement solutions based on the principles of *Universal Design for Learning* (UDL) to increase the accessibility of the teaching process, the flexibility of educational forms, and the individualization of teaching and assessment methods. The University will systematically support students with disabilities through organizational and educational adjustments, counseling, and cooperation with specialized units that support the educational process.

The University will strive to significantly increase the number and quality of spaces where students can comfortably spend time between classes, and to improve their accessibility for people with special needs.

E.6. PROVIDING DOCTORAL STUDENTS WITH TRAINING THAT MEETS THE NEEDS OF RESEARCH AND INTERNATIONAL COOPERATION BASED ON A GRANT CULTURE AND FLEXIBLE PROGRAMS

PK will develop an educational model at the Doctoral School that promotes the development of a grant culture, mobility, and interdisciplinarity, and enables individual research development. A common standard for educational programs will be established, along with regulations that strengthen interdisciplinarity and the individual organization of education. Doctoral students will be required to participate in international mobility and submit a grant application to the research funding agency.

PRIORITY V. PROFESSIONAL DEVELOPMENT OF ACADEMIC STAFF

D.1. DEFINING CLEAR ACADEMIC CAREER PATHS

Effective professional development and talent management require clearly defined academic career paths. This is the basis for consistent solutions in the areas of hiring new employees, academic promotion requirements, employee evaluation, incentive systems, support for skills development, and long-term staff development planning. The University will define four career paths - research and teaching, research, teaching, and implementation - along with rules for transitioning between these paths.

Due to the need to support design culture and internalization, requirements for grant activity appropriate for a given path (research, teaching, implementation grants) and for international cooperation will be specified for all paths. The condition for transitioning to the research path will be the employee obtaining grant funds.

The implementation path will be formulated with those researchers in mind for whom the transfer of knowledge and technology from the socio-economic environment to organizations is a priority.

D.2. ENSURING A CONSISTENT INCENTIVE SYSTEM THAT SUPPORTS THE DEVELOPMENT OF ACADEMIC STAFF

Employee performance reviews will be a key component of the incentive system. The assessment will be of an expert nature. In accordance with CoARA recommendations, the employee evaluation will take into account various evaluation criteria (research, teaching, organizational, commercialization, etc.) related to the University's strategic goals. The evaluation criteria will vary depending on the academic development path and career stage. Particular emphasis in the evaluation will be placed on grant activity, which will also apply to teaching staff (applying for teaching grants), and international cooperation.

The most important area of assessment will be the employee's progress in career development. Employee performance reviews will be based on the Individual Professional Development Plan. This is a plan for improving competencies, prepared periodically by the supervisor in consultation with the employee at the beginning of the period covered by the assessment.

Employee evaluations will directly translate into remuneration through an annual financial bonus system, thereby becoming the sole basis for selecting leaders at faculties. The University will move away from an extensive system of rewards for activity in order to ensure consistency in the incentive system. Exceptions will include: a program supporting publications in leading journals, the possibility of receiving remuneration for project activities, and honorary awards from the Rector.

D.3. PROVIDING SYSTEMIC SUPPORT FOR THE DEVELOPMENT OF ACADEMIC STAFF COMPETENCIES

In order to develop the competencies of all employee groups, PK established the Staff Excellence Office. The University will develop systemic support for the development of researchers' competencies through training cycles in key areas related to conducting research, academic career management, and international cooperation. The support offer will be developed taking into account the requirements set at various stages of academic career paths and Individual Professional Development Plans.

The training will be directed in particular to employees who plan to apply for prestigious grants, take on leadership roles in research teams, and engage in knowledge and technology transfer to the socio-economic environment. The thematic scope will include, among others, research and publication skills (writing articles in accordance with the requirements of leading journals, presenting results at international conferences, open science principles and research data management, data analysis and *data literacy*, use of AI and digital tools in research), commercialization and protection of results (intellectual property, commercialization paths, cooperation with industry), project and research career management (planning, budgeting, risk, leadership, mentoring, grant writing), as well as soft and international skills (language courses, cultural differences, equality and inclusiveness, interpersonal and communication skills, popularization of research results).

The University will implement a program for the development of academic teachers' teaching skills, aimed at systematically improving the quality of education through the development of modern teaching methods (including PBL, *blended learning*, the use of AI in teaching) and interpersonal, communication, and organizational skills, including the ability to respond to difficult situations.

D.4. DEVELOPMENT OF A HUMAN RESOURCES POLICY CONSISTENT WITH *HR EXCELLENCE IN RESEARCH*

PK Krakow University of Technology has been awarded the *HR Excellence in Research* logo, a distinction granted to scientific institutions for providing excellent working conditions for researchers and transparent recruitment processes. The University will continue to implement the principles of *HR Excellence in Research* and the OTM-R policy, ensuring open, transparent, and merit-based HR processes.

As part of its strategic activities, the University will develop a staff development policy, creating conditions conducive to self-improvement and raising the competence of employees, including through Individual Professional Development Plans and a mentoring support system. Appropriately tailored development support will be provided to all employees at every stage and path of their professional development. Flexible career paths will be developed to enable greater alignment of professional development with the individual aspirations and potential of employees.

Particular emphasis will be placed on improving working conditions, both in terms of infrastructure (e.g., premises) and social aspects, including psychological support and *work-life balance*. The University will conduct its activities in accordance with the fundamental principles of equality, justice, and tolerance,

ensuring equal opportunities for every member of the academic community. PK Krakow University of Technology implements an approach consistent with the equality policy in force in the European Research Area, promoting diversity and inclusiveness.

Further implementation of the OTM-R principles will focus on improving recruitment practices and consolidating uniform standards so that recruitment processes are fully open, transparent, and merit-based. The University will also strengthen activities promoting international mobility.

The University will take steps to reduce bureaucracy in internal processes in order to limit excessive administrative burdens and create a working environment conducive to scientific, teaching, and organizational development.

PRIORITY VI. IMPROVING THE QUALITY OF UNIVERSITY MANAGEMENT

Both the effective implementation of the main tasks of a technical university (conducting research, education, knowledge and technology transfer) and the effective implementation of strategic objectives require the support of an efficient administration. The SWOT analysis showed that the University has significant deficits in the area of management: insufficient process management, insufficient management information, limited effectiveness of administration in support processes, as well as ineffective internal communication and communication with external stakeholders. The main cause of these deficits is an organizational silo structure. The University has taken the first steps towards increasing central control and coordination of activities (e.g., implementation of electronic document circulation, establishment of the Staff Excellence Office). In the new strategic perspective, PK Krakow University of Technology will implement the following objectives to improve the quality of university management.

M.1. IMPROVING THE QUALITY OF MANAGEMENT BASED ON THE PROCESS MANAGEMENT MODEL

PK will be one of the first universities in Poland to strive for full implementation of process management. The implementation will involve *reengineering* key processes rather than making isolated adjustments. A process analysis team will be appointed, comprising representatives from key units and individuals familiar with the University's operations. The team's role will be to identify and map key processes (main and supporting), analyze effectiveness, design changes, and develop a methodology for process improvement. The University will conduct training for management and administrative staff to build awareness of the importance of process management.

The University will pay particular attention to improving the processes for supporting Priority Research Areas, ensuring the quality of education, and increasing the intensity of transfer (commercialization and research services).

M.2. PROVIDING SYSTEMIC SUPPORT FOR THE DEVELOPMENT OF ADMINISTRATIVE AND TECHNICAL STAFF COMPETENCIES

PK Krakow University of Technology will develop the competencies of its administrative and technical staff so that they can provide strong support for the implementation of the University's processes and the design of new organizational solutions. Both groups will be covered by a new employee evaluation system based on Individual Professional Development Plans. The new employee evaluation system will address the fundamental problem, which until now has been the lack of mechanisms for monitoring the effectiveness of individuals in management positions. Career advancement paths will be developed for administrative and technical staff.

Mechanisms will be put in place to identify the development needs of administrative and technical staff, and a skills development program will be prepared for these groups.

Particular emphasis will be placed on improving the skills of management staff - both administrative and technical personnel, as well as academic teachers. Management staff will be required to participate in a mandatory training program covering, among other things, the development of team management skills (at all management levels) and strategic and process management (at senior management levels).

M.3. ENSURING HIGH-QUALITY MANAGEMENT INFORMATION TO SUPPORT THE DECISION-MAKING PROCESS

PK will continue its efforts to create a management information reporting and processing system. This system will support the management of academic and administrative processes by providing easily accessible, appropriately processed information that allows for monitoring the effectiveness of the University's activities, predicting trends (e.g., in recruitment, graduate employment, and the development of fields of study), and making data-driven decisions. A reporting policy will be created, along with an integrated system of dashboards and automated reports presenting key indicators for the University (recruitment, teaching, research, finance, HR).

M.4. STRENGTHENING THE EFFECTIVENESS OF COMMUNICATION WITH EXTERNAL STAKEHOLDERS

PK has an established reputation in the region. However, the University's recognition at home and abroad does not reflect its actual level of research and education, which is one of the obstacles to its development. PK Krakow University of Technology will strive to build a strong, recognizable brand as a University that combines research with engineering, capable of solving real problems of industrial partners and other stakeholders in the socio-economic environment (primarily local governments and public institutions), attractive to students planning a career in engineering, as well as partners from domestic and foreign research centers. External communication will be integrated, particularly in areas where it has been

underdeveloped to date: offerings for industry, foreign students, secondary schools, and the popularization of science.

PK Krakow University of Technology will develop lasting partnerships with its students and graduates in order to fulfill its mission in the areas of teaching, research, cooperation with the socio-economic environment, and promotion. The University will leverage the potential of the PK Business Club and the PK Alumni Association to increase its impact on industry partners and local governments.

M.5. STRENGTHENING THE EFFECTIVENESS OF INTERNAL COMMUNICATION

The university will strive to create a unified, personalized, and multilingual information circulation system that provides easy access to current procedures, documents, and resources. The central tool will be a modern intranet containing a catalog of services, document templates, sets of procedures, a knowledge base, a calendar of university events, and news, with the ability to filter and personalize messages according to the user's role. Key regulations, personnel applications, and guides for students and employees will be translated into English.

At the same time, PK Krakow University of Technology is planning activities using AI technology that will provide researchers with, among other things, personalized information about opportunities to apply for external funding and about potential collaborators.

M.6. DEVELOPMENT OF AN IT ECOSYSTEM SUPPORTING TEACHING, RESEARCH, AND MANAGEMENT, AS WELL AS A SECURITY MANAGEMENT SYSTEM

PK will implement a comprehensive digital transformation strategy aimed at creating a coherent, flexible, and innovative IT ecosystem. The new organizational model will enable the unification and standardization of infrastructure, as well as the centralization of services and active fulfillment of the IT needs of organizational units by specialized, centralized structures. This will allow academic and administrative staff to focus on research, teaching, and cooperation with the socio-economic environment. Clear procedures, uniform operating models, and ongoing process modeling will enable automation of activities, increasing their efficiency and transparency. IT integration with the University's processes will promote better cooperation between units, effective resource management, and rapid implementation of innovations.

Digital transformation will be a comprehensive process encompassing technology, organizational culture, security, data management, international cooperation, modern IT management, green transformation, and the sustainable development of competencies across the entire University community. Great emphasis will be placed on ensuring digital accessibility for people with special needs.

Centralization, standardization, and automation of IT services will enable the University to achieve a new level of efficiency, security, and innovation, making it a leader in digital transformation. Process automation will enable quick responses to the University's changing needs and eliminate repetitive tasks, while clear

procedures will make it easier for users to use IT services and obtain the support they need. It is crucial to implement a business continuity plan, conduct regular audits and security tests, and develop cybersecurity competencies at all levels of the organization. Centralizing purchases, optimizing IT resource management, and consolidating contracts will allow for better use of existing and acquired funds. The development of digital skills, training, and a culture of innovation will make PK a place where modernity meets knowledge.

The University will consistently build a centralized security management model, developing operational processes, technologies, and tools that strengthen information security and cyber resilience. At the same time, PK will improve its Information Security Management System, ensuring that internal policies remain compliant with legal regulations and industry best practices. An integral part of this model will be building a culture of security through continuous education of the PK community, developing awareness of threats, and shaping good practices for using the systems. In this way, security management will cover both technical solutions and user competencies.

M.7. CREATING AN ATTRACTIVE, FUNCTIONAL, AND SUSTAINABLE UNIVERSITY ENVIRONMENT THAT PROMOTES COOPERATION, LEARNING, ACADEMIC LIFE, AND NATURE

The University's investment activities will focus on building a modern, safe, and biodiverse space that is conducive to work, study, integration, and cooperation. These investments are planned in a sustainable manner, in consultation with users and tailored to the real needs of the academic community and the natural environment, so that the University becomes a place that is friendly to nature and attractive to the academic community.

Particular emphasis is placed on creating sustainable, multifunctional spaces that meet the diverse needs of the community and the environment, from conference and event rooms to shared laboratory spaces, places for work, rest, and integration, and valuable green areas that promote biodiversity. The University's facilities are accessible to people with special needs, including disabilities – students, researchers, doctoral students, administrative and technical staff, as well as visitors to PK. Infrastructure development also includes modernizing and expanding the University's facilities and campuses, as well as activities related to developing the University's green areas.

The University will also develop spaces and initiatives that promote the integration of the entire PK community, building a shared identity and sense of pride. Spaces designed for collaboration, relaxation, events, and intergenerational meetings are intended to foster relationships between students, doctoral students, researchers, and administrative staff, creating a cohesive and open academic environment.

A strong asset of our University is the expertise of its own specialists—among them architects, landscape architects, and experts in transport engineering, civil engineering, and environmental engineering. Their knowledge and experience will be used in designing new spaces in the spirit of participation and social responsibility. The University will implement investments in line with sustainable development goals, emphasizing energy efficiency, biodiversity, and the quality of public spaces.

Our campuses are located in places with a rich history, and the planned activities will respect and creatively develop this context, fitting into the urban fabric of Krakow. The University's spaces are intended to be not only functional, modern, and environmentally valuable, but also open and welcoming to the city's residents, becoming places for meeting, cooperation, and building relationships between the University and its surroundings.

In this way, investments become a tool for shaping the future—a modern, socially responsible, and sustainable space that strengthens the University's mission and builds its lasting presence in Krakow's landscape

STRATEGY IMPLEMENTATION INDICATORS

PRIORITY I. INCREASING THE IMPACT OF THE UNIVERSITY'S SCIENTIFIC ACTIVITIES ON THE DEVELOPMENT OF GLOBAL SCIENCE

1. Number of scientific articles in the international Scopus database
2. Percentage of scientific articles in the top decile of most cited articles
3. Area-normalized citation count – FWCI
4. Percentage of scientific articles prepared in international cooperation
5. Percentage of scientific articles in the most influential journals
6. Number and value of research projects receiving funding from:
    a. national agencies and the Foundation for Polish Science
    b. framework programs
    c. widening tools
    d. foreign agencies and other agencies
7. Effectiveness of acquiring research projects
8. Level of satisfaction with the ecosystem supporting project application and management
9. Number of laboratories and other units covered by the University's joint offer
10. Number of accredited laboratories
11. Number of accredited services

PRIORITY II. STRENGTHENING RESEARCH COOPERATION WITH INTERNATIONALLY RENOWNED SCIENTIFIC INSTITUTIONS

1. Percentage of academic teachers participating in international mobility
2. Percentage of foreign academic teachers (FAT) in relation to the percentage of FAT in Poland and the OECD
3. Number of visiting professors
4. Number of people in post-doc positions
5. Level of satisfaction of participants in mobility programs
6. Positions of the University and fields of study in national and international rankings
7. Number of international conferences related to PRAs
8. Number of participants in international conferences related to PRAs
9. Number of PK *top-speaker* activities in key national and international events

PRIORITY III. INTENSIFICATION OF KNOWLEDGE AND TECHNOLOGY TRANSFER TO THE SOCIO-ECONOMIC ENVIRONMENT

1. Profit from direct commercialization
2. University profits from the activities of *spin-off* companies and special purpose vehicles
3. Number and value of studies and services performed for external partners
4. Number of intellectual property rights obtained - domestically and abroad

5. Number of start-up companies from the PK environment
6. Number of grants implemented in consortia with representatives of the socio-economic environment
7. Number of employees trained in intellectual property protection
8. Level of satisfaction with the operation of a single "entry point"

PRIORITY IV. IMPROVING THE QUALITY OF EDUCATION FOR STUDENTS AND DOCTORAL CANDIDATES

1. Percentage of practical classes in study programs
2. Number of students participating in the Design Education course
3. Number of hours in the study program completed by lecturers from the socio-economic environment
4. Number of theses completed in cooperation with the socio-economic environment
5. Percentage of first-cycle students continuing their education at the second cycle at PK
6. Level of graduate satisfaction with education
7. Percentage of foreign students at the University in relation to the percentage of foreign students in Poland and the OECD
8. Number of double degree and joint degree programs
9. Number of internationally accredited programs
10. Percentage of students who participated in mobility
11. Percentage of students dropping out of education in the first year of studies
12. Percentage of doctoral students participating in international mobility

PRIORITY V. PROFESSIONAL DEVELOPMENT OF ACADEMIC STAFF

1. Number of people receiving advice on developing their academic career path
2. Number of employees covered by the competency development program – broken down by type of competency

PRIORITY VI. IMPROVING THE QUALITY OF UNIVERSITY MANAGEMENT

1. Level of satisfaction with the quality of university management
2. Level of user satisfaction with external communication tools
3. Level of user satisfaction with internal communication tools
4. Level of user satisfaction with IT systems