



DEVELOPMENT STRATEGY

2020-2030



The recent years have brought enormous changes in higher education. There are new development opportunities ahead of us, but we also face significant threats. Our development program should be flexible enough to allow timely consideration of the changes taking place around us. Above all, it should be clearly defined to maximize the probability of achieving our goals. These requirements are satisfied in the Development Strategy of the Faculty of Chemistry at the Gdańsk University of Technology, which is presented here in this document.

**‘However beautiful the strategy, you should occasionally look at the results’
– Winston Churchill**

The strategy’s aim is to establish an important role for the Faculty at a national, European and international level, and to create favourable conditions for the progressive introduction of innovative education programs and teaching methods. Achieving this will be entirely within our reach as long as the strategic tasks presented here are fully understood by all of us at the University, both staff and students.

There is no golden mean for an effective development strategy, and there is no list of projects whose fulfilment will guarantee success. However, the strategy presented here sets a goal and proposes a path toward that goal. I am convinced that the coherence of our actions aimed at implementing this strategy will enable the harmonious and dynamic development of the Faculty of Chemistry, thus contributing to the implementation of our vision for both the Faculty and the University as a whole.



**Dean of the Faculty of Chemistry
Prof. dr hab. inż. Agata Kot-Wasik**

2020–2030 DEVELOPMENT STRATEGY

The 2020–2030 Development Strategy of the Faculty of Chemistry of the Gdańsk University of Technology is closely related to the resolution of the University Senate of 30 September 2020. The University's 2020–2030 Development Strategy, which sets out the vision for the University as a whole, states that

‘Gdańsk University of Technology is a research university recognized throughout the world, setting new directions of research, providing flexible education tailored to individual needs, caring for the humanistic education of engineers, creating innovations for future generations, serving society and people, and ensuring for the Gdańsk agglomeration the status of one of the leading academic centres in the country’.



THE FACULTY OF CHEMISTRY'S DEVELOPMENT STRATEGY ADDRESSES THE FACULTY'S

- **VISION AND MISSION**

- **GENERAL STRATEGIC GOALS, AND**


- **SPECIFIC STRATEGIC GOALS DEFINED FROM THE FOUR PERSPECTIVES OF SCIENCE, EDUCATION, INNOVATION, AND SOCIAL COMMITMENT**

The Strategy was developed based on the SWOT method



VISION AND MISSION

The Faculty of Chemistry of the Gdańsk University of Technology, as an organizational unit of the University and a conscious contributor to the development of science, technology and culture, shapes fundamental attitudes of patriotism, responsibility, social activity, respect and tolerance, honesty and justice in the academic community, and it promotes both etiquette and ethical principles in the field of science.



The Faculty provides education at all levels – from engineering, master’s and doctoral studies (including implementation doctorates) to participation in the Faculty’s research activities, grant programmes and other projects.

Our knowledge and experience are rooted in a very rich tradition, yet we remain firmly oriented toward the requirements of a changing environment and ready to respond to new challenges. In developing the strategy, the Faculty implemented the objectives set out in national strategy documents regarding science and higher education development in Poland. The overriding goal at a national level is a significant improvement in the quality of education and a significant increase in the competitiveness of research

The Faculty of Chemistry, aware of its strengths and weaknesses as well as the socio-economic opportunities and threats it faces, has formulated a development vision for the next ten years. The main goal is to strengthen the Faculty on three basic levels: research, education and socio-economic cooperation.

A hand wearing a blue nitrile glove is shown from the left side, with the index and thumb fingers extended. A glowing, semi-transparent molecular structure, resembling a long-chain hydrocarbon or a similar organic molecule, is held between the fingers. The background is a soft, out-of-focus blue gradient. The molecular structure is composed of white and light blue lines and dots, with some red dots at the ends of the chains.

GENERAL STRATEGIC GOALS

The Faculty of Chemistry will work toward the following strategic goals by improving the qualifications of its staff as well as through the rational use and development of its infrastructure.

RESEARCH

- Maintain the Faculty's A+ scientific research rating and strengthen its scientific image
- Attain academic qualifications in chemical engineering
- Improve the quality of the Faculty's research
- Implement interdisciplinary projects, including collaboration with both Polish and foreign universities
- Support the development of young scientists and the establishment of new research groups

EDUCATION

- Ensure high-quality education
- Adapt the Faculty's educational offer to current economic and social needs
- Continuously widen the educational offer and promote lifelong learning
- Employ modern educational methods, including online learning

INNOVATION

- Develop technologies of strategic economic importance
- Seek innovative solutions to modern societal challenges
- Extend the scope and increase the effectiveness of research commercialization
- Develop close cooperation with entities from the economic environment in the field of commercialization of research results and implementation of innovative technologies

SOCIAL COMMITMENT

- Cooperate with local authorities, schools, entrepreneurs and businesses
- Educate young people according to the 'knowledge-based society' model
- Better prepare graduates for fulfilling social and professional roles



SWOT ANALYSIS

of the Faculty of Chemistry's
current position

Resources	Strengths	Weaknesses
Human	<ul style="list-style-type: none"> • Large number of employees with doctorate degrees and professor rank • Many research teams • Outstanding research units • Large number of academic promotions • Courses and training for employees 	<ul style="list-style-type: none"> • Varying level of scientific effectiveness among different teams • Limited number of visiting scientists • Difficulty in finding new highly qualified employees
Financial	<ul style="list-style-type: none"> • Highly efficient research and infrastructure fundraising 	<ul style="list-style-type: none"> • Low success rate in obtaining funds from the National Science Centre • Low revenues from R&D work • Varying levels of fundraising effectiveness among different faculty units
Technical	<ul style="list-style-type: none"> • Well-equipped didactic classrooms • Modern scientific equipment • Progressive modernization of infrastructure 	<ul style="list-style-type: none"> • High infrastructure maintenance costs • High operating costs • Costly renovation required for some infrastructure and equipment
IT	<ul style="list-style-type: none"> • Dynamic development of IT systems • Systematic improvement to wireless network access 	<ul style="list-style-type: none"> • Limited financial resources for the development of laboratory and IT equipment

Activity	Strengths	Weaknesses
Education	<ul style="list-style-type: none"> • Versatile learning opportunities (various fields of study, postgraduate studies, training courses) • Courses offered in English • Accredited fields of study • Educational programs modified according to external stakeholder comments • High rating of teachers in student surveys 	<ul style="list-style-type: none"> • Unsatisfactory level of knowledge among study candidates • Student numbers vary between years • Unwillingness of students to pursue education at the MSc level
Research	<ul style="list-style-type: none"> • Strong chemical sciences discipline • Faculty awarded the highest research category (A+) in the national universities parameterization • Strong research teams • Collaboration with domestic and foreign research centres • Many national and European patents • High innovation potential 	<ul style="list-style-type: none"> • Insufficient cooperation between research teams • High faculty- and university-level overheads
Innovation	<ul style="list-style-type: none"> • Many national and European patents • High innovation potential 	<ul style="list-style-type: none"> • Insufficient industry cooperation in several teams • Poor commercialization of research results

Activity	Strengths	Weaknesses
Organization and management	<ul style="list-style-type: none"> • Highly qualified management staff • Unification of regulations within the University 	<ul style="list-style-type: none"> • Changing regulations • Insufficient cooperation between the University's organizational unit
Quality	<ul style="list-style-type: none"> • Positive assessments by the State Accreditation Commission • Adaptation of the quality system to changing regulations • Systematic development of pro-quality procedures • Implementation of an effective teachers and staff evaluation system; high level of student participation in the questionnaires 	<ul style="list-style-type: none"> • Reluctance of employees to rapidly implement the proposed improvements
Resource development	<ul style="list-style-type: none"> • Constant improvement of infrastructure; large investments made in premises and equipment • Social facilities and relaxation zones for employees and students • Staff interested in acquiring funds for resource development • Plans for new infrastructure investments 	<ul style="list-style-type: none"> • Insufficient financial resources to accelerate the development
Collaboration	<ul style="list-style-type: none"> • Systematic development of cooperation with economic environment units • Development of cooperation with other universities and research institutes 	<ul style="list-style-type: none"> • Insufficient participation of external stakeholders

Determinants	Enabling conditions	Threats
University level	<ul style="list-style-type: none"> • Development of IT system 	<ul style="list-style-type: none"> • Staff overloaded with administrative duties
Regional	<ul style="list-style-type: none"> • Good cooperation with economic environment units • Constantly evolving cooperation with local government bodies, schools and offices 	<ul style="list-style-type: none"> • Limited cooperation with industry • Decrease in demand for highly qualified employees in the region
National	<ul style="list-style-type: none"> • High status of the Faculty • Favourable geographic location • Large number of grant competitions / possibility of obtaining funds for activities 	<ul style="list-style-type: none"> • Low educational level of secondary school leavers • Changes in criteria of the universities parametric evaluation
International	<ul style="list-style-type: none"> • Possibility of international cooperation in scientific research through various types of competitions • Various internship programs at renowned universities • Intensively developing cooperation with China in the field of teaching 	<ul style="list-style-type: none"> • Little interest in cooperation from foreign industry • Weak international position of the University • Pandemic-related problems



SPECIFIC STRATEGIC GOALS



Research

- R1. Constant scientific development of academic teachers
- R2. Improving the efficiency of doctoral studies and the doctoral school
- R3. Increasing the number of research projects
- R4. Increasing the degree of research results commercialization
- R5. Intensifying cooperation with academic centres in Poland and abroad
- R6. Rewarding high-quality results of scientific activity (publications in high-score journals, patents and implementations)

Education

- E1. Effective use of the internal education quality assurance system; development of modern teaching methods
- E2. Involving industrial partners in the creation of programs and implementation of the education process; increasing cooperation with members of the Faculty of Chemistry Consulting Council
- E3. Student participation in the Faculty's research activities
- E4. Developing and disseminating online education methods
- E5. Promoting the educational offer
- E6. Cooperating with the Student Governmental Committee and Doctoral Students Governmental Committee in the field of education

Innovations

- I1. Increasing the number of R&D projects
- I2. Developing cooperation with entrepreneurs in order to determine current innovation needs
- I3. Promoting and rewarding the involvement of employees, doctoral students and students in innovative activities
- I4. Financially supporting patenting processes and implementing innovative solutions
- I5. Improving laboratory and technological facilities and modernization of infrastructure

Social commitment

- S1. Popularizing science in society
- S2. Promoting the socio-economic development of the country and the region
- S3. Building strategic partnerships with economic partners
- S4. Constantly developing cooperation with local government administration and social partners



**REALIZATION
OF STRATEGIC
GOALS**



We should move away from rigid attachment to strictly defined regulations in favour of searching for novel solutions and improvement of the existing ones. This approach will ensure better adaptation to a changing environment, which is particularly important due to the Strategy's ten-year timeframe.

While the current instruments for financing and implementing innovations are known, changes to these in the coming years are difficult to predict. Therefore, we must be proactive in pursuing, adapting to and whenever possible shaping the constantly evolving reality.

The Faculty of Chemistry will work toward the defined strategic goals by improving the qualifications of its staff and rationally using and developing its infrastructure. We will pay particular attention to encouraging individuality and promoting outstanding individuals.

STRATEGY

IMPLEMENTATION TOOLS

Research

- Financial rewards for the best publications by staff
- Mini-grants for young academics
- Significant reductions in teaching loads for leading academic staff members
- Motivating staff to obtain grants from external sources (e.g., National Centre for Research and Development, Ministry of Science and Higher Education)
- Promoting participation in European programs
- Support for scientific contacts with foreign universities (including those in Ukraine, Belarus, Lithuania and China)
- Scholarships for all PhD students

Didactics

- Review of programs in order to eliminate obsolete content
- Consultations with alumni and industry representatives
- Ensuring access to modern equipment in the education process
- Individual study program for outstanding students
- Awards for thesis and/or diploma scientific research projects published in top international journals
- Awards for theses and/or diploma projects conducted on behalf of industry
- Support for staff members acting as supervisors for foreign students and doctoral students

Collaboration

- Developing collaboration through increased involvement of the Faculty's Consulting Council
- Constant search for industrial partners
- Developing international collaboration
- Sponsorship agreements

Organization

- Modification of the HR policy
- Adjusting the organizational structure of the Faculty to current needs
- Optimization of administrative and dean's office functioning to facilitate task implementation
- Improving IT support for the Faculty
- Optimization of the use of the premises' infrastructure
- Subsidy distribution strategy
- Developing indicators to monitor the effects of implementing the Strategy

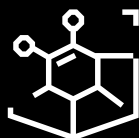


Gdańsk University of Technology
Faculty of Chemistry
11/12 Gabriela Narutowicza Street
80-233 Gdansk, Poland

Faculty Office
Building 6 - Chemistry A, room 116
Phone : +48 58 347 27 40
Fax: +48 58 347 26 94
e-mail: biuro@chem.pg.gda.pl

<https://chem.pg.edu.pl/en>





FACULTY OF
CHEMISTRY