

University of Zagreb  
Faculty of Electrical Engineering and  
Computing

# Development Strategy

2024 – 2028



UNIVERSITY OF ZAGREB

Faculty of Electrical  
Engineering and  
Computing

**PUBLISHED BY**

University of Zagreb  
Faculty of Electrical Engineering and Computing

**FOR THE PUBLISHER**

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**PRINTED BY**

ITG d.o.o. Zagreb

**EDITION**

500

Printed in Zagreb, 2024

**ISBN**

Online: 978-953-184-295-2

Printed: 978-953-184-296-9

The CIP record is available in the computer catalog of the National  
and University Library in Zagreb under the number 001240844.

# Foreword

University of Zagreb Faculty of Electrical Engineering and Computing (FER) proudly looks back on a 105-year tradition of excellence in education, research, and professional work. Through its contributions to technological and societal progress, the quality of its experts, its efficient organisation, and its strong ties to the community, FER has earned its reputation as a prestigious higher education and research institution. Its entrepreneurial spirit, along with an environment that encourages individual initiative and rapid adaptability, often positions FER as a leader and role model in Croatia.

With its outstanding experts and business leaders, as well as its partnerships on projects with Croatian companies, FER plays a vital role in advancing the technological development of Croatian society. The Faculty actively supports the growth of technological entrepreneurship and drives new technological initiatives within Croatia. Over the past decade, FER has made the most of Croatia's membership in the European Union by integrating into the European research community, competing internationally for talent at all stages of study and career progression. FER is proactive, open, and engaged in scientific, social, and cultural projects. Our aim over the next five years is to further elevate FER's standing within Europe as a leading technical faculty and research centre, measured by its quality and impact in the areas of education, research, and technological advancement. This strategic framework sets out how FER will tackle upcoming challenges and maximise the opportunities that lie ahead.

Between 2024 and 2028, FER will make major investments in infrastructure. The faculty buildings on Unska Street, which were built in the 1960s, will undergo extensive renovation and reconstruction. These investments in the physical infrastructure of the campus will improve safety, enhance working and study conditions, and increase research capacities of our facilities.

Moreover, we expect the first cycle of programme funding which will provide a fresh impetus for the Faculty's development. FER faces the challenge of increasing the international relevance and visibility of its research, as well as introducing new organisational models to achieve global impact. During this period, the Faculty will focus on further improving the quality of the student experience and study outcomes, while also expanding international partnerships. All these goals can only be achieved by continuously developing the skills of our staff and optimising processes within FER.

We approach these ambitious objectives with optimism, bolstered by our past achievements and motivated for future successes.

Dean  
prof. dr. sc. Vedran Bilas



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**01**

# **Vision, Mission and Values**



# Vision

FER's vision is to be a distinguished European higher education and research institution in the fields of electrical engineering, computing, and information and communication technology. By fostering exceptional technological talent and educating responsible leaders, FER aims to shape the future of both Croatia and Europe

# Mission

- to educate and inspire students who will drive technological and societal development in Croatia through research-led teaching, instil entrepreneurial courage in them and empower them to steer progress responsibly, for the benefit of humanity, the environment, and the community,
- to create new knowledge through internationally recognised research,
- to promote innovation in both the economy and the public sector,
- to uphold high academic and ethical standards, serving as a centre for critical thinking and intellectual inquiry, and ensuring equality among all members,
- to be a driving force behind the technological advancement of Croatian society.

# Values

- Excellence
- Innovation
- Integrity
- Connectivity
- Openness

# Overview of Strategic Development in Five Key Areas

	STRATEGIC GOAL	SPECIFIC OBJECTIVES
STUDENTS AND EDUCATION	Internationally recognised, challenging, and attractive study programmes in the fields of electrical engineering, computing, information and communication technology, and related multidisciplinary areas	<ul style="list-style-type: none"> <li>enhancing and ensuring high quality in academic programmes</li> <li>enhancing student experience and support</li> <li>increasing international recognition of study programmes</li> <li>integrating research and innovation activities into the teaching process</li> <li>improving lifelong learning programmes</li> <li>aligning the educational process with industry needs</li> </ul>
RESEARCH AND INNOVATION	Scientific excellence and innovation as drivers of new insights and technologies that will advance society	<ul style="list-style-type: none"> <li>expanding participation in competitive project funding</li> <li>strengthening international scientific collaboration and research activities</li> <li>strengthening human resources for research and development work</li> <li>improving research and development resources and infrastructure</li> <li>bolstering interdisciplinarity in scientific research</li> <li>promoting the principles of open science and open access to scientific data</li> </ul>
COLLABORATION WITH INDUSTRY	Students, academic staff, and researchers as creators of knowledge and innovations that will drive technological advancements and contribute to economic development	<ul style="list-style-type: none"> <li>promoting the provision of scientific, research, and technological services in the open market</li> <li>effective institutional management of intellectual property</li> <li>long-term and proactive management of technology transfer</li> </ul>
SOCIETY AND COMMUNITY	High academic values and ethical standards as foundations for critical thinking and intellectual inquiry, and equality among all members of the community	<ul style="list-style-type: none"> <li>ensuring equal opportunities for personal and professional development</li> <li>collaboration with the alumni community to enhance the academic, economic, and societal impact</li> <li>encouraging student and staff engagement in socially beneficial activities</li> <li>introducing professional disciplines to primary and secondary school students</li> <li>strengthening cultural, artistic, and sports activities</li> </ul>
ORGANISATION, OPERATIONS, AND INFRASTRUCTURE	High organisational efficiency with the ability to swiftly adapt to emerging trends and needs both in Croatia and globally, supported by energy-independent infrastructure and a state-of-the-art working environment	<ul style="list-style-type: none"> <li>increasing organisational efficiency and fostering a supportive organisational culture</li> <li>professional development and lifelong learning for staff</li> <li>digitalising operations</li> <li>renovating and modernising infrastructure</li> <li>advancing the green transition</li> </ul>





02

# Students and Education

# Situational Analysis (SWOT Analysis)

## STRENGTHS

- active student involvement in research activities
- admission of top secondary school graduates
- effective organisation of the teaching process
- attractiveness of available academic programmes
- highly skilled experts imparting relevant knowledge

## WEAKNESSES

- insufficient number of associates and assistants funded by the government
- inadequate facilities for delivering effective teaching and providing suitable student spaces
- highly disproportionate enrolment of student across different programmes, profiles, and modules

## OPPORTUNITIES

- integration of the teaching process with industry needs
- growing interest from international students in STEM fields
- availability of new and innovative learning technologies
- high demand for technical experts
- availability of programmes for the enhancement of teaching skills

## THREATS

- absence of students from classes due to work commitments alongside their studies
- decrease in the number of prospective Croatian students caused by unfavourable demographic conditions
- rapid technological changes outpacing the curriculum
- challenges related to infrastructure renovation

## STRATEGIC GOAL

# Providing High-Quality Education and Raising Student Standards

High-quality education will be guaranteed through the integration of teaching with the Faculty's research and innovation activities, which are carried out within the framework of national and European competitive projects and through co-operation with industry. By promoting student and staff mobility and further developing and expanding our lifelong learning and professional development programmes, we will promote internationalisation and increase the global recognition and appeal of our academic programmes in electrical engineering, computing, information and communication technology, and related multidisciplinary fields. We are proud of our participation in the Erasmus+ programme and seek to strengthen it further through the European University initiative, which is dedicated to creating alliances between European universities. We will continue to raise the standard of student life by supporting student organisations and by upgrading and expanding the infrastructure available to them.

### SPECIFIC OBJECTIVE 1

## Enhancing and Ensuring High Quality in Academic Programmes

One of FER's primary objectives is to train future highly qualified engineers in the fields of electrical engineering and computing. To achieve this, it is essential to continually refine academic programmes, adapt teaching methods through innovative approaches, and incorporate advanced technologies. Efforts will be made to reduce the size of lecture and laboratory groups to offer

a more personalised educational experience and allow instructors to provide more effective teaching. Additionally, programmes must evolve to meet the demands of the labour market and emerging technological trends, ensuring that students acquire knowledge of long-term value. To enhance teaching skills and support continuous professional development, teaching staff will be encouraged to engage in workshops and international exchange programmes. We will also work towards balancing teachers' workloads to further improve teaching quality. To identify areas for improvement and facilitate ongoing development, we will conduct surveys among students and staff, as well as perform internal assessments of teaching effectiveness.

### SPECIFIC OBJECTIVE 2

## Enhancing Student Experience and Support

Students are at the heart of our institution. To support them throughout their academic journey and help them maximise their potential, it is essential to maintain the highest standards of student support. FER is committed to increasing scholarship opportunities and providing financial aid to students from disadvantaged backgrounds, ensuring they can fully focus on their studies. We will actively promote participation in international exchange programmes at renowned universities to enrich students' experiences and broaden their networks. Additionally, we will support student associations and organisations that enhance their sporting, cultural, and social lives.

#### SPECIFIC OBJECTIVE 3

### **Increasing International Recognition of Study Programmes**

In response to the increasing globalisation, demographic trends within the country, and the objective of attracting highly qualified international students, there is a clear need to enhance the international visibility and appeal of our study programmes, particularly at the graduate and postgraduate levels. The aim is to increase the number of incoming students by promoting international exchanges and establishing new partnerships with leading technical universities. Study programmes offered in English will be actively promoted to attract more international students to FER, with a particular emphasis on students of Croatian origin. Additionally, we will encourage the development and implementation of joint study programmes with international institutions.

#### SPECIFIC OBJECTIVE 4

### **Integrating Research and Innovation Activities into the Teaching Process**

Given the rapid pace of technological progress and the challenge of continually adapting curricula to these changes, an important aspect of the teaching process will be to engage students more actively in FER's research and innovation activities. Faculty mentors will be encouraged to involve students in national and international projects carried out at FER, especially during the preparation of diploma theses. Furthermore, students will be encouraged to contribute to the writing of scientific papers. FER will also promote student innovation activities, enabling them to develop and pursue their own innovative ideas.

#### SPECIFIC OBJECTIVE 5

### **Improving Lifelong Learning Programmes**

Lifelong learning is an essential part of modern educational processes, especially in technical fields. In order to meet the needs of industry, existing postgraduate specialist programmes will be expanded, and new lifelong learning programmes will be developed, aimed either at acquiring additional knowledge or at retraining. Furthermore, the transfer of knowledge to industry will be actively promoted through seminars, courses, and workshops designed for the professional development of specialists.

#### SPECIFIC OBJECTIVE 6

### **Aligning the Educational Process with Industry Needs**

One of the Faculty's main objectives is to provide students with an education that increases their competitiveness in the labour market. To this end, there will be a concerted effort to increase the involvement of industry experts in the teaching process. This will be achieved through various means, including advisory roles, guest lectures where practical experiences are shared, and the organisation of specialist courses that provide industry-specific knowledge. In addition, the Faculty will foster links between students and industry through institutional internship programmes where students can gain practical experience in tackling real-world business challenges.





**03**

# Research and Innovation

# Situational Analysis (SWOT Analysis)

## STRENGTHS

- conducting cutting-edge research focused on the needs of industry and society
- implementation of numerous competitive national and international research and innovation projects
- promotion of researcher mobility and professional development
- support for research and technology transfer
- strong ties with Croatian industry

## WEAKNESSES

- insufficient involvement of a significant portion of academic and research staff in enhancing scientific excellence and project implementation
- lack of stronger collaboration between research laboratories and groups within FER
- limited capacity to support researchers in the preparation and execution of projects

## OPPORTUNITIES

- growing demand for cutting-edge research within industry and society
- strengthening international scientific collaboration and global recognition
- strategic investments in research infrastructure and equipment
- enhancing interdisciplinarity in scientific work
- expanding innovation activities

## THREATS

- insufficient funding for research projects
- decreasing interest in enrolling in doctoral study programmes
- declining interest in employment at the Faculty in research roles
- strong international competition

## STRATEGIC GOAL

# Advancing Scientific Excellence and Strengthening Innovation Activities

In order to achieve scientific excellence and generate new ideas and knowledge that can be transferred to industry, FER is committed to continually raising the level of scientific research, strengthening innovation efforts, and ensuring the availability of the necessary resources for research and development. The primary goal is to ensure the sustainability of research and its results through technology transfer, while increasing the international visibility of research, development, and innovation across all branches and fields of science nurtured at FER. As part of the European Research Area, FER will continue to engage in research projects that address global challenges and contribute to advancing European industrial competitiveness within five recognised clusters:

Cluster 1: Health

Cluster 2: Culture, Creativity and Inclusive Society

Cluster 3: Civil Security for Society

Cluster 4: Digital, Industry and Space

Cluster 5: Climate, Energy and Mobility

In line with the European strategic framework for research and development Horizon Europe, Croatia's National Development Strategy 2030, the Smart Specialisation Strategy until 2029, and transnational programmes of the Danube and Mediterranean regions, FER's research and innovation activities will focus on supporting the economic and service sectors of the Republic of Croatia and the European Union. As a leading research institution within the University of Zagreb, FER will actively promote participation in research initiatives under the European Space

Agency, the European Defence Agency, and the European Organisation for Nuclear Research (CERN).

## SPECIFIC OBJECTIVE 1

### Expanding Participation in Competitive Project Funding

As a research and educational institution operating in the field of technical sciences, FER must prioritise projects related to both fundamental and industrial research, as well as experimental development. To this end, the focus will be on conducting cutting-edge research that addresses the needs of industry and society as a whole. This will involve increasing the number of project proposals and securing greater funding for scientific projects through national and international competitive calls, particularly those associated with European Commission framework programmes and high-quality research initiatives (e.g. European Research Council programmes). Additionally, collaborative project proposals with significant technological and societal impact will foster closer co-operation between research laboratories and groups within FER.

## SPECIFIC OBJECTIVE 2

### Strengthening International Scientific Collaboration and Research Activities

FER's research and innovation activities in the fields of electrical engineering, computing, and information and communication technology,

with a strong support to projects in the fields of mathematics and physics, will focus on tackling global challenges and fostering sustainable growth and industrial competitiveness. These objectives will be achieved through collaborative projects with both domestic and international partners, in alignment with the strategic objectives outlined in the Republic of Croatia's Smart Specialisation Strategy and the EU Framework Programme for Research and Innovation. Efforts will be directed towards implementing research and development activities that contribute to the creation, discovery, application, and transfer of knowledge, as well as the commercialisation of innovations. The aim will be to create an environment of international and competitive scientific activity that encourages scientists to engage in international collaborative networks and bilateral and multilateral initiatives. FER will support the development and networking of research capacities across centres of excellence throughout Europe and globally, as well as the promotion and participation in industrial test platforms and pilot services. Furthermore, there will be a continued emphasis on establishing and maintaining long-term strategic partnerships with top universities in order to transfer expertise and systematically improve quality of management in science, foster scientific excellence, and increase international ranking of both the University and FER.

#### SPECIFIC OBJECTIVE 3

### **Strengthening Human Resources for Research and Development Work**

Strengthening human resources is fundamental to advancing scientific excellence. By developing support programmes for early-career researchers and academics, we will aim to improve the

effectiveness of mentoring, refine organisational and leadership skills for managing research teams, and bolster capabilities for preparing competitive national and international project proposals. Our efforts will focus on creating conditions that attract leading international scientists while promoting researcher mobility and professional development. These initiatives will support the establishment and growth of both Croatian and European research infrastructures.

#### SPECIFIC OBJECTIVE 4

### **Improving Research and Development Resources and Infrastructure**

Strengthening research excellence and innovation, alongside the increasing volume of projects, necessitates upgrades to physical infrastructure and equipment. Through strategic investments in research infrastructure, funded by earmarked or internal resources, FER will ensure the availability and utilisation of state-of-the-art research facilities, effective management of this infrastructure, and its development to an internationally competitive standard. Additionally, to bolster scientific collaboration, we will support the establishment and equipping of research laboratories in partnership with industry. We will also enhance support services for researchers to facilitate project applications and implementations, foster international research collaborations, address intellectual property issues, enable technology transfer, and support the creation of new technology ventures.



#### SPECIFIC OBJECTIVE 5

### **Bolstering Interdisciplinarity in Scientific Research**

Collaboration with national and international institutions will be actively encouraged to promote interdisciplinary scientific projects that utilise new technologies and contribute to the advancement of science, industry, and society. Building on existing collaborations with fields such as natural sciences, biotechnology, biomedicine and other technical disciplines, partnerships will be extended to include the social sciences and humanities. This will promote technological and scientific development, as well as enhance quality of life. In this context, careful consideration will be given to the broader societal impacts of technology and the ethical implications of its application.

#### SPECIFIC OBJECTIVE 6

### **Promoting the Principles of Open Science and Open Access to Scientific Information and Research Data**

In line with the principles of open science and European initiatives promoting open access to scientific information and research data, FER aims to establish an institutional policy on open science. This policy will clearly define the methods for ensuring the continued development of FER's open research infrastructure, as well as educating all participants in scientific communication on open science principles. As a knowledge hub, the Faculty will actively promote and support the adoption of open science principles and the implementation of open research practices.



**04**

# Collaboration with Industry

# Situational Analysis (SWOT Analysis)

## STRENGTHS

- high proportion of projects within FER's research portfolio implemented in collaboration with industry
- broad application of scientific insights derived from multidisciplinary research
- strong and growing interest from outstanding students in studying at FER
- recognised importance of FER's scientific and educational activities in driving economic growth, particularly in the ICT sector
- well-established and highly regarded programmes at the Innovation Centre Nikola Tesla

## WEAKNESSES

- insufficient alignment of master's and bachelor's theses with industry needs
- limited adaptability of the organisational structure
- lack of internal funding to promote innovation and entrepreneurship

## OPPORTUNITIES

- increased funding for technological development resulting from economic growth in Croatia
- presence in the European market
- public-private partnerships for infrastructure development and commercialisation
- investment in technology transfer through EU funding mechanisms

## THREATS

- productivity gap in the Croatian economy
- structure of the Croatian economy, which is predominantly focused on service industries
- underdeveloped financial mechanisms for advancing high technology

## STRATEGIC GOAL

# Fostering Research Collaboration with Industry and Entrepreneurship in order to Translate Research Results into Innovative Commercial Activities

FER recognises the pivotal role of technology in bolstering economic activities and the broader economy. The institution also understands that a competitive advantage is gained through the swift progression of the innovation cycle. As research findings are rapidly published and immediately accessible to competitors, FER will prioritise the close integration of research and development activities for products and services. Furthermore, FER will support the growth of small, dynamic enterprises by incorporating research components into their development processes and fostering strong connections with FER's research groups.

### SPECIFIC OBJECTIVE 1

## Promoting the Provision of Scientific, Research, and Technological Services in the Open Market

In order to effectively harness its research excellence, FER must focus on the strategic development of new products and the optimisation of production processes for businesses. The institution will strengthen its support mechanisms and advocate for research and development activities that are carried out through direct funding from industry, as well as from small and medium-sized enterprises. Accordingly, FER will encourage direct collaboration with companies through targeted calls for proposals.

As a scientific and educational institution in technical sciences, FER has a unique opportunity to contribute to the creation of new, multidisciplinary scientific insights that can improve business operations across all sectors. It is essential to capitalise on FER's unique strengths to bolster co-operation with other research groups, both in Croatia and internationally. Furthermore, FER will support the development and networking of research capacities at centres of excellence throughout Europe and globally, and will facilitate participation in testing platforms and pilot services.

### SPECIFIC OBJECTIVE 2

## Effective Institutional Management of Intellectual Property

As a leading institution in research and development, FER recognises the importance of effective intellectual property management. The Research Support Centre is responsible for providing guidance on intellectual property protection, processing requests for safeguarding intellectual property, overseeing the administrative procedures for its registration, active participation in its preservation, maintaining intellectual property records, and mapping the technologies and applications developed at FER. The aim is to assist researchers in protecting their research outcomes and facilitating their commercialisation.

### SPECIFIC OBJECTIVE 3

## **Long-Term and Proactive Management of Technology Transfer**

By strengthening entrepreneurial skills among students, teachers, and researchers, FER will continue to promote entrepreneurship and the transformation of its research discoveries into innovative commercial ventures. Building on past successful experiences, FER will continue to utilise mechanisms such as start-up incubators to help students and staff turn their ideas and projects into viable start-up companies. With strong support from alumni, new programmes will be introduced to connect participants with experts, mentors, investors, and business partners.

The Innovation Centre Nikola Tesla (ICENT) will undergo further development to establish itself as a key hub for leading industrial partners whose expertise aligns closely with the scientific research conducted at FER and the University of Zagreb. Together, FER and ICENT will continue to develop the digital innovation centre, which will play a pivotal role in bridging the gap between academia and the business community.





**05**

# **Society and Community**

# Situational Analysis (SWOT Analysis)

## STRENGTHS

- highly motivated students and staff
- well-developed institutional infrastructure for implementing equal opportunity programmes
- extensive experience in promoting and popularising science
- strong ties with wider community

## WEAKNESSES

- gender imbalance within the student and research communities
- insufficient staff training for the effective implementation of equal opportunities programmes
- inadequate resources for overcoming language barriers in administrative and educational activities

## OPPORTUNITIES

- strong and extensive alumni network
- growing significance of STEM disciplines within society
- European Commission programmes aimed at ensuring equal opportunities with the goal of promoting inclusion and eliminating discrimination

## THREATS

- dependence on voluntary work exclusively
- institutional inertia and resistance to change
- challenging transition from leadership initiatives to a sustainable system

## STRATEGIC GOAL

# **An Institution of High Academic Standards and Ethical Criteria that Fosters Critical Thinking and Intellectual Inquiry, and Promotes Equality Among All Members**

As a leading public institution of higher education and research, FER makes a substantial contribution to the development of Croatian society and the broader European community. The greatest asset of this institution is its people, and FER is committed to fostering a dynamic professional community. This dedication helps create an inclusive environment where students and staff are encouraged to apply their knowledge towards developing socially beneficial technological solutions. FER will strengthen its collaboration with the alumni community and promote the initiation of joint development projects. The institution will also work to make technical fields accessible and engaging to the wider public, with a particular focus on primary and secondary school students. This approach aims to maintain a high level of interest among prospective students in careers within electrical engineering, computer science, and information and communication technology. Beyond its primary mission, the Faculty remains actively engaged in sports, arts, and cultural activities.

## SPECIFIC OBJECTIVE 1

### **Ensuring Equal Opportunities for Staff and Students in Achieving Personal and Professional Development, Free from Prejudice and Stereotypes**

FER is committed to upholding principles of equality and inclusivity, and eliminating all forms of discrimination based on race, gender, religion, socioeconomic status, marital or family status, age, health condition, disability, gender identity, expression, or sexual orientation. The institution will develop a strategic approach that values diversity, promotes fairness, and enhances social inclusivity and solidarity.

As a leading institution, FER is dedicated to being inclusive. Therefore, it will continue to provide structured support tailored to the specific needs of students and staff, ensuring equal opportunities for their professional development. Members of the FER community with diverse life experiences will contribute to the discovery of innovative engineering solutions and enhance the institution's capacity for innovation.

Gender equality in research and innovation is a priority within the European Research Area (ERA). In alignment with this, the European Commission has set out three key objectives for European nations and institutions: achieving equality in research careers, ensuring balanced representation in decision-making processes, and integrating gender considerations into research and innovation content.



At FER, female students constitute 25% of the student body across all levels (undergraduate, graduate, and doctoral), with a similar percentage of women occupying academic positions. FER will work with the community to implement and evaluate activities in teaching and research that will contribute to achieving these overarching goals.

#### SPECIFIC OBJECTIVE 2

### **Collaboration with the Alumni Community to Enhance the Academic, Economic, and Societal Impact**

The FER alumni community is extensive and actively engaged across various sectors of society and industry. This network holds significant potential to elevate the Faculty's visibility and reputation, particularly on an international stage. Enhanced global recognition is expected to attract high-calibre international students to FER's programmes. Additionally, the alumni community can make significant contribution through charitable foundations and fundraising initiatives aimed at supporting student scholarships. Their involvement in mentoring programmes can offer invaluable guidance to current students and recent graduates, aiding their career development and improving employment prospects. FER alumni who are employed at prestigious global universities and high-tech companies can provide valuable opportunities for FER students by facilitating short-term mobility and offering access to valuable international experiences within leading institutions. FER will actively encourage collaboration with alumni based abroad and create opportunities for their return and re-engagement with the Faculty.

#### SPECIFIC OBJECTIVE 3

### **Encouraging Student and Staff Engagement in Socially Beneficial Activities Addressing Societal Challenges**

In today's world, numerous examples highlight how technology can address social challenges. The Republic of Croatia has reaped the benefits of infrastructural technological solutions developed by experts educated at FER, contributing to its progress and safety. Building on this foundation, FER is committed to actively supporting the engagement of students and staff in socially beneficial activities designed to tackle societal issues within Croatia.

The Faculty is dedicated to assisting research groups in implementing projects and developing technological solutions for urgent societal problems, including those of national importance, while carefully considering the ethical implications of technology application. Members of the university community will be encouraged to utilise their resources and technological expertise to create sustainable solutions across the medical, natural sciences, social sciences, and humanities sectors. Additionally, FER will facilitate student involvement in these efforts through coursework and practical experiences with Croatian companies, thereby creating opportunities for students to acquire and refine their skills through socially impactful projects and internships.

#### SPECIFIC OBJECTIVE 4

### **Introducing Professional Disciplines to Primary and Secondary School Students**

FER will continue its proactive efforts to attract prospective students through the science popularisation programme “ŠUZA – From School to Science and Academic Community,” aimed at primary and secondary school pupils and their teachers. The Faculty will provide resources to organise workshops and lectures designed to enhance public interest in science, technology, engineering, mathematics, and the natural sciences. The Faculty is committed to advancing education in STEM fields and will work to strengthen collaboration between schoolteachers and the academic community. This initiative aims to enrich the learning experiences of younger generations and foster a greater interest in technical fields.

and promote interdisciplinary approaches, while preserving the identity and heritage of the Faculty, the University of Zagreb, and the technical sciences as a whole. Additionally, these efforts aim to contribute to the well-being and healthy lifestyle of both students and staff.

#### SPECIFIC OBJECTIVE 5

### **Strengthening the Faculty’s Cultural, Artistic, and Sports Activities**

Cultural and artistic creation and sports are integral aspects of life at FER, as evidenced by the active participation of faculty staff in a variety of cultural, artistic, and sporting events, as well as the preservation of heritage within the technical sciences. FER will promote cultural, artistic, and sporting engagement among students and staff through collaborative and individual exhibitions, the organisation of professional conferences, workshops, and events, the commemoration of milestones related to the history of science, the enhancement of publishing activities, participation in cultural and artistic projects, and involvement in sports competitions. The overarching goal is to inspire creativity, facilitate collaborative projects,

A blurred background image showing two people in a meeting. One person is on the left, wearing a red and white striped shirt, and the other is on the right, wearing a dark shirt. They appear to be looking at a document or screen together. The background is out of focus, showing what might be a window or a wall.

**06**

# Organisation, Operations, and Infrastructure

# Situational Analysis (SWOT Analysis)

## STRENGTHS

- outstanding reputation within the academic community and society at large
- competent, talented, and highly motivated staff
- high level of integration of digital technologies

## WEAKNESSES

- insufficient physical infrastructure
- displacement of some staff due to infrastructure renovation
- resistance to changes in internal processes and the introduction of new technologies
- limited financial resources

## OPPORTUNITIES

- digitalisation
- collaboration with scientific and research institutions and industry
- opportunities for securing grant funding
- advancing the green transition
- infrastructure renovation

## THREATS

- competitive environment
- economic uncertainty
- changes in legislative frameworks and funding mechanisms
- staff and departmental involvement in infrastructure renovation
- financial risks associated with infrastructure renovation

## STRATEGIC GOAL

# Increasing Organisational Efficiency, Digitalising Operations, Improving Faculty Infrastructure, and Advancing the Green Transition

FER has set itself the goal of becoming a highly efficient institution by improving its organisational effectiveness, fully digitalising its operations, and modernising its infrastructure. This transformation will enable the Faculty to adapt quickly to new trends and emerging needs.

The Faculty strives to continuously improve organisational effectiveness and operational excellence through the principles of professionalism, accountability, and collaboration. By achieving the highest standards of operational excellence in its professional services and streamlining internal processes and procedures, FER will provide support for staff and students in their daily activities.

FER will create a stimulating and dynamic working environment that encourages and promotes collaboration, innovation, and personal development for both staff and students, whilst ensuring responsible and sustainable practises. Through the effective utilisation of available resources, the adoption of energy-efficient and environmentally friendly technologies, and the integration of renewable energy sources, FER aims to lead by example and guide society and the community towards a sustainable, green transition.

## SPECIFIC OBJECTIVE 1

### **Increasing Organisational Efficiency and Fostering a Supportive Organisational Culture**

Simplifying internal processes and procedures, combined with the efficient use of resources, will enable the Faculty to adapt more quickly to challenges and ensure that FER's professional services support staff and students in a competent, timely, accessible, and effective manner. By improving productivity and achieving the highest levels of operational excellence in internal processes, teaching and research staff will be free to focus on achieving exceptional outcomes in education, research, and innovation, while administrative, financial, and legal tasks will be handled by dedicated professional services and administrative teams.

By fostering a culture of organisational excellence, FER will strengthen collaboration between departments, laboratories, and staff, and encourage every employee and student to fulfil their creative and innovative potential in pursuit of a common goal.

#### SPECIFIC OBJECTIVE 2

### **Professional Development and Lifelong Learning for Staff**

Prioritising the health, well-being, satisfaction, and personal growth of staff is essential for fostering an exceptional working and learning environment. By continuously investing in staff education, FER aims to support both their personal and professional development, enhance their expertise, increase their efficiency and proactivity, and foster a modern environment that is adaptable to emerging trends and challenges within the academic community.

#### SPECIFIC OBJECTIVE 3

### **Digitalisation of Faculty Operations**

FER is committed to integrating digital solutions into all areas of its operations, investing in digital technologies and tools and developing the digital skills of its employees. Through the complete digitalisation of processes and procedures, FER aims to streamline document management and provide staff and students with an efficient, fast, and readily available support from professional services in the areas of teaching, research, innovation, business, and administration.

#### SPECIFIC OBJECTIVE 4

### **Renovation and Modernisation of the Faculty's Infrastructure**

The series of severe earthquakes that struck Zagreb and the surrounding areas in 2020 revealed existing vulnerabilities and introduced new challenges for the Faculty's physical infrastructure. Consequently, the restoration and expansion of the FER complex have become long-term strategic priorities for the institution.

Using the comprehensive reconstruction project, alongside other available funding mechanisms and its own resources, the Faculty will restore and modernise the infrastructure damaged by the earthquake, creating a state-of-the-art environment that fosters collaboration and supports excellence in education and research. Furthermore, the energy efficiency of the renovated buildings will be significantly improved, reinforcing FER's commitment to a sustainable future.

In addition to the extensive reconstruction necessitated by the earthquake, FER will persist in supporting its students and staff by investing both its own resources and earmarked funds into teaching, research, and information infrastructure and equipment. Effective infrastructure management and the provision of material benefits to employees will also be prioritised. The construction of additional facilities will further ensure the realisation of FER's long-term development plans.

#### SPECIFIC OBJECTIVE 5

### **Advancing the Green Transition**

FER is committed to sustainability, renewable energies, and energy efficiency across its scientific, teaching, and professional activities, and strongly supports sustainable development and environmental protection. FER's long-term goals include transitioning to clean energy, achieving energy self-sufficiency, and reaching carbon neutrality. By utilising available financial resources and its own assets, FER will integrate renewable energy sources and enhance responsibility and efficiency in the management of energy and water infrastructure. Through its initiatives and investments in renewable energy and energy efficiency, FER aims to be a driving force and a model for the community in the transition towards a sustainable society.

# 07

# Towards the Action Plan

The proposed strategic framework outlines the guidelines for the future institutional development of FER.

To effectively implement this strategic framework, an Action Plan will be developed, designed as a multi-layered process that integrates activities, incentive mechanisms, and performance indicators.

The development and implementation of the Action Plan will be a collaborative effort between the staff and senior management of the Faculty. Together, they will identify and coordinate the specific actions required to achieve the objectives set out in this Strategy.

Faculty staff will be responsible for implementing and optimising the results of the Action Plan.

The role of the Faculty leadership will be to support, oversee, and manage the implementation of the Action Plan.

Ultimately, the Action Plan will serve as the foundation for negotiations with the Ministry of Science, Education and Youth, and its successful execution will enable systematic programme funding for the Faculty.

