

### **KONČAR - Electrical Engineering Institute**

#### on 25 March 2021 celebrates



# of scientific research dedicated to creating new and innovative products and services

For generations, the Institute has advocated innovation, quality solutions and specific customer demands. We respect this tradition by turning investment into innovation and development of products and services that help our customers make positive changes and be more productive, profitable and sustainable.

#### We offer our customers

Better management of capital assets and safe and reliable risk management

Responsible treatment of natural resources and waste disposal while protecting human health and the environment

The solution of complex technological challenges in order to improve the quality of life of people and communities

#### 102-14 LETTER FROM THE MANAGEMENT

This report contains our response to the extraordinary difficulties which arose with the pandemic and earthquake, as well as our contribution in 2020 to responsible management, correct and ethical business practices in the past period, environmental impact, development of products and services and overall economic impact and creation of added value to society. We are also monitoring our contribution to achieving the United Nations Sustainable Development Goals 2030, where we know we can have the greatest impact.

The year 2020 was beyond all imagined projections, plans and expectations in the business, social and human sense in general. Our world has faced problems that go beyond the frameworks of individuals and companies and has launched many, until then, unimaginable scenarios in recent history.

The Institute's activities quickly adapted to the new situation, by introducing recommended precautionary measures in all business segments, where there is a potential risk to human health and safety. By intensified communication on new measures, timely procurement of protective equipment, the introduction of control and protection measures upon entry and exit of the trade in goods, the transfer of disease has been minimized, and the business continuity preserved. Additional mechanisms have been put in place to protect the health and safety of employees by working from home for those jobs that allow it, shift work was introduced, the circulation of people was reduced by using communication platforms instead of live meetings, and joint gatherings and celebrations, such as Open day of the Institute and the Christmas party were cancelled.

The pandemic and strained direct communication have reduced to the necessary minimum or delayed numerous activities, and some projects have been cancelled or are pending for the time being. Business activities were accompanied by some difficulties in procurement and delays in delivery. Greater disruptions in revenues have been caused by difficulties in sending associates to the field, especially abroad, so some planned commissions and tests failed to finish. An additional reduction in efficiency and cost increase was caused by testing for Covid-19 and two weeks of isolation at each departure and arrival from the commissioning of the delivered equipment.

Despite the difficulties, we successfully completed most of the planned activities and contracts. We can mention the significant extension of accredited methods in the Laboratory Center, entry into the international IECE CB Scheme as a national certification body and test laboratory and development of new specific testing methods according to customer requirements

Two important co-financed IRI projects have been successfully completed: SafeTRAM, the development of a system for increasing the safety of public urban rail traffic and SafeLog within the framework of Horizon 2020, research, development and design of a prototype safety critical vest for staff working in robotic warehouses.

In 2021, the normalization of exceptional circumstances related to the spread of Covid-19 is expected, and our priorities will be: preserving economic stability, jobs, professional development of our employees and helping the community.

Reasons for optimism in 2021 include also announcements of major projects in energy in the Republic of Croatia and abroad, as well as announcements of long-term and complex tests in the Laboratory Center and the delivery of tram and train equipment. Works on restoring the envelope and fire escape stairway of the administrative building (P-building) and long-awaited construction of the new laboratory LAVESP will start as planned and approved investments for 2021.

The beginning of 2021 marked two major anniversaries. The 100th birthday of KONČAR was celebrated in January, a hundred years of continuous development in the field of the electricity industry, adapting to various economic and political conditions. There is no doubt that generations of top experts from Končar left an indelible mark and a huge contribution to the overall development of the Croatian economy and created a name known and recognized in the world, which recalls the high level of quality and reliability of equipment and constructed facilities.

Also, the Institute celebrates 60 years of founding and working on applied scientific research and development in Končar. Since its beginning, the Institute has been the driving force of new technological trends and the developer of the KONČAR Group, a company with a scientific status where the very best and promising experts and scientists want to work, turning knowledge into competitive products and services for the global market. We will continue to offer our employees a creative and pleasant working environment, good conditions for scientific research and development activities and encourage the acquisition of higher academic titles in order to achieve top results in the development of competitive products for the global market.

We want the Institute to lead the creation of added value for future generations by implementing scientific and technological achievements and by widening the production program of the KONČAR Group, with a high level of social responsibility, thus contributing to the sustainable development of society.

Zagreb, May 2021

Managing Board Siniša Marijan, PhD, President Dalibor Filipović-Grčić, PhD, Member



KONČAR – Electrical Engineering Institute Inc. the Institute

the Group, KONČAR Group KONČAR – Electrical Industry Inc. and subsidiaries

Parent Company KONČAR – Electrical Industry Inc. CSR Corporate social responsibility

GRI Global Reporting Initiative

**GRI Standards** GRI Sustainability Reporting Standards

SD Sustainable development

SDG Sustainable Development Goals

RDI Research – development - innovations

TMS Transformer monitoring system

MCM System for machine condition monitoring and fault detection

MEP Electromagnetic field monitoring system TCMS Train control and management system

 HVDC High Voltage Direct Current

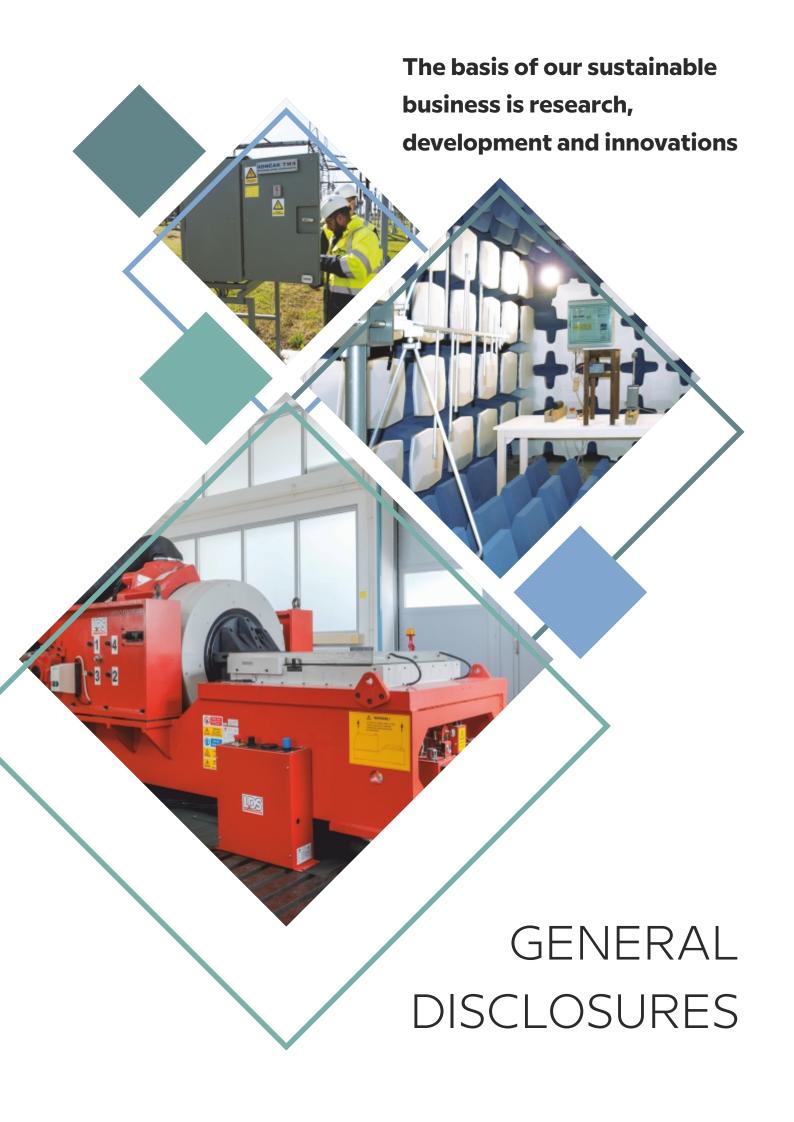
LCC Life Cycle Costs

 RAMS Reliability, Availability, Maintainability, and Safety • CENELEC European Committee for Electrotechnical Standards

Value added VA

**SCERT** Certification Service

LAVESP Laboratory for Power Systems and Drives



#### **ORGANIZATIONAL PROFILE**

#### 102-1,3 Name of the organization, Location of headquarters

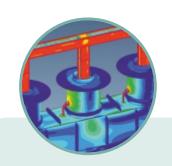
KONČAR – Electrical Engineering Institute, Inc., with headquarters at Fallerovo šetalište 22, 10000 Zagreb, Croatia, operates in the areas of energy conversion and transmission, as well as use of electricity in power industry and transport.

It was founded on January 21, 1991 on market principles as an independent company within the KONČAR Group. It continued the work on core activities of the company Rade Končar - Elektrotehnički institut (founded in 1961): applied research and development of electrical equipment and plants

#### 102-2 Activities, brands, products, and services

The main activities of the Institute are research, development and testing in the fields of natural, technical and technological sciences, with orientation towards applied research, testing and support to development projects of the Group. Besides supporting the Group in power industry and transport, the Institute offers its proprietary solutions and services in the global market.

#### Three key business activities



# Research and development

The Institute follows trends and invests in research in order to be the leader in application of the most advanced technologies to the production programme of companies of the KONČAR Group and to improve its proprietary solutions for the global market.



#### **Proprietary solutions**

Monitoring systems for transformers, rotating machines, switchgear, and control systems for traction vehicles and power converters.

Proprietary HW/SW platforms based on long-life components (including SIL 4 solutions).



# Diagnostics, testing and certification

Compliance and diagnostic tests of the equipment installed in power plants and substations, and supervision of their construction are also important activities that ensure our employees a wide range of competences and direct contact with customers.

#### 102-5 Ownership and legal form

The Institute has the status of an autonomous company wholly-owned by KONČAR – Electrical Industry Inc., which leaves the Institute its entire profit for further development. Statement of Independence of June 6, 2000 attests its independence of any influence of its owner, manufacturers or suppliers of products, and that none of them can in any form influence test or certification results.

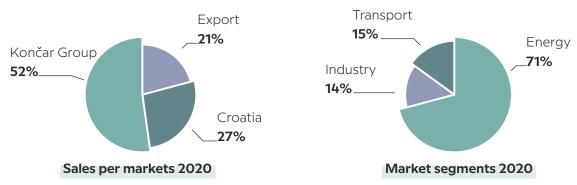
The Institute is registered in the Register of the Scientific Organisations of the Ministry of Science and Education. At the same time, being a company specialized in applied research in electrical and mechanical engineering, it has two important roles within the KONČAR Group:

- support to further development of solutions manufactured and sold by KONČAR companies based on contracts and market principles, providing expertise and R&D testing in numerous laboratories of the Institute
- applied research at its own expense for the development of new solutions compatible to the production programme of the KONČAR Group, for which the Institute bears risks not only regarding the development but also regarding their placing on the market

#### 102-6 Markets served

Major companies for the power systems area, telecommunications and transport are the Institute's long-time partners on the Croatian market. The most important customers on the world market are the global companies from Sweden, Republic of Korea, Switzerland, Bosnia and Herzegovina, Qatar, Italy, Germany, Serbia and Slovenia.

Most important partners in R&D field are companies from KONČAR Group. Most important markets for diagnostics, testing and certification are the Croatian and EU ones.



#### 102-7 Scale of the organization

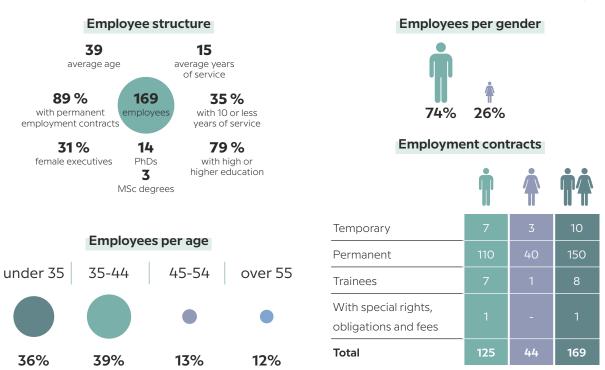
By its size and boundary indicators KONČAR - Electrical Engineering Institute Inc. belongs to small and medium-sized enterprises according to the classification in the Accounting Act of Croatia.



#### 102-8 Information on employees and other workers

At the end of 2020, the Institute had 169 employees, i.e. 2 associates more than at the end of 2019. Among them, 134 have high or higher education, 82% belong to technical professions (electrical engineering 68%, mechanical engineering 10%, chemical 4%), economic and legal 7% and other professions 10%.

(on 31 December, 2020)



### Involvement of the Institute in the Implementation of **UN Global Sustainable Development Goals (SDG)**

UN adopted the 2030 Agenda for Sustainable Development to end poverty in the world, ensure quality education, healthy lives, decent jobs and address key environmental challenges. We have identified seven goals closely related to the Institute's business activities, whereby we can monitor our contribution to their implementation.















#### We protect investments in property and primary equipment

We ensure better management of capital assets, safe and reliable risk management

Our contribution to SDGs 7, 8, 9, 11 and 12:



We are committed to the use of renewable sources and energy-efficient solutions. The Institute's contribution is related to water, sun and wind. We help modernize, monitor and diagnose vital equipment in hydro power plants, wind power plants and photovoltaic plants. We provide expert assistance in the construction of photovoltaic power plants and develop reliable vital components.



Our solutions improve resource management, reduce plant maintenance costs, and extend the lifespan of primary equipment.



By participating in R&D projects, we help build an adaptable infrastructure, promote inclusive and sustainable industrialization, and foster innovation.

Systems with functional safety requirements ensure the highest level of protection of people's lives and security of assets in work processes with a high potential risk.



Electromagnetic field monitoring system provides local communities with information about actual radiation values, thereby contributing to their safety.



Primary power equipment monitoring systems enable better management of vital components and risk management, thus contributing to a better quality of life for everyone.

We help manufacturers to have their products tested so that they can be marketed.

We assist manufacturers in assessing compliance of their products with regulations to determine their safety and reliability for the user and the environment.

Material topics: Economic performance, Indirect economic impacts

#### We protect the environment

By responsible management of natural resources and waste disposal in a safe and secure way we protect human health and minimize environmental impact

Our contribution to SDG 12:



We reduce the risks of premature obsolescence and product rejection through our own hardware and software platforms, helping to reduce emissions and accumulate unnecessary electronic waste.

Rational consumption of energy resources and the establishment of emission control systems in environmental constituents reduce the adverse effects to the smallest possible extent.

Material topics: Energy, Emissions of greenhouse gases, Waste

#### We protect people and the community

Our business activities reflect global needs and ambitions for solving complex technological challenges, protecting people and the community

Our contribution to SDGs 4, 5 and 8:



We encourage personal development and improvement of employees through professional education, foreign language learning, IT training and education for quality systems, environmental protection and occupational safety.

By exchanging knowledge and partnership, both scientific community and the Institute acquire new competencies, creating new opportunities for development and value added in the wider community.



By accepting and encouraging diversity and equal opportunities, we contribute to both organizational culture and the general goals of non-discrimination and gender equality.



Solving complex industrial challenges and participation in international and national projects encourages employment on challenging tasks and creates new

Healthy and secure working environment is recognized as our greatest responsibility and contribution to creating quality jobs.

Material topics: Training and education, Community, Diversity and equal opportunities, Employment, Health and safety at work

#### Research and development

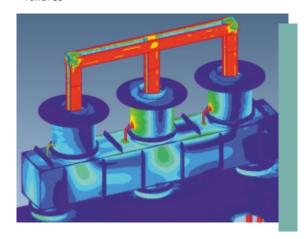


Applied and developmental research is focused not only on acquiring new knowledge, but also on solving advanced requirements on power equipment.

Study of voltage conditions in the isolation system of power transformers including those for high voltage direct current (HVDC)

- Research of new environmentally friendly insulation materials
- Investigation of power and instrument transformer failures





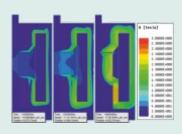
Development of a new series of electromagnetic actuators with unique magnetic path design, faster response time, higher electromagnetic force, and reduced dimensions.

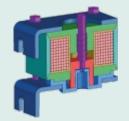
Up-to-date computation tools, simulation and physical models, and prototyping are

and special purpose electrical

all used to improve characteristics of standard

machines.





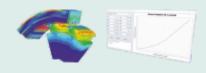


#### Electromagnetism

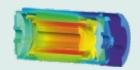
- Specific purpose analyses
- Optimization of active machine parts
   Optimization of heat transfer

#### Heath transfer

- Machine loss disposition calculations Machine temperature distribution analyses
  - Computation of fluid dynamics (CFD)

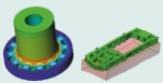






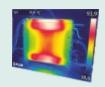
#### Mechanic

- Varying load vibration calculation
- Determination of material fatigue
- Stress analyses



#### **Physical models**

- Determination of precise characteristics
- Concept verification
- Prototype manufacturing







#### Systems with Functional Safety requirements



Systems with functional safety requirements ensure the highest level of protection of people's lives and security of assets in work processes with a high potential risk.

We are specialized in embedded control solutions according to the functional safety requirements for railways and machines.

The KONTRAC SafeHMI platform has acquired considerable references within level crossing and signaling systems based on SIL (Safety Integrity Level) HW/SW components.







#### **Proprietary monitoring and control systems**



Primary power equipment monitoring systems enable better management of vital components and risk management, thus contributing to a better quality of life for everyone.

Features of monitoring systems:

- On-line systems
- Applicable to all kinds of primary equipment
- Modular and upgradable systems
- Long-term data storage and important events tracking (trends, waveform, alarms ...)
- Local and remote data access

WE PROTECT
INVESTMENTS IN
PROPERTY AND
PRIMARY
EQUIPMENT

We ensure better management of capital assets, safe and reliable risk management

#### Transformer monitoring system - TMS

Končar TMS enables on-line monitoring and diagnostics of all vital parts of power transformers and reactors. It detects incipient faults, so that user can prevent failure by timely intervention.

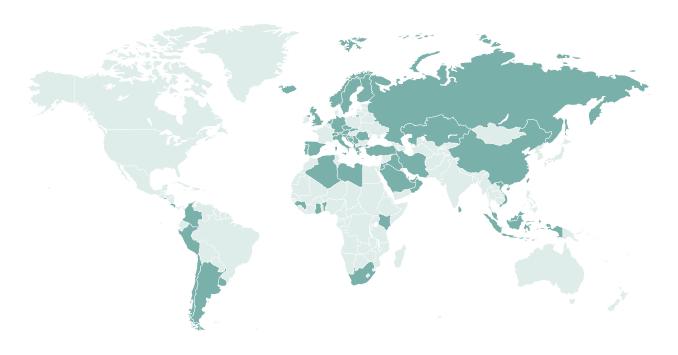
>50000 MVA



#### Systems for machine condition monitoring and fault detection - MCM

To ensure reliable operation of the Rotating electrical machines we have developed various condition monitoring systems, whose main function is early detection of possible defects and prevention of major material and financial losses.

#### More than **680** On-Line Condition Monitoring System (OLCMS) delivered in **52** countries worldwide



#### Electromagnetic field monitoring system - MEP



Electromagnetic field monitoring system provides local communities with information about actual radiation values, thereby contributing to their safety.

MEP is a system for continuous monitoring of electromagnetic fields radiation at all frequencies. It enables local communities insight in monitoring results, i.e. in the actual radiation values. In this way all the interested can compare actual radiation values with the levels defined in the Regulations for Protection against Electromagnetic Fields.



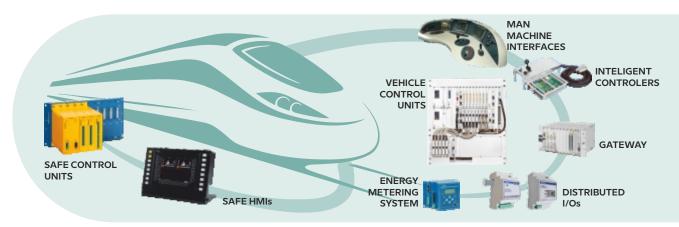
#### Train control and management system - TCMS



We reduce the risks of premature obsolescence and product rejection through our own hardware and software platforms, helping to reduce emissions and accumulate unnecessary electronic waste.

After successful development of embedded control systems for locomotives and trams, the Institute has developed and delivered train control and management systems for new Croatian electric and diesel trains.

The platform comprises numerous hardware and software components which enable configuration of different control systems for various purposes and of various levels of complexity.





We are committed to the use of renewable sources and energyefficient solutions. The Institute's contribution is related to water, sun and wind. We help modernize, monitor and diagnose vital equipment in hydro power plants, wind power plants and photovoltaic plants.

We provide expert assistance in the construction of photovoltaic power plants and develop reliable vital components.

Development and proprietary solutions of control electronics and software for power converters.





Photovoltaic power plant Vis was put into operation with a large contribution from the Institute, which participated in the development and delivery of KonSol power converters. The solution enables parallel connection of several inverters and connection to the distribution network, which achieves functionality without an additional on-site substation and reduces energy conversion losses.

#### Diagnostics, testing and certification



We help manufacturers to have their products tested so that they can be marketed.

#### Laboratory Center accredited under EN ISO/IEC 17025



The Laboratory Center consists of eight laboratories accredited for numerous test methods according to the requirements of international standards and technical specifications. It is accredited to the requirements of EN ISO / IEC 17025: 2017, which confirms the independence and competence of providing laboratory and field product testing services.

Laboratory services are based on the competences of experts, quality, speed and the so-called "one-stop testing" approach.



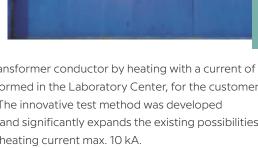
The automated system for research and development testing of high-voltage insulation materials enables accelerated aging of insulation samples, control of humidity, temperature, and independent control of voltage testing. Such a complex testing system enables the market competitiveness of some products of the Končar Group.

Increasing the number of test methods in the field of power equipment keeps pace with the specific customer requirements. The Laboratory Center has successfully conducted a complex and risky test of the junction box for internal arc failure, which required lengthy preparations and great expertise, because during such tests often a large amount of energy is released.



A test of the transformer conductor by heating with a current of 25 kA was performed in the Laboratory Center, for the customer from Sweden. The innovative test method was developed independently and significantly expands the existing possibilities of testing with heating current max. 10 kA.

The Institute is accepted in the IECEE CB (Certification Body) scheme, which means that the test reports of the Laboratory Center and the certificates of our certification body (SCERT) in the field of safety of electrical and electronic products are internationally recognized and are part of the global laboratory system.





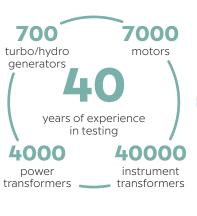
Laboratory testing services in the following areas:

- High-voltage and low-voltage power equipment
- Material properties
- Environmental impact
- Electromagnetic compatibility
- Electrical safety
- Radio equipment
- Gas appliances
- Sources of electromagnetic fields
- Low-voltage electrical installations and lightning protection systems
- Acoustics (noise)
- Testing the physical-chemical properties of materials
- Calibration of measuring and test equipment

#### Checking the condition of power equipment and systems

- Diagnostics of power and instrument transformers
- Diagnostics of switchgears in HV plants
- Diagnostics of rotating machines
- Acoustic diagnosis

- · Energy efficiency
- Quality of electricity
- Measurements of NF and HF fields
- Non-destructive testing (NDT)







### Notified body and product certification body (SCERT) accredited under EN ISO/IEC 17065

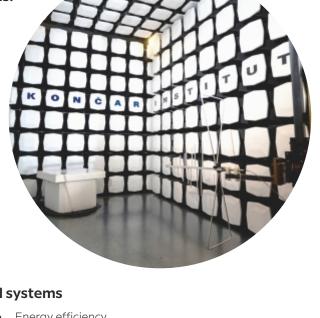


We assist manufacturers in assessing compliance of their products with regulations to determine their safety and reliability for the user and the environment.

KONČAR – Electrical Engineering Institute, as a Notified Body (NB), assists manufacturers in conformity assessment and certification of their products in accordance with European standards and directives, before CE marking and placing on EU market.

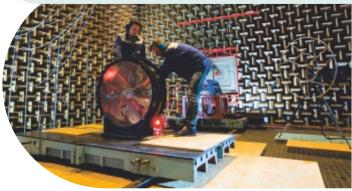
#### KONČAR-Institute is a Notified Body NB 2494 of the European Commission for the following regulations:

- electromagnetic compatibility (Directive 2014/30/EU)
- machinery (Directive 2006/42/EC)
- noise emission in the environment by equipment for use outdoors (Directive 2000/14/EC)
- gas appliances (Regulation (EU) 2016/426)
- radio equipment (Directive 2014/53/EU)
- welding procedures of pressure equipment (Directive 2014/68/EC)



In addition to conformity assessment as a Notified Body, the Institute assesses product conformity as an authorized/accredited Certification Body (SCERT) for products and processes in the areas of LV and HV equipment, corrosion or IP/IK protection, ecological design, energy labelling, welding procedures for metal materials, and signalling and traffic regulation equipment. It is also equipped for assessment of product conformity to climatic conditions and noise and vibrations.

Accredited certification schemes of Institute enable conformity assessments and certification of products intended for markets other than EU that are made in accordance with ISO and IEC standards or manufacturer specifications.





#### Product conformity assessment

Well-equipped laboratories and a wide range of accreditations, authorisations and notifications of the Institute enable numerous and diverse services:

- Type testing of products in our test laboratories
- Verification of test reports issued by other laboratories
- Expert supervision of tests in external laboratories
- Assessment of completeness of technical documentation
- Conformity assessment of technical documentation
- Assessment of product design
- Type examination of products for certification purposes
- Certification
- Auditing compliance with the type of product

#### Certification (SCERT) and Inspection Bodies

Product Certification Body – SCERT is an independent unit within the Institute that impartially certifies products.

Inspection Body impartially inspects and calibrates power and measuring equipment used in testing electrical installations.



#### 102-9 Supply chain

Business activities of the Institute are based on a wide scope of suppliers and business partners mostly from electrical industry, but also from numerous other fields. Code of Business Ethics is the basis on which the Institute develops its relations with suppliers, business partners and all the stakeholders. Partners in the supply chain, apart from required quality, should also observe the best of human rights and working conditions, occupational health and safety, and environmental and ethical concerns.

Because of very stringent requirements on products and services, the purchasing processes in the Institute are mostly based on agreements and contractual arrangements oriented towards quality, competitive prices, respect and integrity. Choice of suppliers is based on their professionalism and competence, and the purchasing process and choice of suppliers are implemented in an objective and transparent way.

Suppliers are selected according to the following criteria:

- technical and functional characteristics and capabilities
- proofs of quality assurance (certificates, test reports ...), instructions
- delivery time and mode of transport
- eaction speed and cooperativeness
- price and payment terms

Providers of outsourced services are selected according to their technical capabilities and competences (references, cooperation so far). If necessary, periodic audits of suppliers are carried out to check their competencies and ensure the continuous quality of their services.

Suppliers are evaluated and approved by the laboratories. At least once a year, suppliers are re-evaluated on the basis of the same criteria and quality of their deliveries to ensure quality of the tests.

When evaluating suppliers, numeric and statistical methods can be used (e.g. grading from 1 to 5 for each criterion). This kind of assessment is recommended if there is a problem and if the supplier should improve the service or the product. In that case, the supplier is informed about the grade and need to improve.

A supplier is removed from the list if he does not meet the criteria to such an extent that it may jeopardize the quality of the work for which his service or product is intended, in particular if it could jeopardize the quality of the test or calibration or affect the customer's satisfaction.

#### 102-10 Significant changes to the organization and its supply chain

#### New Managing Board of KONČAR and Institute's Supervisory Board appointed

At the beginning of 2020, the new Managing Board of KONČAR was appointed, headed by the president of the Managing Board Gordan Kolak, MSc with a four-year mandate. With the entry into office of the members of the Managing Board of KONČAR, they also took over the duties of the members of the supervisory boards of all companies within the KONČAR Group.

#### Development of the integrated strategy and operational model of the KONČAR 2020+ Group

The development of an integrated strategy for the next mid-term period has started in 2020, which will ensure the main development directions and openness to new technologies and business models. The drafting of the strategy is planned in five phases. The first phase covered the elaboration of objectives and guidelines, the second envisions defining the KONČAR 2020+ strategy. In the third phase, the operational model is expected to be developed and the fourth phase includes organizational harmonization. The fifth, final phase includes the elaboration of implementation plans and projects.

#### Preparations for the reorganization of the Institute completed

During 2020, all preconditions and strengthened communication on the reorganization of the Institute with effect from 1 January 2021 have been fulfilled. The purpose of the reorganization is to increase the efficiency, recognition and acceptance of the Institute's products and services on the market and to improve internal communication in order to achieve in the best possible way all the potential and competences of employees.

#### Approved investment in the LAVESP project

The project to build a new laboratory, LAVESP - Laboratory for Power Systems and Drives, the most important planned investment in the forthcoming period, received an approval of investment in 2020.

#### 102-11 Precautionary Principle or approach

Through commitment to sustainable development strategy, the Institute is guided in its business processes by Precautionary Principle in accordance with Act on Environmental Protection and its actual capabilities. Precautionary Principle means that in case when scientific and objective evaluation indicates that there is a possible environmental or health risk, measures for its prevention are implemented although the damage is not fully certain.

#### 102-12 External initiatives

#### **Diversity Charter**

The Diversity Charter is a voluntary initiative launched in 16 EU countries and joined by the Institute to promote the principles of diversity and non-discrimination in the workplace. The Diversity Charter Croatia was developed as part of a joint project of the Croatian Business Council for Sustainable Development (HR PSOR-a) with partners from Slovenia and Romania.



#### Principles of corporate management

As a part of KONČAR Group, the Institute supports the principles of corporate management adopted by the Management and Supervisory Boards of KONČAR – Electrical Industry on 22 December 2020 concerning:

- · Socially responsible management
- Defining a procedure of corporate management based on recognizable adopted international standards
- Supervision of business activities to establish high standards of corporate management and business transparency as the basis for protection of shareholders, investors and other stakeholders, and for care for workers, sustainable development and environmental protection

#### Integrated management system

The market competence of the Institute and its recognisability in social community are based on the Integrated Management System which covers quality management system (ISO 9001), environmental management system (ISO 14001), occupational health and safety management system (ISO 45001), system for management of testing and calibration laboratories (ENISO/IEC 17025), and system for management of certification bodies (ENISO/IEC 17065).

Integrated management system enables the Institute to apply principles of corporate social responsibility with balanced relation to customers, employees, owners, suppliers and social community. It defines roles and responsibilities, organization and processes that are important for achievement of high level of quality of our products and services. Through such processes the Institute communicates with customers and other stakeholders, realizes products, achieves goals, learns, and makes continual improvements.

Co	Integrated management system  Complying with the requirements of the standard			Valid until
ISO 9001	Quality management system (QMS)	HR18/1930	28.07.1997	02.04.2024
ISO 14001	Environmental management system (EMS)	HR18/1929	19.12.2002	02.04.2024
ISO 45001	Occupational health and safety management system (OHSMS)	HR18/1919	07.05.2008	07.04.2024
ICO/IEC 1702E	Competence of testing laboratories	1035	30.11.1999	18.04.2024
ISO/IEC 17025	Competence of calibration laboratories	2057	06.07.2004	07.05.2025
ISO/IEC 17065	Competence of certification bodies	3169	28.12.2008	28.04.2024
ISO/IEC 17020	Competence of inspection bodies	6544	18.11.2016	17.11.2021
NQA-1	NQA-1 Nuclear safety requirements		pervision of the l	Krško nuclear

#### 102-13 Membership in associations

- Croatian Academy of Engineering (HATZ)
- Croatian Business Council for Sustainable Development (HR PSOR)
- Croatian Chamber of Economy (HGK)
- Croatian Chamber of Electrical Engineers (HKIE)
- Croatian Chamber of Mechanical Engineers (HKIS)
- Croatian Exporters Association (HIZ)
- Croatian Laboratories (CROLAB)

- Croatian National Committee of the International Council on Large Electric Systems (HRO CIGRÉ)
- Croatian Standards Institute (HZN)
- Electrotechnical Society Zagreb (EDZ)
- European Committee for Electrotechnical Standardization (CENELEC)
- International Conference on Electricity Distribution (CIRED)
- International Council on Large Electric Systems (CIGRÉ)

The Institute is a member of Croatian Business Council for Sustainable Development since 2010.



#### 102-15 Key impacts, risks, and opportunities

#### The risk of spreading the SARS-CoV-2 virus

In 2020, special attention was paid to employee awareness and health protection due to the risk of spreading the SARS-CoV-2 virus.

A Coordinating Team was established that monitored the situation on a daily basis and provided instructions. Educational posters and instructions for health protection were placed in visible places. Controls and protective measures have been introduced in a visible place for all suppliers and partners upon entry and exit from the facility and in the surroundings of the factory. The Institute's intranet contains a section with notices and information related to the spreading of the COVID 19 disease.

Precautionary measures were implemented in all business segments where there was a potential risk to human health and safety. Taking the temperature, prescribed distance, workplace disinfection, use of protective masks and gloves have been introduced. Employees were allowed to work from home for those jobs that allow it, and shift work was introduced. The circulation of people was reduced by using communication platforms instead of live meetings, and special attention was paid to the protection of risk groups of employees and pregnant women.

#### **Market risk**

The Institute manages the economic effect of its business policy based on the diversification of market risk. Of the three core businesses, some always bring higher revenues than others due to market conditions and contracts. The Institute is constantly trying to develop new products and services in order to compensate one reduced activity with another.

#### Interest rate, credit and liquidity risks

The Institute is funded exclusively by its own resources and is not exposed to interest rate, credit and liquidity risks.

#### **Currency risk**

The company is exposed to currency risks, i.e. changes in foreign exchange rates when purchasing equipment and parts for its own products, but this risk is minimized by doing business with suppliers mainly in EUR, and avoiding currencies as CHF i USD.

#### Technological-development risk

Personal development and improvement of employees are very important for the Institute, because business activities and development are based on the application of knowledge, i.e. on good knowledge of problems and ways of solving by applying new techniques and technologies. With additional training, active participation in international conferences and exhibitions employees gain specialist knowledge and make innovations that create a competitive edge and contribute to the success of developing new products and services.

#### Personnel risk

The risks of the leaving of key employees have been identified and measures have been taken to detain key employees. In order to prevent the unwanted outflow of employees and improve the organizational climate and greater satisfaction of employees, a plan with seven key activities was drawn up at the end of 2019. Out of the planned measures, in the first half of 2020, a quarterly informing of associates on important business events and developments of main activities at the Institute was carried out via e-mail. Annual personal talks with employees have begun, and flexible working hours have been redefined in accordance with employee suggestions and needs.

#### **STRATEGY**



Through application of knowledge and state-of-the-art technologies we develop solutions for efficient energy conversion and power transmission, on the principles of Corporate Social Responsibility.



To become a globally recognizable partner in the fields of power engineering and rail vehicles, and in that way to contribute to the success of KONČAR Group.

#### Policy of governance and social responsibility

The policy of governance and social responsibility expresses the unambiguous orientation of the Management Board to the application of a management system based on the principles of sustainable development and social responsibility and the permanent improvement of the system.



#### Strategy of Sustainable Development of the Institute

- Permanent increase of productivity with intense investments in the development of new products and services, life-long learning of employees, and construction of new laboratories or upgrading the existing ones
- Business based on sustainable development, fostering and promoting partnership relations with all stakeholders
- Fostering collaboration with academic communities and public institutes through joint scientific-research projects
- To be a scientific organization with status of an independent company within the KONČAR Group, whose owner leaves its entire profit for its further development

#### **ETHICS AND INTEGRITY**

#### 102-16 Values, principles, standards, and norms of behaviour

Within its sphere of influence the Institute supports and implements all the measures and obligations prescribed by law and international standards for the areas of business ethics, workers' rights, occupational health and safety and environmental protection.

#### Our fundamental values

Our values reflect our goals, priorities and convictions that guide us. By adhering to fundamental values and ethical standards we can focus on sustainability.

#### Reliability

One of our fundamental values, inherent to all we do. It is ensured by building trust with our customers based on our correct expertise and up-to-date technical solutions.

#### Excellence

Our goal is to constantly make improvements, plan future activities, and forecast challenges, keeping excellence, quality and sustainability.

#### **Tradition**

Decades of experience in applied research and laboratory testing are the basis for stability and success of our business in the future. There are intense investments in the development of new products and services, training of employees, and construction of new laboratories and refurbishment of the existing ones.

#### Knowledge

Successful business is based on knowledge and skills of our employees, superior expertise, professional competence, and correct and impartial assessments.

#### Responsibility

We are aware of social and environmental impacts of our actions. We take greatest possible care of environmental protection, human rights and occupational health and safety.

#### Code of business ethics

The Institute is a signatory of the CODE OF BUSINESS ETHICS of the Croatian Chamber of Economy.

In our business practice, we follow the highest ethical standards, and build our reputation on expertise, trust and reliability. All employees are encouraged to follow the Code in their work and everyday activities, and the Code covers rules and procedures, guidelines for decision making and examples of potential ethical dilemmas related to business activities.



#### Procedure for internal notification of irregularities and appointment of a confidential person

Pursuant to the Law on the Protection of Reporters of Irregularities, at the beginning of 2020, the Institute's management adopted the final text of the Ordinance on the Procedure for Internal Reporting of Irregularities and the Appointment of a Confidential Person which regulates; the procedure and method for appointing the reporter, the procedure and method for appointing a confidential person, the protection of the reporter of irregularities and the preservation of the received data and other important issues for reporting and protection of the reporter of irregularities.

The Institute has no recorded cases of irregularities.

#### **Anti-corruption policy**

Anti-corruption policy of the Institute is implemented by doing the entire business in accordance with laws, international regulations and rules of profession in an honest, fair and ethical way, with zero tolerance to bribery and corruption. The policy defines the reporting procedure, and every employee shall report any knowledge or doubt of bribery or any form of corruption inside or outside the Institute to the head of their department or service. Employees can report their knowledge or observations either orally, by mail or by an anonymous note put in a special box.

No case of corruption has ever been noticed in the Institute.

#### **GOVERNANCE**

#### 102-18 Governance structure

KONČAR – Electrical Engineering Institute is a joint stock company fully owned by KONČAR – Electrical Industry Inc. Companies within KONČAR Group are independent legal entities. The parent company monitors, strategically directs and supports the Institute through supervisory boards and meetings of shareholders in accordance with the Croatian Companies Act and Articles of Incorporation of both KONČAR – Electrical Industry and KONČAR – Electrical Engineering Institute.

Supervisory Board of the company appoints and dismisses the Managing Board and decides about the number of its members and duration of their term of office. Supervisory Board has five members, three of them are elected at the annual general meeting, one member is appointed by employees, and one by the majority shareholder. The length of term of members of the Supervisory Board is four years.

In accordance with the Companies Act and Articles of Incorporation, the Managing Board manages the business of company on their own responsibility. In doing so, the Board is obliged and authorized to make decisions necessary for successful management of the company. There are certain kinds of decisions prescribed by Articles of Incorporation that require approval by the Supervisory Board. The basic organisational structure of the Institute is set down by the Managing Board and approved by the Supervisory Board.

#### **Organizational structure**

From 1st January 2021, the Institute operates according to the new organizational structure which enables an efficient way of adapting to market requirements and investing its own resources in new technologies and applied research for the purpose of developing new solutions and services. The results of this approach are the trust of employees and customers and the creation of competitive products whose features and quality meet customers' needs.

Business units of key competencies act as profit centers, whose effectiveness is measured by newly created value and is the basis for rewarding employees from the joint contribution of the unit, while the success of individuals or teams is rewarded by personal stimulation or one-time monetary reward, depending on the contribution to the operation of the Institute or creation of conditions for future successful business operations. Business activities of the Institute are carried out in business units with the support of joint services, so that rewarding the services is related to the joint success of three profit centers.

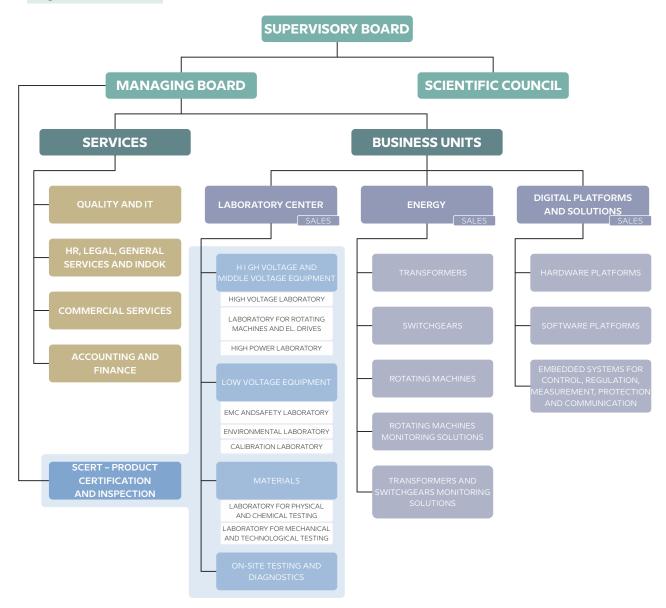
Within the Institute there is the independent, accredited Certification and Inspection Body.

The work of Product Certification Service SCERT is supervised by representatives of
government bodies and consumer
associations.

Certification Service - SCERT is accredited under EN ISO/IEC 17065:2012 Conformity assessment - Requirements for bodies certifying products, processes and services.

Inspection Service for Power and Measurement Equipment under EN ISO/IEC 17020:2012.

#### **Organisational chart**



#### STAKEHOLDER ENGAGEMENT

#### 102-40 List of stakeholder groups

The nine key stakeholders of the Institute have been identified. Stakeholders, their needs and expectations, and the type and frequency of communication are presented in the table.

#### 102-41 Collective bargaining agreements

Rights defined in Collective Agreement are guaranteed to all the employees.

#### 102-42 Identifying and selecting stakeholders

Internal procedures were established for recognition of particular stakeholders with which departments and services mostly interact in their everyday activities, stakeholders' requirements, frequency of interaction, way of communication, and relevance of stakeholders in regard to Institute's sustainable development.

The recognition process has three steps:







Stakeholders	Stakeholder needs and expectations	Type and frequency of communication
CUSTOMERS	Quality of products and services Observing delivery times Customer relationship management and methods of complaint solving Responsible resource management Ethical principles Customer privacy	Regular meetings, workshops, consultations Professional training when necessary Solving and analysis of complaints, requests and suggestions, when necessary Annual customer satisfaction survey Fairs, conferences, gatherings Official website, e-mail (continuous) Annual visits to customers Annual CSR Report
EMPLOYEES	Salaries and allowances Good working environment Personal development, respect and rewarding Stabile business Occupational health and safety Training and education Non-discrimination	Annual employee satisfaction survey Training and education, continuous Intranet, continuous E-mail, continuous Annual CSR report
SHAREHOLDERS AND INVESTORS	Corporate business strategy Value added Sustainable business	Annual general meeting Letters, e-mail, when necessary Annual CSR report
SUPPLIERS AND PARTNERS	Mutual benefits and long-term relations Management systems Ethical behaviour	Participation at conferences Mutual annual audits Official webpage, continuous Annual CSR report
LABOUR COUNCIL	Participation in management Legal compliance Freedom of association and right to collective bargaining	Regular and extraordinary meetings Notice boards, continuous Annual CSR report
BUSINESS AND PROFESSIONAL ASSOCIATIONS	Financial support Strengthening competences	Membership, continuous Working groups, working bodies, continuous Participation at conferences Annual CSR report
SCIENTIFIC COMMUNITY	Applied R&D Transfer of knowledge Joint projects	Scientific and professional papers Seminars and workshops, when necessary Participation at conferences and gatherings Joint activities Annual CSR report
PUBLIC ADMINISTRATION BODIES	Paying taxes, contribution and charges Compliance with laws and regulations Reporting	Working groups, continuous Letters, e-mail, continuous Official webpage, continuous Annual CSR report
LOCAL COMMUNITY	Investments in local initiatives Protection and rational use of resources (economic, environmental and social)	Regular visits and joint activities Donations and sponsorships Official webpage, continuous Annual CSR report

#### Communication with stakeholders

Due to limited movement and inability of direct contact in 2020, communication via websites and social networks has assumed the dominant role. Digital marketing and sales activities were dominant in 2020 and the means of communication and inclusion were as follows:

#### Fairs and conferences

The appearance and participation of the Institute's associates in 8 international fairs and professional gatherings in synergy with KONČAR Group companies was planned for 2020. Due to the pandemic, most events have been postponed or were held online, while 17 papers (scientific, expert or reports) of the Institute's associates have been published in various publications.

#### Official webpages

The Institute's webpages are constantly upgraded and harmonized with new requirements, offering information on business activities, organization of the Institute, solutions and services, references and a multitude of useful data related to electrical engineering, mechanical engineering, electronics and other technical sciences. The first page was published in 1996 at www.koncar-institut.hr, and in 2016 a dedicated website was created at www.koncarmonitoring.com, for the promotion of products and services of monitoring and diagnostics of transformers and rotating machines.

#### Social networks

The inability to move and closing down state borders in 2020 highlighted the importance of social networks in business. Using LinkedIn, the largest global business network, for the widest possible presence in the virtual world and interactive communication with stakeholders, the Institute publishes information related to business, new projects, products and services and participation in fairs and professional gatherings. The LinkedIn website KONČAR Electrical Engineering Institute, Inc. has almost 6,500 followers, and every month about five new posts are published. As part of this website, the Laboratory Center's showcase site (https://www.linkedin.com/showcase/laboratory-center/) was published in 2019.

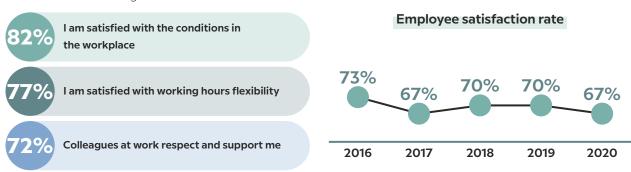


#### Intranet

The Institute's intranet is the central information point for employees with instructions and forms necessary for everyday work, databases of professional knowledge and norms, ordinances and other acts. The platform also contains interesting business events, as well as events related to employees, the introduction of new employees and awards and provides an overview of published scientific and professional papers of associates. Information and file management, archiving and searching, joint teamwork and creation of knowledge databases are ensured by MS Office SharePoint Server - MOSS document management system.

#### Employee satisfaction survey

In order to better communicate and understand the needs of employees, the Management has adopted a model for testing employee satisfaction through a survey conducted once a year. In December 2020, the tenth testing of employees' attitudes related to job satisfaction and interpersonal relations, motivation and rewarding, as well as information flow and other aspects important for determining the organizational climate was carried out in order to raise productivity and quality of the working environment to an even higher level.



The overall result of the satisfaction test in 2020 as well as the response were greatly influenced by events with the pandemic and its consequences, but the positive and negative attitude trends related to work did not change significantly. The Institute's employees remain highly motivated and have a positive attitude towards work. High 99% of respondents feel responsible for their work, 98% said they are ready for additional efforts when the job requires it, while 82% are satisfied with workplace conditions. In the next period, the area of improvement and leadership challenges are certainly to involve employees more in the processes of the new organization, to promote more actively the Institute's strategy and vision and to improve the award and promotion criteria.

#### 102-43 Approach to stakeholder engagement

The procedure refers to the collection, storage and processing of stakeholder requirements related to their satisfaction and expectations related to the information on Institute's impacts as well as to the information provided in the previous report.

The content of the report includes all the expectations, expectations and satisfaction ratings related to the topics of sustainable development, which were received from the involved stakeholders during the reporting period.

Involved stakeholders: employees, shareholders, customers, suppliers and partners, scientific community

#### 102-44 Key topics and concerns raised

In the reporting period, the following stakeholders' demands and interests were initiated as key and material:

- key economic indicators, investment in development (employees, customers, shareholders) GRI 201 Economic Impact
- the interest of suppliers and partners in the relationship between the Institute and the environment, and the establishment of a complete emission management system in the environmental constituents (shareholders, suppliers and partners, employees) have fuelled the materiality of the environmental themes GRI 302 Energy, GRI 305 Emissions and GRI 306 Waste
- · requests for promotion of connections between science and economy (partners) GRI 406 Community

#### **REPORTING PRACTICE**

#### 102-46 Defining report content and topic boundaries

In order to focus on the most important issues of sustainability for our stakeholders and our business, we apply the GRI principle of materiality. In 2016, the first process of identifying the most important material issues of sustainability in 5 steps was carried out: identifying, prioritizing issues, stakeholder involvement, analysis of relevance for the reporting period and confirmation.

Harmonizing the business activities of the Institute with expectations and needs of stakeholders, the following issues of particular interest are identified:

- stable and sustainable economic growth (employees, shareholders, suppliers and partners)
- investment in development and value added (shareholders, suppliers and partners, scientific community)
- responsible energy consumption and environmental impacts (employees, shareholders, customers)
- fair employment and job creation (employees, shareholders, scientific community)
- investing in competence and expertise (employees, customers)
- transfer of knowledge and innovation (buyers, scientific community)

The Institute is influenced by its own activities, but also by the activities that are the result of business relationships with other organizations.

#### 102-47 List of material topics

#### **Economic**

- Economic performance
- Indirect economic impact

#### **Environmental**

- Energy
- Emissions
- Waste

#### Social

- Employment
- Occupational health and safety
- Training and education
- Diversity and Equal Opportunity
- Communities

#### 102-48 Restatements of information

None

#### 102-49 Changes in reporting

There were no changes in material topics compared to the previous report. All inquiries and requests from stakeholders in the reporting period were already included in the content. Each year material topics shall be reviewed in terms of importance and harmonized with the requests and feedback received from the stakeholders involved. Each material topic has been accompanied by announcements of management approaches.

This report integrates the involvement of the Institute's business activities in the achievement of Agenda 2030 of the UN Global Sustainable Development Goals.

- 102-50 This 14th Report covers the period from 1 January to 31 December 2020.
- 102-51 The previous report was published in May 2020, and the next is planned for April 2022.
- 102-52 CSR Reports are published annually, and each contains results from the previous calendar year.
- 102-53 Contact person for CSR Report and its content:

Irena Šinko, Expert Assistant for CSR and Communication, isinko@koncar-institut.hr.

This CSR Report for 2020 has been prepared in accordance with GRI standards: Core option. The application of internationally recognized Global Reporting Initiative (GRI) methodology ensures a balanced and transparent representation of the Institute's sustainability performance.

#### 102-56 External assurance

 ${\sf External\,assurance\,of\,the\,Report\,was\,not\,made}.$ 



# TOPIC-SPECIFIC DISCLOSURES

#### GRI 200 ECONOMIC

#### **GRI 201** Economic performance



Our solutions improve resource management, reduce plant maintenance costs, and extend the lifespan of primary equipment.

#### **GRI 103 MANAGEMENT APPROACH**

#### 103-1 Explanation of the material topic and its Boundary

The Institute's economic growth is based on cutting-edge R & D services, competent and well-equipped laboratories, and competitive advanced IT-based solutions. It also plays an important role in the development of key electronic and energy components and communication equipment of Končar's production program.

The topic is material due to the significant interest of the involved stakeholders - employees, customers, shareholders and partners and the Institute.

The company is influenced by its own activities, but also by the activities that are the result of business relations with other Končar Group companies and the situation in the Croatian and global markets.

#### 103-2 The management approach and its components

The Institute participates in research, development, testing, supervision and expertise on a large number of Končar Group projects. In addition to providing support to Končar Group companies, the Institute's experts cooperate globally in the development of rotating machines and security critical embedded computing systems for a foreign customer.

The export potential for the global market are also transformer, bushing and machine monitoring systems and laboratory testing.

It is also investing in the reconstruction of the existing and construction of new laboratory infrastructure. The modernization of laboratory infrastructure is a prerequisite for improving the testing and the market position of the Institute. The strategy of providing laboratory services is based on competences, quality, speed and the so-called "one-stop testing" approach.

#### 103-3 Evaluation of the management approach

The Institute's short-term assets are 8.9 times higher than short-term liabilities, and in short-term assets 67% include financial assets and cash that, together with open liabilities, after the end of the business year, ensure stable operations of the Institute in the forthcoming period.

#### 201-1 Direct economic value generated and distributed

In 2020, despite limitations, revenues from some diagnostic and field testings were higher than planned and the revenue from the Laboratory Center services increased. (mil.  $\in$ )

The first delivery of fast transients event recording system based on the new KonFID platform was successfully completed, as well as the delivery of contracted transformer monitoring systems, rotating machines and switching equipment and the delivery of newly developed equipment for the first Latvian trams. The delivery of equipment for trains and railway crossings continued. The project for development and testing of control electronics and converters for solar power plant for the island of VIS and development and research contracts for transformer companies within the Group have been completed. It was agreed to continue cooperation with numerous Group companies and start cooperation on projects for Siemens Energy and Hyosung Heavy Industries.

The Institute's long-term business strategy in the coming period will be focused on excellent research and development services, competent and well-equipped laboratories and competitive advanced products based on information communication technologies.

Component	2020
Direct economic value generated	10.03
Sales	9.54
Financial income	0.01
Asset income (rental and sales)	0.01
Income from co-financed projects	0.36
Direct economic value distributed	9.33
Suppliers of materials and services	3.25
Education & training	0.06
Services of academic community	0.13
Other costs	0.53
Salaries & allowances	3.33
Taxes, contributions, insurances	1.99
Donations	0.01
Retained earnings	0.70

Challenges in the coming period will be the construction of a new Laboratory for Power Systems and Drives (LAVESP), the continuation of investments in infrastructure for laboratory and diagnostic tests, and other projects to modernize laboratory equipment. It is planned to continue the investment in competencies within the Certification Service and the Service for Electrical and Measurement Equipment Inspection. These services, together with the Institute's certification for 6 EU directives (Notified Body 2494), further increase the Institute's visibility on the market for laboratory, diagnostic, certification and inspection services.

The following figure shows sales revenue for key business activities for the past five years. In 2020, revenues from proprietary solutions increased by 16% and from diagnostics, testing and certification increased by 1.2% compared to 2019, while revenues from research and development decreased by 8%.

#### Key business indicators

In 2020, operating income was 10.13 million €, while EBITDA amounted to 1.32 mill. €. Return on sales was 6.6%, while the level of general economic efficiency was 6.1%.



Productivity measured by value added per employee in 2020 was  $\leqslant$  34,919, a decrease of 4% compared to 2019 and 2018.

# Trends in total income, sales, value added, total personnel cost, and number of employees

Trends in total income, sales, value added, total personnel cost, and number of employees in the last 10 years are shown below.

#### Investment in the development

Investments in non-current assets amounted to 558,868 euros - 504,441 euros in equipment, and in software 54,426 euros. Investment maintenance of equipment and buildings amounted to 70,356 euros. Investments in education with total eligible costs (tuition fees, registration fees, professional literature and official trips related to training) amounted to 67,701 euros. The license and maintenance cost of the software was 148,677 euros.

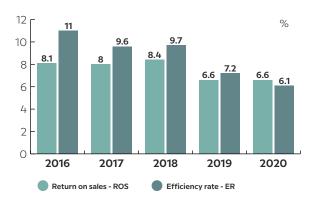
#### Investments in R & D

Numerous projects are underway where the Institute conducts co-financed R & D and innovation activities or invests exclusively in its own resources. During 2020, investments in R&D were 1 million euros.

#### Sales per business activities



\*applied exchange rate from 2019.



#### Income and personnel costs



#### Investments

					(mil. €)
	2016	2017	2018	2019	2020
Investments in equipment & refurbishments	0.95	0.82	0.66	0.57	0.50
Investment maintenance	0.11	0.08	0.08	0.08	0.07
Software license and maintenance	0.13	0.13	0.27	0.2	0.15
Investments in R&D	0.13	0.13	1.29	1.03	0.99
Education	0.8	0.97	0.12	0.12	0.06

T O.6 Our own R & D Co-funded investments in research, development and innovation (including our own contribution to co-financed projects)

O.1 Intangible assets in preparation-development own contribution to co-financed projects)

#### Major investments realized in 2020:

- laboratory current sources, and capacitive and reference resistive dividers
- a system for measuring the angle of loss and capacity
- · vacuum drying equipment
- devices for the diagnostics of transformers and rotating machines
- climatic testing equipment

- a device for measuring kinematic viscosity and fluid density
- · oscilloscopes
- equipment for measuring electromagnetic fields
- IP and LVD testing equipment
- expansion of existing and purchase of new software licenses



#### Increase of laboratory capacities by our own investment

The most significant investment planned in the coming years is related to the project for the construction of a new Laboratory for Power Systems and Drives - LAVESP and the expansion of R&D and testing facilities of the existing laboratories within the Institute. The value of the planned LAVESP project and the renovation of the other laboratories is about 8.1 million euros.

The purpose of the Laboratory is the implementation of R&D studies necessary for the development of new, innovative products and services such as power equipment and services related to their use or application. The development of new and innovative products and services will significantly increase the competitiveness of the entire power sector in Croatia.

#### 201-2 Climate change: financial implications, risks and opportunities

Climate change is the main topic of discussion in almost all international organizations, governments and large and small companies around the world. The Institute is not an exception and has been encouraging and implementing measures to reduce greenhouse gas emissions for many years. Through its policy of governance and social responsibility the Institute undertook to maintain high standards of environmental protection and health and safety in all business processes.

Although the Institute develops its business in the field of services with less significant consequences for the environment, employees of the Institute pay great attention to environmental protection in two ways. One is to launch a range of initiatives to mitigate climate change within the Institute, monitor the consumption of heat and electricity, as well as water in order to rationalize self-consumption while at the same time regulating the working environment and facilities. The second way is through new technical solutions of products with minimal environmental impact and suitability for recycling at the end of their lifetime. Observing the whole product lifecycle is one of the important elements that gives the future product user-added value, the meaning of which is increasing every day.

In the forthcoming period, the Institute plans to restore the envelope of the administrative building in order to further reduce the consumption of heat and electricity and to build a new facility according to the principles of high energy efficiency in which the LAVESP laboratory will be housed.

Most of the Institute's facilities were either reconstructed or they are currently undergoing reconstruction in accordance with the energy efficiency rules of buildings in order to reduce heating and cooling costs. Such access to natural resources significantly contributes to the reduction of costs related to the Institute's infrastructure, which is very large and demanding in terms of space and installations and without which the Institute could not perform very complex research and testing.

#### 201-3 Defined benefit plan obligations and other retirement plans

In the preparation of the annual financial statements for the year 2020, provisions for jubilee awards and severance payments amounting to 0.21 million euros were made. The amount includes the estimated amount of regular employee benefits in accordance with the Collective Agreement. The present value of the provision is calculated on the basis of the number of employees, the amount of the pension, the working life on the balance sheet date and the discount rate of 0.7%. The reserve amount fully covers the anticipated severance grants and rewards of employees who have been eligible for this in 2020.

The companies of the KONČAR Group regularly pay contributions for all workers in the system of generational solidarity at the rate of 20% for the 1st pension insurance pillar. For insured persons who are insured in both mandatory pillars, the contribution rate for the 1st pillar is 15%, and for the 2nd pension pillar the contribution of 5% is paid to personal accounts in mandatory pension funds.

#### 201-4 Financial assistance received from government

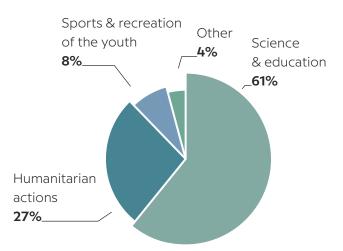
In 2020, the Institute received the state aid in the amount of 45,513 euros through the reduction of the profit tax base (education and training grants). The Ministry of the Economy, Entrepreneurship and Crafts co-funded the SafeTram R&D project, which the Institute conducts in co-operation with the Faculty of Electrical Engineering and Computing, in the amount of 311,630 euros.

#### **Donations and sponsorships**

The KONČAR Group, which also includes the Institute, donated a million kuna for the purchase of protective and medical equipment necessary to fight against the SARS-CoV-2 virus. The funds were donated to the action "Croatia against Coronavirus", and equipment procured for health care professionals included protective FFP2 and FFP3 masks, protective suits, safety glasses and face shields, respirators and monitors for monitoring the vital functions of the sick.

Moreover, after the devastating earthquake in Sisak-Moslavina County, the KONČAR Group paid a donation of 66,374 euros to the state budget to help the victims and financially assist its employees whose homes were damaged in the earthquake.

In 2020 the Institute invested most funds (61%) in partnerships and fostering relations with engineering faculties, development and exchange of knowledge in natural sciences and electrical engineering. Strategic approach with funds invested in areas closely related to corporate business provides value added for the entire community.



Donations and sponsorships were **1.72%** value added

#### **GRI 203** Indirect economic impacts

#### GRI 103 MANAGEMENT APPROACH

#### 103-1 Explanation of the material topic and its boundary

Scientific-research organizations should be involved in national and international projects to ensure co-financed funding and the ability to adopt state-of-the-art scientific methodologies and procedures, create innovations and evaluate their own work.

The topic is material due to the significant interest of stakeholders-employees, shareholders, partners and the Institute.

The company is influenced by its own activities, as well as by the activities that are the result of business relationships with other Group companies and the scientific community.

#### 103-2 The management approach and its components

The Institute is an accredited scientific organization in the field of technical sciences, whose sole owner (shareholder) leaves the overall profit for its development. The tradition of applied research and development of products and technology at the Institute has been developed for 60 years and has played a major role in the production program of KONČAR Group. Examples are the development of key electronic and power components and communication equipment and solutions for low-end trams and electric and diesel trains. Knowledge acquired by participating in R & D projects and product creation has enabled the development of new business activities, further growth and acquisition of new competencies, creation of desirable jobs and innovation. Acquired references as added value keys are the ones that open the door to new business opportunities.

#### 103-3 Evaluation of the management approach

The importance of scientific and technological development for the overall economic development has been recognized through numerous researches that show that social benefit from investment is considerably higher than private benefit, which is one of the most important reasons for state incentives and financing of this activity.

Value-added products - innovations that ensure a sustainable development and a competitive economy - are produced through scientific research and experimental work.

Completion of development and the first delivery of the new generation of the main control and visualization system for the Latvian tramway. As part of the project, for the first time, a compact dual driver-machine interface was installed in the tram vehicle.





A development project to upgrade a high-voltage motor for a well-known South Korean company has begun. The first phase included diagnostic tests of the existing engine, as well as the expert application of the most modern tools for numerical analysis in the field of mechanics, electromagnetism, heat transfer, and fluid dynamics.

#### Award for scientific contribution in 2020

The "Vera Johanides Award" was given to Eduard Plavec, PhD for significant scientific and expert progress and outstanding contribution in the field of his research.

Plavec, PhD stood out with his research and innovation work with three new products, the development of two new methods – optimisation and calculation, and numerous scientific and professional papers published in prominent journals.

He has received three scientific and innovation awards for his work so far.



#### 203-2 Significant indirect economic impacts



The results of participation in national and international projects are the original solutions applicable in practice, whose aim is the exchange of knowledge and ultimately an innovative product competitive on the world market.

#### Project funded by Croatian Science Foundation



Project "Capacitively graded oil-paper insulation behaviour under very fast transients", approved by the Croatian Science Foundation, continued in 2020. The expected contribution of the project is the extension of knowledge on the behaviour of the capacitively graded oil-paper insulation during transition phenomena, which can contribute to the optimization of electrical equipment design and their monitoring, thus increasing their safety and reducing the impact on the environment. Activities on the project will be carried out in 5 phases, and the expected completion is by the end of 2022.

#### Projects co-funded by European Regional Development Fund

The SafeTram Project - a system for increasing the safety of public urban rail traffic, co-financed by the Croatian Ministry of Entrepreneurship and Crafts, within the Call for Proposals "Increase of the development of new products and services which supervene from research and development activities", and the Faculty of Electrical Engineering and Computing in Zagreb project partner, ended in 2020.

The system has been developed and tested and awaits application in rails vehicles, where it will warn the driver about the danger and help him avoid other traffic participants.



#### EU programmes - HORIZON 2020

The project with the original name "Safe human-robot interaction in logistic applications for highly flexible warehouses" (abbr. SafeLog) within Horizon 2020 Programme is completed. The project was coordinated by the Karlsruhe Institute of Technology, and apart from the Institute, Fraunhofer IML, Czech Technical University of Prague, Swisslog and the Faculty of Electrical Engineering and Computing from Zagreb worked on the project. The safety-critical vest for staff working in flexible logistics centers, developed in this project, received a high mark and is looking for its way to the market.



**GRI 300** 

#### **ENVIRONMENTAL**



Rational consumption of energy resources and the establishment of emission control systems in environmental constituents reduce the adverse effects to the smallest possible extent.

# We protect the environment

By responsible management of natural resources and waste disposal in a safe and secure way we protect human health and minimize environmental impact

GRI 302 Energy

#### **GRI 103** MANAGEMENT APPROACH

#### 103-1 Explanation of the material topic and its boundary

The company KONČAR - Infrastructure and Services Ltd., a member of the KONČAR Group, is the lead and coordinator of the infrastructure project "Establishment of a system for comprehensive screening/monitoring of emissions into environmental components at the KONČAR Group – Environmental emissions register". The project collects data on emissions in all environmental components and the Group's investments in the environment.

The company KONČAR - Infrastructure and Services Ltd. has introduced the EMAS (Eco-Management and Audit Scheme) system of ecological management and independent assessment, a voluntary environmental management system developed by the European Commission, intended for business entities to assess, report and improve environmental impacts.

 $The topic is \, material \, due \, to \, the \, significant \, interest \, of \, stakeholders \, - \, employees, \, shareholders \, and \, partners \, and \, the \, Institute.$ 

The company is influenced by its own activities, but also the activities that result from business relationships with other Group companies.

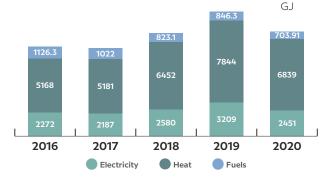
# 103-2 The management approach and its components

Most of the Institute's constructed facilities were either reconstructed or they are currently undergoing reconstruction in accordance with the energy efficiency rules of buildings in order to reduce costs for energy and greenhouse gas emissions.

Business activities of the Institute affect energy consumption. The consumption and its costs are monitored and measured, all major deviations are analysed, and risks assessed.

#### 103-3 Evaluation of the management approach

The Institute purchases electricity and heat from the distributor KONČAR - Infrastructure and Services Ltd., a company within the KONČAR Group, which supplies Končar's locations with energy (electricity, gas, heat and compressed air), water (cold, warm, technological) and provides drainage systems.



HEP's green energy (ZelEn) guarantees that the electricity the Institute uses in its business is produced from renewable energy sources, further contributing to the reduction of CO2 emissions.

#### 302-1 Energy consumption within the organization

In 2020, electricity consumption was reduced by 24% and heat consumption by 13%, which is related to reduced business activity volume and work opportunities from home used by about a quarter of employees. Fuel consumption for official cars also decreased from the previous year in relation to the limited movement due to the spread of the SARS-CoV-2 virus.

#### **Indirect energy consumption**

	Consumption	of electricity	Heat cons	sumption
	MWh	GJ	MWh	GJ
2016	631	2272	1435	5168
2017	607	2187	1439	5181
2018	716	2580	1792	6452
2019	891	3209	2178	7844
2020	680	2451	1899	6839

#### GRI 305 Emissions

#### GRI 103 MANAGEMENT APPROACH

#### 103-1 Explanation of the material topic and its Boundary

The same description applies as to GRI 302 Energy and GRI 305 Emissions.

# 103-2 The management approach and its components

Direct and indirect emissions include fuel consumption of company-owned vehicles, fuel consumption of privatelyowned vehicles used for business purposes and fuel consumption of planes are also included.

To promote energy efficiency in traffic, consideration is being given to procurement of official hybrid and/or electric cars.

CO<sub>2</sub> emissions by weight

Energy costs were 5.76% value added

CO <sub>2</sub> emissions per activity in tonnes								
Fuel CO <sub>2</sub> (t)*	Electricity CO <sub>2</sub> (t)*	Heat CO <sub>2</sub> (t)*	Flights CO <sub>2</sub> (t)*	Emissions total CO <sub>2</sub> (t)*				
82.5	174.6	386.7	36.0	679.8				
74.8	168.1	387.7	36.7	667.3				
60.3	198.4	482.8	48.7	790.2				
62.0	205.7	587.0	24.5	879.2				
51.5	0**	511.8	13.2	576.5				
Scope 1	Scop	pe 2	Scope 3					
	82.5 74.8 60.3 62.0 51.5	Fuel cO <sub>3</sub> (t)* Electricity cO <sub>3</sub> (t)*  82.5 174.6  74.8 168.1  60.3 198.4  62.0 205.7  51.5 0**	Fuel cO <sub>3</sub> (t)*         Electricity cO <sub>3</sub> (t)*         Heat cO <sub>4</sub> (t)*           82.5         174.6         386.7           74.8         168.1         387.7           60.3         198.4         482.8           62.0         205.7         587.0           51.5         0**         511.8	Fuel cO <sub>3</sub> (t)*         Electricity cO <sub>3</sub> (t)*         Heat cO <sub>3</sub> (t)*         Flights cO <sub>4</sub> (t)*           82.5         174.6         386.7         36.0           74.8         168.1         387.7         36.7           60.3         198.4         482.8         48.7           62.0         205.7         587.0         24.5           51.5         0**         511.8         13.2				

\*From the Manual for Energy Consultants, UNDF

#### 103-3 Evaluation of the management approach

The Institute purchases electricity and heat from the distributor KONČAR - Infrastructure and Services Ltd., a company within the KONČAR Group, which supplies Končar's locations with energy (electricity, gas, heat and compressed air), water (cold, warm, technological) and provides drainage systems.

Since 2019, the Institute has been using green energy (ZelEn), which guarantees that the electricity needed in the business is produced from renewable energy sources, further contributing to the reduction of CO2 emissions.

Most of the Institute's constructed facilities were either reconstructed or they are currently undergoing reconstruction in accordance with the energy efficiency rules of buildings in order to reduce costs for energy and greenhouse gas emissions.

#### 305-1/2 Total direct and indirect greenhouse gas emissions per weight

A significant reduction in total CO2 emissions is the result of the supply of neutral electricity ZelEn. Annual fuel consumption of vehicles and planes is directly dependent on business activities and increased number of travels and diagnostic tests on site (transport of measuring equipment and test engineers).

#### GRI 306 Waste

#### **GRI 103** MANAGEMENT APPROACH

#### 103-1 Explanation of the material topic and its boundary

Since introduction of Environmental Management System (EMS) in 2002, waste has been disposed in the Institute in accordance with Croatian laws and regulations. EMS applies to all organizational units (departments and services), all working areas, all places of work and work resources, all workers and other persons who have access to or stay in the Institute's premises for any reason whatsoever.

The topic is material due to the significant interest of stakeholders - employees, shareholders and the Institute.

The company is influenced by its own activities, but also the activities that result from business relationships with other Group companies.

<sup>\*\*1</sup>A contract was signed with HEP Opskrba on the purchase of electricity from renewable sources (ZelEn - Green energy on 1.10.2019

#### 103-2 The management approach and its components

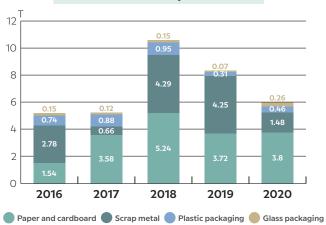
In Laboratory for Physical and Chemical Testing the work with chemicals is under constant monitoring, and the prescribed environmental measurements and testing are carried out. All the employees in the Laboratory are technically competent for work with poisons, have completed courses in toxicology in accordance with the applicable legislation, so that there is full compliance with legal requirements. Safety data sheets for dangerous substances, instructions and other documentation are maintained and compliant with GHS and REACH directives.

#### 103-3 Evaluation of the management approach

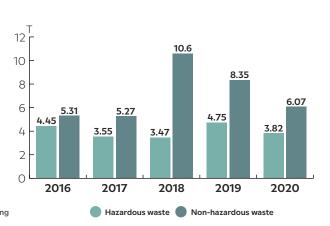
Proper disposal and classification of waste is an on-going task of all employees, and raising awareness of the importance of the environment and training on the culture of waste disposal in the Institute is carried out with all new employees.

The Institute was neither fined nor sanctioned in any other way for non-compliance with environmental laws and regulations.

#### Non-hazardous recyclable waste



#### Hazardous and non-hazardous waste



#### 306-2 Waste by type and disposal method

Our work processes generate waste that requires special disposal methods including recognition of hazardous waste, collecting, temporary storage, disposal by the authorized waste disposal contractors, keeping prescribed records and delivery of data about waste.

The effectiveness of the measures taken shall be checked on an annual basis and an internal audit shall be carried out to determine any deficiencies. The amount of municipal, mixed waste is monitored, measured and steps are taken to improve the collection and disposal system.



The quantity of waste metal and cardboard is directly influenced by business processes, i.e. by increase of purchases, deliveries and investments in the current year.

Waste type	2016	2017	2018	2019	2020
Municipal waste (mixed) (m³)	126	127	112	107	117
Hazardous waste (t)	4.45	3.55	3.47	4.75	3.82
Non-hazardous waste (t)	5.31	5.27	10.60	8.35	6.07

#### GRI 400 SOCIAL

#### GRI 401 Employment



Solving complex industrial challenges and participation in international and national projects encourages employment on challenging tasks and creates new desirable jobs.

#### GRI 103 MANAGEMENT APPROACH

#### 103-1 Explanation of the material topic and its boundary

The Institute mostly employs young and college-educated people, and by working on research and development tasks together with experts from other KONČAR companies or in partnerships at national and international projects they gain new knowledge and team work experience. Satisfied and motivated employees are the basis of our long-term business success, and well-educated and competent experts are our greatest asset.

This topic is material due to the significant interest of stakeholders - employees, shareholders and the Institute.

The company is influenced by its own activities.

# We protect people and the community

Our business activities reflect global needs and ambitions for solving complex technological challenges, protecting people and the communit

#### 103-2 The management approach and its components

Motivation of employees for scientific and professional development, personal advancement and their focus on the areas of interest of the Institute are a huge force for technical creativity and competition at the global level.

The Institute offers its employees the acquisition of expert knowledge, challenging jobs and fair working conditions. They include fair compensation for their work, additional benefits, and flexible work practices to meet individual employee needs. All employees are provided with continuous personal and professional development through education and training programs.

#### Workers' Council

All employees have the freedom of association and the right to collective bargaining. Through the Workers' Council, employees have the opportunity to participate in decision-making on issues related to their economic and social rights and interests. The representative of the Workers' Council participates in the regular work of the Institute's Supervisory Board and annual meetings of the Management where business plans are presented for the next period. On the Intranet there is a special section of the Workers' Council with information about the conclusions of the Works Council's meetings, valid contracts and news related to employee interests.

#### **Employee satisfaction survey**

Employee satisfaction surveys have been introduced as an important tool by which employees can point to realized improvements and possibilities for further improvements, so that the Institute can achieve the best working conditions possible. Strong employee engagement is essential for successful long-term operations of the Institute and the quality of products and services provided to its customers (more on page 21).

#### 103-3 Evaluation of the management approach

Challenging tasks, comfortable and air-conditioned workspace, modern equipped laboratories, decorated landscape, intranet and the availability of international databases of worldwide published papers are the main features of the business environment of today's employees of the Institute.

Job recruitment, selection and retention procedures are constantly being promoted and aligned with new challenges. External and internal communication and improvements in two-way inclusion process require additional attention in the coming period.

401-1 At the end of 2020, the Institute had 169 employees, i.e. 2 associates more than at the end of 2019. In 2020, 17 new associates were hired and 15 left the Institute, out of which 3 retired and 12 ended their employment by agreement. Over the past ten years, 116 employees have left the Institute, with the same number of new employees hired.

#### Number of employees 2011 to 2020

	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020
New employees hired	8	7	9	9	11	15	21	10	9	17
Employees who left the Institute	12	14	7	5	12	12	20	6	13	15
Total number of employees	169	162	164	168	167	170	171	173	167	169
on 31 December	103	102	10-4	100	107	170	17 1	1/3	107	109

#### 401-2 Benefits provided to full-time employees

Additional benefits create a positive atmosphere that favours the climate of unity and cohesion in the Institute, despite differences in monthly wages that are related to the success of performance of each department:

- Educational and professional programmes for improvement of knowledge and skills
- Paid business trips and participation in international conferences
- Christmas and Easter bonuses, holiday cash grants
- Jubilee financial rewards for 10, 15... years of service in the Institute
- Money reward for completion of graduate and postgraduate studies

- Financial aid in the case of sick leave exceeding 90 days
- Allowance in the case of death of immediate family member
- Allowance for each new-born baby
- Regular medical check-ups
- Leisure time recreation
- · Mobile phone

There are special bonuses for each successfully completed job. Corporate loyalty is fostered and each employee who wishes to improve their knowledge in the areas that are of interest for the Institute will have paid expenses of such training or education.

#### **MultiSport program**

The Institute, in collaboration with the company Benefit Systems, has enabled its employees to use the MultiSport program with more than 50 different sports activities in more than 360 sports facilities.

The programme encourages employees to live a healthy and active life and adopt daily physical activities. In order to provide its employees with a balance between business and private life, the Institute covers 50% of the monthly fee for the use of the Multisport program.

#### 401-3 Parentalleave

All female employees have the right on parental leave, and male employees have the same right in accordance with the decision of the Croatian Institute for Health Insurance (HZZO). During the reporting period, 4 women exercised their right to maternity leave. For one of them the maternity leave has expired and she is back to work.

#### **GRI 403** Occupational health and safety



Healthy and secure working environment is recognized as our greatest responsibility and contribution to creating quality jobs.

#### GRI 103 MANAGEMENT APPROACH

#### 103-1 Explanation of the material topic and its boundary

Expenses of occupational health and safety were **1.54** value added

Occupational health and safety risk management is the overall process of identifying, assessing and monitoring the risks, and in accordance with them taking the necessary measures and controls for the purpose of eliminating risks, reducing risks and / or controlling them.

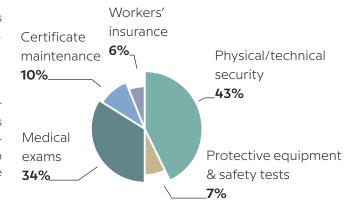
The topic is material due to the significant interest of the involved stakeholders - employees and the Institute.

The company is influenced by its own activities, as well as activities outside the boundaries of the Institute's influence.

# 103-2 The management approach and its components

Ensuring a healthy and secure work environment for employees through the OHSMS management system has been recognized as our major responsibility and consequently gained the trust of users, customers, foreign investors and improved global competitiveness of the company in the market.

#### Expenses of occupational health and safety in 2020



#### 103-3 Evaluation of the management approach

Safety at work and occupational health care are essential elements of working conditions governed by applicable Croatian regulations and OHSMS procedures.

#### 403-1 Occupational health and safety system

OHSMS is a part of the integrated management system defined by the OHSAS 45001 and represents a mechanism for occupational health and safety. The fundamental goal of the system is to ensure a healthy and safe working environment, i.e. to remove or reduce the risk of work injury and occupational illness for all employees of the Institute and other persons to whom the activities of the Institute may have an adverse effect.

#### 403-2 Hazard identification, risk assessment, and incident investigation

In accordance with Croatian regulations and OHSMS procedures, dangers are identified, risks assessed and monitored (both those affecting health and safety of employees and third parties), and accidents and injuries at work investigated and analysed. Controls and audits are conducted in accordance with OHSAS 45001, and they include a complete OHSMS system: estimates, goals, analysis, measurement, stakeholder feedback and results, undertaken activities and improvements.

#### <u>403-3</u> Occupational health services

The Institute has a contract with a medical specialist who regularly monitors the health status of workers through periodic and extraordinary medical examinations. Examinations are carried out during working hours, and the health institution in which the examinations are conducted is located directly next to the Institute's location.

#### 403-4 Worker participation, consultation, and communication on occupational health and safety

Workers are involved in health and safety during risk assessments. All workers can initiate or suggest improvements, more practical solutions, eliminate omissions and irregularities in the implementation of workplace safety regulations or improve the management of occupational health and safety through communication channels: representatives at the Workers' Council and the Commissioner for Occupational Safety, either publicly (verbally or in writing) or anonymously (polls and mailbox).

#### <u>403-5</u> Worker training on occupational health and safety

The following trainings have been carried out:

- safe work and starting fire extinguishing of all new employees
- operation of forklifts, crane lifts, self-propelled lift platform and scaffolding
- handling hazardous chemicals
- for authorized persons in the field of occupational safety

#### 403-6 Promotion of worker health

Once a year, all employees can have a systematic medical examination at a selected healthcare facility.

# 403-7 Prevention and mitigation of occupational health and safety impacts directly linked by business relationships

Occupational health and safety risk management is carried out in accordance with OHSMS procedures, with a view to defining the methodology for permanent and timely hazard identification (potential / current), risk assessment of possible adverse effects on health and safety at work and determination of control mechanisms.

#### <u>403-8</u> Workers covered by an occupational health and safety management system

OHSMS refers to all organizational units (departments and services), all working spaces, all places and means of work, all employees and other persons who have access to or stay in the Institute's premises for any reason.

#### <u>403-9</u> Work-related injuries

Work injury information

	2016	2017	2018	2019	2020
Average number of employees	167	169	172	169	169
Number of fatal injuries	-	_	-	_	-
Number of group injuries	-	-	-	-	-
Number of severely injured at work	1	1	1	1	1
Number of light injuries at work	1	2	3	1	-
Total number of injuries	2	3	4	2	1
Number of lost working hours	64	408	1008	1672	208

In 2020 1 occupational injuries occurred and were reported in accordance with regulations and OHSMS procedures. The injury is severe, it occurred outside the workplace, i.e. on the usual way from work to home. The cause of the injury is the fall of the worker on a flat surface.

The rate of work-related injuries that were recorded in 2020 is 0.58 based on 200,000 hours worked.

#### 403-10 Work-related ill health

None

#### GRI 404

#### **Training and education**



We encourage personal development and improvement of employees through professional education, foreign language learning, IT training and education for quality systems, environmental protection and occupational safety.

#### GRI 103 MANAGEMENT APPROACH

#### 103-1 Explanation of the material topic and its boundary

The focus of employees on scientific and professional training, as well as encouraging excellence and innovation in creating competitive advantages contribute to the success in the development of new products and services. The advantage over others is achieved through faster and more versatile learning, and the acquired knowledge and competences give us an advantage on the market.

The topic is material due to the significant interest of stakeholders - employees, customers and the Institute.

The company is influenced by its own activities.

#### 103-2 The management approach and its components

Employees are given the opportunity of professional education, foreign language learning, IT training and education for quality systems, environmental protection and safety at work. New knowledge is gained through postgraduate doctoral and specialist studies as well as work on research development tasks in mixed teams of KONČAR Group companies, at seminars and in active participation in international congresses and exhibitions. Creativity and leadership development are encouraged through management education programs.

Internal processes are continually improved in the HRM system (the system of monitoring the staff of the Končar Group), and effects and costs are monitored through the procedures in the Annual Education Plan and the Program of Training and Education.

#### 103-3 Evaluation of the management approach

Processes of knowledge management and digitization of the expert knowledge and competencies database are of utmost importance to the Institute, and an area where significant improvements can be made.

#### 404-1 Average annual number of training hours per employee

In 2020 66% of employees attended some form of training or education, and average lesson time was 81 hours per employee.

Doctoral and postgraduate students are men, which increases the difference in the average hours of training and education in 2020 in favour of men. Also, training for types of jobs mostly made by men (work with a forklift, crane and self-propelled lifting platform).

#### 404-2 Programs for upgrading employee skills and transition assistance programs

#### Program for new employees and trainees

The program for new employees and trainees enables familiarization with the Institute's legal acts, management systems, health and safety protection, and the basic concepts of corporate social responsibility and the application of sustainability principles at the Institute.

#### Average hours of training and education in 2020

Category	Hours
Management Board (Top management)	67
Heads of departments	57
(Middle management)	3/
Heads of laboratories and sections	74
(Lower management)	74
Employees	84



#### Acquisition of specialist knowledge and scientific vocation

Postgraduate doctoral studies are attended by 6 associates at three technical faculties of the University of Zagreb, 1 attendees are studying postgraduate specialist studies and 3 undergraduate and graduate studies. The Institute has 19 scientists enrolled in the Register of Scientists, 8 of them with the status of research associate and 1 senior research associate. In 2020 17 employees attended German and Spanish language courses.

#### KONČAR Academy

KONČAR Group conducts the programme Fundamentals of Business Administration (FBA) with candidates up to the age of 35 who are capable of modern management. The aim of the program is to provide opportunities for developing work independence and creating a base for potential young managers. Six generations were educated under this programme, and an advanced education cycle was carried out to stimulate business thinking and develop specific managerial  ${\sf competencies}$ . So far, 21 associates of the Institute have attended a training program for management candidates.

#### **Diversity and Equal Opportunity**



By accepting and encouraging diversity and equal opportunities, we contribute to both organizational culture and the general goals of non-discrimination and gender equality.

#### GRI 103 MANAGEMENT APPROACH

#### 103-1 Explanation of the material topic and its boundary

Diversity includes differences in ethnicity, gender, function, competence, language, religion, lifestyle, culture, intellectual and other abilities of employees.

Accepting and promoting diversity and non-discrimination as key values for the Institute's sustainable development takes place through three important segments: organizational culture, management and employees.

Management in the context of diversity is a voluntary effort of the Institute to recognize and involve people of different characteristics to ensure innovation, creativity and adaptability through such an approach and achieve long-term business success, and also to contribute to the goals of anti-discrimination.

This topic is material due to the significant interest of stakeholders - employees, shareholders and the Institute.

The company is influenced by its own activities.

#### 103-2 The management approach and its components

In 2018 the Institute adopted Diversity and Non-Discrimination Policy and drafted the Action Plan for Diversity and Non-Discrimination Promotion 2018-2021. The Policy clearly expresses the attitude and focus on a better understanding of the impact of diversity among all stakeholders of the Institute, defining goals, roles and responsibilities and monitoring measurable impact indicators.

The Diversity and Non-Discrimination Policy in the Workplace is available to all the stakeholders on the Institute's website and intranet, while the Diversity and Non-Discrimination Action Plan is available on the Institute's intranet.

#### 103-2 Evaluation of the management approach

Drafting an action plan for a new three-year period in line with the results and assessment of the progress of impact indicators from the Action Plan for Diversity and Non-Discrimination Promotion 2018-2021 is currently underway.

The annual Report for 2020 provides an assessment of progress made towards achieving measurable action plan targets in 5 key areas:

KEY AREAS	ASSESSMENT OF THE IMPLEMENTED MEASURES IN ACHIEVING THE TARGETS
Diversity management	Two out of three measures were successfully implemented, setting responsibilities and time frames and measurable impact indicators in achieving this target.
Recruitment, selection and retention	Recruitment measures have been fully implemented, while retention measures need to be intensified in the following period in order to achieve satisfactory improvement
Working environment	5 measures have been set out to ensure the integration of the principle of diversity into the impact management process and education and development programmes. According to the respondents' assessments, two indicators have improved, while the others have to be redefined in the forthcoming period
Communicatio n and education	The Diversity and Non-Discrimination Policy at work is accessible to all stakeholders, but no process has been carried out to verify that its principles are understood at all levels of the Institute.
Balance of private and business life	Employees are satisfied with flexible work practices that allow employees a balanced relationship between private and business life and continuous support for personal progress

#### 405-1 Diversity of governance bodies and employees

The Institute's main activities stipulate that the Institute employs men in the highest percentage. The share of women in the total number of employees is approximately the same for many years and amounts to about 25%. However, the Institute's managing structure has almost completely changed. In 2011, the share of women in the Managing Board and middle management (heads of departments) was 15%, while in 2020 it reached a high 58%.

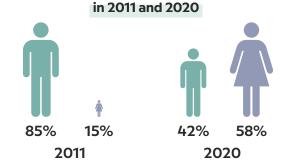
Preservation of expert and specialist knowledge is vital for the Institute, and knowledge transfer and mentoring have been given great attention in the past fifteen years. As a result of the systematic rejuvenation and the natural generation shift, the age structure of employees changed significantly. From the average 40 years of age of employees in 2011 to the present it has decreased to 39 years in 2020. Also, since 2011 the Managing Bord and the heads of departments (the College) have almost completely changed their composition, which is why it is reduced from an average age of 56 to 45.

#### 405-2

#### Ratio of basic salary and remuneration of women to men

Category	M/F
Heads of departments (Middle management)	1.17
Heads of laboratories and sections (Lower management)	0.98
Employees	1.14

#### Comparison of percentages of female employees in the managing board and middle management



#### Percentages of female employees

Category	2011	2016	2020
The Managing Board and middle	15%	50%	58%
management (heads of departments)			
Lower management (heads of	12%	16%	17%
laboratories and sections)			
Employees	24%	23%	26%

#### Average age

Category	2011	2016	2020
The Managing Board and middle	56	44	45
management (heads of departments)			
Lower management (heads of	42	45	41
laboratories and sections)			
Employees	40	40	39

#### **GRI 406** Communities



By exchanging knowledge and partnership, both scientific community and the Institute acquire new competencies, creating new opportunities for development and value added in the wider community.

#### **GRI 103 MANAGEMENT APPROACH**

#### 103-1 Explanation of the material topic and its boundary

The collaboration of the Institute and the scientific community has been fostered for many years through various activities and is constantly improving. Encouraging science and economy cooperation directs the scientific community to address scientific research topics that could bring benefits to the economy. It also demonstrates how the scientific community can contribute to the development of society not only through education but also through applied research for the sake of innovation.

Joint activities of the Institute and the scientific community:

- Partnership on joint scientific research projects
- Participation in the curriculum
- Mentoring, membership in professional commissions, boards, jury
- Education (graduate, postgraduate and specialist)
- Awarding the best students to three technical faculties
- · Professional student and student practice, professional visits
- Exchange of knowledge from which scientific papers, conferences, expert meetings emerge

The Institute invests in activities contributing to the sustainable development of the scientific community:

- Applied scientific research
- Innovations

• Inclusion of the scientific community in the development of the economy

Connecting the economy with the scientific community is also strongly encouraged by the EU with a view of to transferring new technologies and knowledge from faculties to industry, aiming at improving the existing and developing new high technology products and services.

The topic is material due to the significant interest of the involved stakeholders - the employees, the scientific community and the Institute.

The company is influenced by its own activities.

#### 103-2 The management approach and its components

The Institute gains new knowledge by linking with the scientific community, encourages the publication of professional and scientific papers, exchanges the existing knowledge of scientists and new knowledge gained through research on concrete technical problems, innovation is being created and costs are reduced as European and national resources are used for research according to the needs of the economy.

	2016	2017	2018	2019	2020
Co-financed projects with scientific community	3	3	3	3	4
Published papers	9	50	18	41	17
Attendants of postgraduate doctoral studies	11	10	9	6	6
Defended PhD theses	1	1	1	3	0
Members of the Institute teaching at faculties	12	10	10	10	10

The impact of collaboration between the scientific community and the Institute can be seen in several aspects: material benefits in the final results of successfully implemented projects with industrial application, exchange of knowledge and education, and expert and scientific papers.

By joint work on research and development projects, the Institute and the scientific community jointly take the risk regarding project results, commit themselves to deadlines for implementation of the results, and responsibility for the development of the economy and society.

#### 103-3 Evaluation of the management approach

The stronger involvement of the scientific community with the economy in more developed societies is the driver of the society as a whole. The partnership between the Institute and the scientific community and the experience gained were the basis for proposing measures to strengthen the innovative activities in the National Innovation Strategy 2014 - 2020. Measures to promote mobility between the education, science and industry sectors have been proposed and stimulate synergies in innovation between two and more sectors.

# 413-1 Operations with local community engagement, impact assessments and development programs

#### Information-documentation service (INDOK) and library

INDOK and the library share resources with the local and international community and provide access to information. They have a key role in ensuring access to information, supporting research and development, as well as in safeguarding and protecting professional knowledge.

INDOK has more than 20,000 printed professional books and more than 800 scientific and professional journals in the fields of electrical engineering, electronics, energy, transport and natural sciences. Users can access databases of scientific and professional e-books, e-proceedings, e-papers, PhD, MSc and BSc theses.



## Support for engineering sciences and awards for best students

The Institute builds up partnership with the scientific community, develops and supports both professionally and financially organisation and participation at scientific meetings, conferences and symposia that enable exchange of experiences and development of science, and also awards best students at three faculties of engineering.



Since 2003, the Institute has been a supporting member of the Croatian Academy of Engineering (HATZ) and the first fifteen years the donor of the "The Power of Knowledge Award" given by HATZ to a prominent scientist for his overall scientific and research work in the field of technical/biotechnical sciences and a long-term contribution to the progress of the profession, with special emphasis on the application of research results.

In 2020, as in every year, the Institute has financially awarded the best students at the Faculty of Electrical Engineering and Computing in Zagreb (Josip Lončar Award), and the Faculty of Chemical Engineering and Technology in Zagreb (Vjera Marjanović-Krajovan Award).

#### **Practical training**

Due to epidemiological measures during 2020, pupils and students did not do the practical training in the Institute. Under the guidance of expert mentors, they had the opportunity to acquire practical knowledge and skills. Mandatory training gives them the opportunity to take part in solving concrete every-day problems, and their teachers get feedback on knowledge and skills which the contemporary market expects from future engineers, what in turn enables better adaptation of the curriculum to current needs of industry and technology trends.

#### Visits of pupils and students

 $During\ 2020, there were\ no\ organized\ groups\ of\ students\ and\ pupils\ due\ to\ epidemiological\ measures.$ 

Within the Laboratory Center they got familiar with production processes and up-to-date laboratory equipment. Practical knowledge and concrete solutions are the most important segments of successful training especially in engineering.

#### Entrepreneurial Mindset for Youth 2020 Conference

The media platform Entrepreneur organized the second Entrepreneurial Mindset for Youth 2020 Conference at the end of 2020. Twenty Croatian businessmen shared their managerial and life experiences, among them Siniša Marijan, PhD, the President of the Managing Board of the Institute. More than 1,800 high school pupils, students and other young people from Croatia and the world applied via the platform.

As his online lecture, Mr. Marijan chose the burning topic of today's young people, namely their dilemma to stay in or leave Croatia, with the message that opportunities appear day after day and that one should only be persistent in one's entrepreneurial spirit.



# Monitoring of non-ionizing electromagnetic fields at three Končar locations

Monitoring of non-ionizing electromagnetic fields at three Končar locations allows informing employees about the levels of electromagnetic radiation in the work environment. The Končar Group thus became the first large company in Croatia to offer its employees an objective and reliable comparison with the permitted radiation levels prescribed by the Regulations for protection against electromagnetic fields.

MEP system permanently measures radiation of relevant electromagnetic fields, and the access is publicly available through the web application https://mep.koncar-institut.hr/smart-environment

#### 102-55 GRI content index: **Core option**

GRI standards are a globally accepted tool for sustainability and sustainable development reporting, and they are periodically revised to enable companies to communicate most appropriately the impacts of their economic, environmental, social and governance performance. Set of modular GRI standard were created with a view to improving global comparability and quality of information, what ensures higher transparency and responsibility of the company.

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#### **KONČAR - Electrical Industry Inc.**

#### **ENERGY AND TRANSPORT**

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POWER TRANSFORMERS

KONČAR – XD HIGH VOLTAGR SWITCHGEAR





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