

Sustainability Priorities

NKA's sustainability priorities were identified through an intensive process of engagement with its stakeholders, both internal and external. The materiality analysis took place over a three-month period between March and May 2017.

The topics identified also provided input for the development of ENKA's sustainability strategy.

ENKA Sustainability Materiality Analysis Process

Preparation

A list was made of the topics that might be prioritised, based on a study of sectoral dynamics, information obtained from situation analysis meetings, feedback from stakeholders and relevant internal and external sources

The list was reviewed and the items were grouped and consolidated. As a result, 21 topics that might potentially be materialized were identified.

Determination of Strategic Topics

A materiality workshop was conducted with the Sustainability Committee, representing the top management of ENKA, in order to identify the sustainability topics of strategic importance for ENKA.

Determination of Topics for Stakeholders

Face-to-face workshops and/ or online qiuestionnaires were used with varioius groups of stakeholders in order to find out what sustainability topics were material for ENKA's stakeholders and to receive their feedback.

ENKA Materiality Analysis

The findings obtained from the top management and from the stakeholders were consolidated and the most material sustainability topics for ENKA were projected onto a matrix.

n determining the potential material sustainability topics, GRI Standards Sustainability Reporting Guidelines, the GRI Construction and Real Estate Sector Disclosures and the GRI report "Sustainability Topics for Sectors: What do stakeholders want to know?" were used. Account was also taken of the dynamics of the sectors in which ENKA operates, the economic, social and environmental impacts of these sectors and of ENKA itself, and feedback obtained directly or indirectly from stakeholders over the course of time.

A materiality workshop was held with the Sustainability Committee in order to determine the sustainability topics of strategic importance for ENKA. A total of 42 members, consisting of high-level managers and decision-makers from ENKA headquarters and ENKA group companies, took part in the workshop. Among the factors taken

into account in identifying the most material topics were the economic, social and environmental impacts which ENKA creates, the risks and opportunities associated with each of the sustainability topics, and the effects of these topics on the long-term performance of the company.

In addition, face-to-face workshops and/or online surveys were carried out to find out which sustainability topics were most important to ENKA's stakeholders and to receive the stakeholders' feedback. The groups of stakeholders to take part in the materiality assessment were chosen together with the group companies taking elements of impact and accessibility into account, and care was taken to ensure that the individuals and organisations contacted were selected in such a way as to be representative of the stakeholder group.



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During the workshops and online surveys, the relevant sustainability topics were shared with ENKA's stakeholders and they were asked to select the topics most important to them and put them in order. At the workshops, the participants were also given a sustainability training, which made the workshops more productive. All of these activities proved to be of great value for understanding what stakeholders expect of ENKA, getting to know their ideas for improvements, and strengthening stakeholder engagement.

A total of **266 stakeholder representatives**, including the Sustainability Committee, ENKA employees, suppliers, employers, sales representatives, non-governmental organisations and professional associations contributed to ENKA's materiality analysis through the stakeholder engagement process. Finally, the most material sustainability topics for ENKA were identified by consolidating the findings obtained from the senior management and from the stakeholders.



Workshops Held and Surveys Conducted

Method	Stakeholder Group	No. Of Participants
	Senior Management	42
	Employees Group 1	27
	Employees Group 2	25
Workshop	Suppliers	10
	Non-Government Organisations And Professional Organisations	11
	Çimtaş	30
	Total	145
	Employers	15
	Sales Representatives	6
	Suppliers Group 1	3
S	Suppliers Group 2	39
Survey	Employees Group 1	10
	Employees Group 2	48
	Total	121
	Grand Total	266

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Most Material Sustainability Topics	Scope
Health and Safety at Work	ENKA Group and Subcontractors (including Projects)
Economic Performance	ENKA Group (including Projects)
Customer Satisfaction	ENKA Group (including Projects)
Quality of Products and Services	ENKA Group (including Projects)
Employee Training and Development	ENKA Group (including Projects)
Employee Rights and Employee Satisfaction	ENKA Group (including Projects)
Ethics and Compliance	ENKA Group, Subcontractors, Suppliers and Business Partners (including Projects)
Innovation and R&D	ENKA Group (including Projects)
Carbon Footprint and Energy Efficiency	Headquarters, Çimtaş (Pipe + Steel), 2 Projects, Power (All), ENKA Pazarlama, Istanbul ENKA Schools, ENKA Sports Club, ENKA Real Estate (CCI, ENKA TC, MKH)
Contribution to the Local Economy	ENKA Group (including Projects)

Sustainability Policy

As a leading and global company, headquartered in Istanbul, we provide high-quality products and services in any activity we partake in.

We contribute to the development and welfare of the countries in which we execute our projects; we ensure our credibility by prioritizing occupational health and safety, quality and cost efficiency.

We carry out our business with a corporate management approach that is transparent and accountable and contributes to the vision of sustainable growth.

We provide employment to thousands of people in geography we operate and help local economies flourish. By meeting regional needs, we contribute in local socio-economic development.

We value stakeholder participation. Our comprehensive strategy takes account of stakeholder expectations, lowers risks and helps us establish long-lasting and permanent relationships.

In all regions where we undertake work, we respect human rights, oppose all forms of discrimination, promote equality of opportunity and expect our business partners to be just as sensitive.

In addition to ensuring the health and safety of our employees, who are our foremost stakeholders, we provide them with a fair and participatory working environment and invest in their development.

We measure and assess the environmental and social impact of our activities. We improve processes in place to reduce negative impact.

We support measures against climate change and take care to protect natural resources.

We support the development of future generations by investing in education, arts, culture and sport.

Sustainability Management

ENKA, which operates in a variety of sectors such as engineering and construction, energy, real estate and trade, and is active in many different locations, has committed itself to serve sustainable development in all its operations.

ENKA has a Sustainability Committee which leads its sustainability efforts, determines its sustainability strategy, follows up the implementation of its sustainability actions and monitors the state of its sustainability goals. The Sustainability Committee is made up of managers from different units and departments at the Headquarters and in the subsidiaries. The Sustainability Committee meets regularly and is sponsored by ENKA's CEO.

While the Sustainability Committee leads ENKA's work on sustainability, sustainability and corporate responsibility is a holistic approach which requires the integration of all ENKA employees into decision-making and business mechanisms. With this in mind, every effort is made to ensure that sustainability targets and actions are owned and followed at every level.

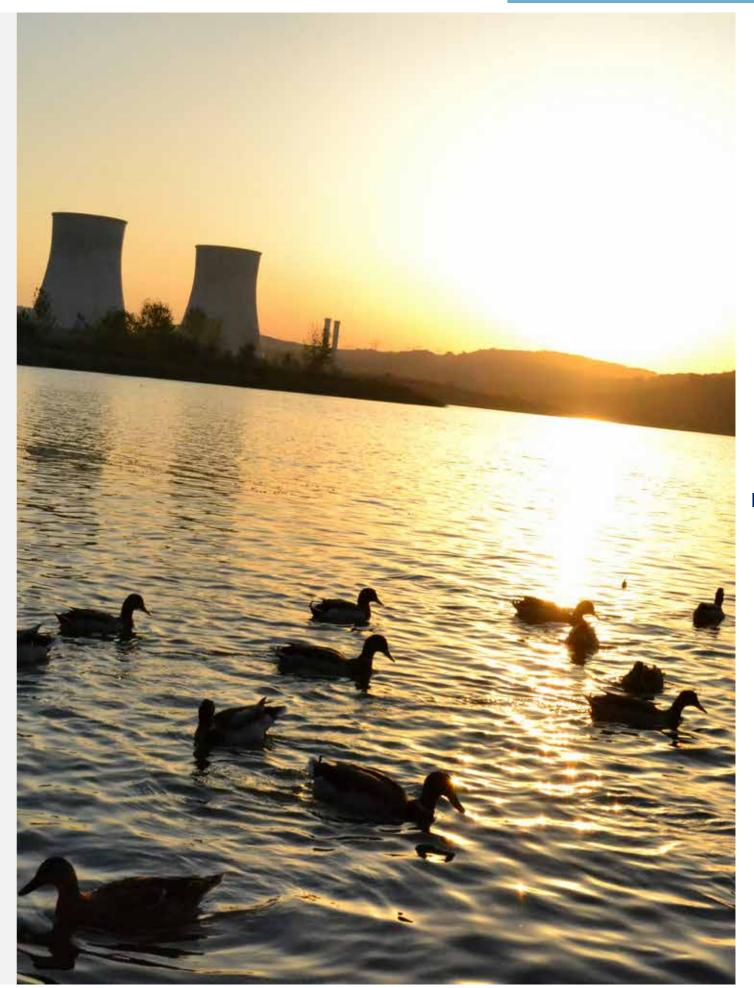
On 17th November 2017, ENKA signed the United Nations Global Compact and committed itself to act in accordance with its ten fundamental universal principles. The UN Global Compact, which is the world's

largest corporate sustainability initiative, calls on companies to bring their strategies and operations into line with universal principles concerning human rights, employee rights, the environment and the avoidance of corruption, and to take action for the achievement of global goals. https://www.unglobalcompact.org/

The approach to corporate sustainability adopted by ENKA entails an awareness of its economic, environmental and social responsibilities to its internal and external stakeholders. In this context, ENKA has held a comprehensive dialogue with its stakeholders, both external and internal, in order to develop its sustainability priorities and perform its materiality analysis. The strategy development effort was conducted by the ENKA Sustainability Committee – which meets regularly and includes representatives of the various subsidiaries and departments within the group – and led by ENKA's CEO, the sponsor of the Sustainability Committee.

ENKA Sustainability Strategy

Drawn up in consideration of ENKA's fields of influence and the sustainable development goals, the ENKA sustainability strategy has four main foundations:



has broadened the definition of risk management so as to address economic, environmental and social issues in an integrated manner.

encourages, trains, supervises and ameliorates its business partners, subcontractors and suppliers in the context of its responsible supply chain management.

seeks to generate awareness of sustainability among its sales representatives and customers as well, and provides leadership to all its stakeholders in terms of sustainability.

contributes to the realisation of sustainable development through its innovation and R&D activities.

ENKA,

protects the health and safety of its employees and its subcontractors' employees.

works to increase employee loyalty and the more active engagement of the employees in decision-making mechanisms.

invests in the training and development of its employees and provides them with equal opportunities for training and development.

seeks to generate awareness of sustainability among its employees.

Engineering for a Sustainable Future

ENKA,

measures and reports on its environmental impacts, sets targets and ameliorates them.

carries out improvements to reduce its carbon and water footprints and ensures energy efficiency.

develops and implements environment-friendly building solutions.

adopts green office practices and encourages its employees to respect the environment.

ENKA,

contributes to the welfare and development of local communities through the infrastructure and superstructure investments it makes.

contributes to the development of the engineering profession in all regions of the world in which it operates.

supports the growth of a responsible generation by spreading awareness of sustainability in its schools.

invests in education, culture and arts, and sport.

The UN Sustainable Development Goals (SDGs), sometimes also referred to as the "global goals", emerged from the UN Sustainable Development Conference held in Rio de Janeiro in 2012 and took effect in 2016. The aim was to establish a set of universal goals that address the urgent environmental, social and economic problems

our world is faced with. There are seventeen SDGs, grouping together a total of 167 targets.

https://www.un.org/sustainabledevelopment/

ENKA seeks to contribute to the UN global development agenda through its sustainability strategy, the decisions it takes and the operations it carries out. The ENKA sustainability strategy is particularly closely linked to the following SDGs:























Stakeholder Engagement

Determining the needs and expectations of stakeholders and engaging them in business processes is of great strategic value and importance for improving performance in processes and activities, minimising risks and managing them effectively, reducing environmental impacts through an awareness of new developments in the company's fields of activity, shaping social investment efforts and collectively constructing a sustainable future

ENKA defines its stakeholders as the individuals, groups and organisations who affect, or are affected, directly or indirectly, by its activities, aims and policies, and by the decisions which it takes. In identifying the stakeholders who may influence its strategies and activities, or whom the activities it carries out may affect, the company makes use of criteria such as degree of impact, potential for impact, authority to represent individuals and institutions, degree of loyalty to the company and influence over company policies and targets.

ENKA communicates regularly with its stakeholders in a spirit of openness, transparency and accountability. It informs them about its activities via various platforms and endeavours to obtain their opinions.

Together with all its subsidiaries, ENKA has an extensive stakeholder network. In line with its overall understanding and principles of stakeholder engagement, the company maps its stakeholders and identifies

channels for interacting with them. ENKA further groups its main stakeholders as employees, customers, business partners, shareholders, community stakeholders and public institutions. ENKA communicates regularly with its stakeholders in a spirit of openness, transparency and accountability. It informs them about its activities via various platforms and endeavours to obtain their opinions. Stakeholder engagement activities have played a determinant role in the identification of ENKA's sustainability strategy and actions.

The "ENKA Newsletter" platform, developed in 2015, provides employees with all kinds of information and increase their awareness. This platform is used to strengthen communication by sharing information about organisational changes at ENKA Headquarters and within its subsidiaries, innovations, any matter that might directly or indirectly affect employees, developments related to management systems, environmental matters, sustainability activities, general announcements about the company, lessons learned within the organisation, examples of good practices, the company's operating principles, updates to management methods and procedures, technology which we have developed and many other topics of concern to our employees.

The following table shows the communications platforms used by ENKA and the frequency of communication:

STAKEHOLDERS	COMMUNICATION PLATFORM	FREQUENCY OF COMMUNICATION
	Web Sites	Continuous
	Social Media	Continuous
EMPLOYEES (ENKA employees and other workers performing	Newsletter - Health, Safety and Environment at Work, Quality Management System, Sustainability Activities, General Announcements	Monthly
duties in ENKA's name)	Newsletter - Lessons Learned and Best Practices within the Organisation	Continuous
	ENKA Academy	Continuous
	Employee Loyalty and Satisfaction Survey	Once a year
0 0	Customer Satisfaction Survey	Upon the completion of projects
	Web Sites	Continuous
CUSTOMERS (Investors, Project Owners, etc.)	ENKA Document Management System	Continuous
	Meetings	Periodic
NZI	Web Sites	Continuous
BUSINESS PARTNERS	ENKA Academy	In line with the Training Plan
(Suppliers, Subcontractors, Manufacturers, Joint	Evaluation Surveys	Several times a year
Ventures, Third Party Auditing Firms, Insurance Companies, Logistics	ENKA Code of Conduct and ENKA Supplier Code of Conduct	Before starting new jobs
Firms, Service Providers, Consultancy Companies, etc.)	Management Systems Inspections	Periodic
eic.)	ENKA Document Management System	Continuous
	Meetings	Periodic

STAKEHOLDERS	COMMUNICATION PLATFORM	FREQUENCY OF COMMUNICATION
	General Assembly	At least once a year
	Web Sites	Continuous
SHAREHOLDERS	Activity Reports	Four times in a year
(Partners, Investors)	Material Disclosures, Financial Reports, Periodic Disclosures (Public Disclosure Platform - KAP)	As required by the related disclosure
	Meetings	Continuous
NEW5	Web Sites	Continuous
SOCIAL PARTNERS (Local Communities, NGOs,	Media, Social Media	Continuous
the Media)	Activity Reports	Once a year
	Meetings	Periodic
^	Activity Reports	Once a year
TITT	Web Sites	Continuous
PUBLIC INSTITUTIONS (Governments, Local	Periodic Disclosures (Public Disclosure Platform -KAP)	Periodic
Institutions, Universities and Academic Institutions, Tax Bodies)	Meetings	Periodic
	Official Correspondence	Continuous
	Audits	Periodic
	Memberships	Monthly

By maintaining the highest and most effective level of communications with all our stakeholders, we aim to orient the activities of our company in line with the principle of a sustainable and better future for all

Due to their specific structures and missions, the ENKA Foundation and ENKA Schools interact with a different group of stakeholders from those of the ENKA companies. The ENKA Foundation communicates constantly with sports school students, athletes, members, trainers, teams, federations, spectators and artists and develops collaborations where necessary with sponsors, non-governmental organisations and local administrations.

The ENKA Schools define teachers and other employees, students, parents, international stakeholders, public institutions, academic institutions and subcontractors as their major stakeholders and dialogues are maintained with all these groups of stakeholders by means of various channels and means of communication.



Our Membership Affiliations

Name of the Department/ Organization	Category
Organizations ENKA is enrolled in:	
Overseas Contracting Certificate	Construction, Installation, Assembly, Engineering, Design, Consulting, Management, Maintenance and Repair Activities
British Safety Council	Global HSE Standards
Organizations ENKA has the certificate of:	
American Society of Mechanical Engineers	A (Assembly of power boilers at field sites)
	U (Manufacture of pressure vessels at field sites)
	U2 (Manufacture of pressure vessels at field sites)
	S (Design with fabrication, assembly and stamping at field sites)
British Standards Institution	Quality Management System ISO 9001:2015
	Environmental Management System ISO 14001:2015
	"Occupational Health & Safety Management System OHSAS 18001:2007"
TÜV NORD	ASME Nuclear (Section III) Conformity Certificate
Turkish Organizations ENKA is enrolled in:	
Foreign Economic Relations Board of Turkey (DEIK)	
The Turkish Contractors Association (TMB)	
The Turkish Employers' Association of Construction Industries (INTES)	
Turkish Exporters Assembly (TIM)	

Organizations Çimtaş Steel, Cimtas Pipe and Precision Machining are enrolled in:

Steel Construction Institute

The Chamber of Turkish Naval Architects and Marine Engineers

People Management Association of Turkey (PerYÖn)

SAHA İstanbul Defence and Aerospace Cluster Association

KALDER

TWI

The American Society of Mechanical Engineers (ASME)

Bursa Aerospace and Defence Cluster (BASDEC)

Human Resources Solidarity Association (İKDAY)

Turkish Shipbuilders' Association (GİSBİR)

Organizations Cimtas CNBO is enrolled in:

American Society for Quality

China Lean Enterprise

Turkey Lean Enterprise

Jishuken Association

Ningbo Welding Association

Liaoning Welding Association

The Committee of Liaoyang technical School Consultation

Organizations ENKA Pazarlama is enrolled in:

Turkish Construction Equipment Distributors' and Manufacturers' Association (İMDER)

The Material Handling, Storage & Industrial Equipment Association of Turkey (İSDER)

Organizations ENKA Foundation is enrolled in:

Third Sector Foundation of Turkey (TÜSEV)

Turkish Marine Enviornment Protection Association

Mediterranean Opera and Ballet Club Association (AKOB)

Organizations ENKA Power is enrolled in:

Istanbul Mineral and Metals Exporters' Association

Organizations CCI is enrolled in:

CRE Russia (Commercial Real Estate)

BREEAM In-Use

Organizations ENKA Systems is enrolled in:

Turkey Software Industrialists Association (YASAD)

Organizations MKH is enrolled in:

Association of European Businesses

Organizations ENKA TC is enrolled in:

RCSC (Russian Council of Shopping Centers)

USGBC (US Green Building Council (Gold)

RUGBC (Green Building Council Russia (Premium)

Moscow Investors Club

Organizations Adapazarı ENKA Schools is enrolled in:

Eco-Schools

White Flag

The International Baccalaureate Organization (IBO)

Organizations istanbul ENKA Schools is enrolled in:

Eco-Schools

White Flag

The International Baccalaureate Organization (IBO)

Round Square

New England Okullar ve Üniversiteler Birliği (NEASC)

Uluslararası Okullar Konseyi (CIS)

Duke of Edinburgh Programı

Organizations ENKA Kocaeli Schools is enrolled in:

Ministry of Education School Democracy Assembly

Ethics And Compliance

Ethics is one of ENKA's basic values and the principle of "No concessions on integrity, honesty and fairness" is an unwavering element of ENKA's culture. ENKA's employees have adopted global standards for interacting ethically with employers, suppliers and subcontractors, communities, other colleagues and competitors, and are obliged to make the necessary efforts to carry out their work fairly and honestly along these lines.

All activities performed by ENKA's employees, representatives and subsidiaries must be transparent and accountable, and consistent with the honesty, impartiality and reputation of the company. ENKA units and individual employees must comply fully with the relevant laws and regulations in all activities which they are involved in carrying out, anywhere in the world. All ENKA employees are obliged to avoid any kind of relationship, communication or connection which might affect the decisions they make or the responsibilities they undertake in the course of their work. These rules are valid for all of ENKA's employees including managerial staff at all levels and the top management.

Managers in ENKA also have responsibilities for establishing a positive working environment and for encouraging the development of the culture necessary to preserve this environment, in which people are treated with respect and dignity.

ENKA Code of Conduct

In order to ensure that the principles which underlie ENKA's way of working are understood and adopted by all the relevant parties, a booklet has been written entitled ENKA Code of Conduct. This booklet, which has been published with the approval of the President and Chairman of the Executive Committee, is accessible to all employees via ENKA's Electronic Document Management System (EDMS). It has also been made

available on ENKA's website so that it can be reached by parties other than ENKA employees.

ENKA Code of Conduct, and the stance of the company concerning human rights and ethical matters, are shared with all newly-employed personnel as part of their orientation training. Through this training programme, ENKA seeks to ensure that its new employees carry out their work in accordance with the Corporate Understanding of Ethics and Human Rights from their very first day at work. As of the end of 2017, 100% of ENKA's employees had completed the orientation programme. The ENKA Code of Conduct is available in Turkish, English, Russian and Arabic. The ENKA subsidiary Çimtaş has its own specific Çimtaş Code of Ethical Conduct.

ENKA Supplier Code of Conduct

ENKA treats the concept of ethics as an indivisible whole that encompasses all the processes in which it is engaged, and believes that all the organisations with which it jointly creates value should form part of this whole. Accordingly, ENKA expects all its suppliers, subcontractors, consultants and business partners (collectively referred to as "suppliers") to comply in all their activities with the ENKA Supplier Code of Conduct, which it published in 2017.

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The ENKA Supplier Code of Conduct falls under five main headings:

- Compliance with the Law
- Human Rights and Fair Working Conditions
- The Environment and Health and Safety at Work
- Security
- Combating Bribery and Corruption and Preventing Anti-Competitive Behaviour

ENKA informs its suppliers of its Code of Conduct and the procedures that will be followed in the case of any infringement of this code before signing any contract with them. This requirement has been set out in ENKA's Procurement Procedure and all the units concerned have been informed of this by means of internal announcements. In addition, the ENKA Supplier Code of Conduct is available on the ENKA website in Turkish, English, Russian and Arabic.

Executive Ethics and Compliance Committee

ENKA's work on ethics and compliance is guided by the Executive Ethics and Compliance Committee ("the Committee"), which commenced its activities in 2017. The Committee also helps the company to conduct an effective ethics and compliance programme, to determine basic principles, and to promote continuously a corporate culture that places importance on ethical business practices and compliance with the law.

ENKA Ethics Hotline

In 2017, ENKA established an Ethics Hotline to provide for open and transparent communication, to enable employees, local people and all parties with which the company has business relations (suppliers, subcontractors, subcontractors' employees, employers, business partners etc.) to report behaviour that infringes the Code of Conduct or other company policies, and to obtain advice on

any matters which they may be in doubt about. By using this hotline, employees and all the stakeholders concerned are able to pass on any concerns which they are unable to overcome by talking to their supervisors or to their local project management.

ENKA Ethics Hotline personnel have signed a confidentiality agreement to the effect that they will preserve the confidentiality of all information provided by persons making use of the Ethics Hotline. They have completed the training on the work it requires, and are fully conversant with the ENKA Code of Conduct and the company's policies. They are obliged to report all the questions, requests for advice, accusations and complaints, which they receive, to the Ethics and Compliance Committee. Once inquiries have been completed, they identify the actions that need to be taken in order to close the report, as well as the persons responsible, and then keep track of the process.

The company employees are informed the ENKA Ethics Hotline by means of their orientation training, internal announcements and Ethics Hotline posters. Contact information for the Ethics Hotline is also available on the ENKA website. In addition, a training programme has been designed for 2018 to create awareness of the topic among employees and managers. Training on "Ethics and Human Rights in Working Life" will be offered to all the company's employees, and the functions of the Ethics Hotline will be explained as part of the training. A special session of the training programme will be organised for the senior management of ENKA with the aim of increasing the awareness of the management in this area. The importance of basic principles in the Ethics Hotline process will also be shared with them

The following table gives the planned numbers of participants for the Ethics and Human Rights in Workplace training:

2018 Ethics and Human Rights Training Plan

Trainee Group	Planned Number of Participants	Hours of Training	Planned Person-Hours
Ethics Hotline Personnel	11	14	154
Headquarters (General)	70	3.5	245
Senior Management	30	3.5	105
ENKA Sports	21	3.5	73.5
ENKA Power	185	3.5	647.5
ENKA Schools	55	3.5	192.5
ENKA Moscow	30	3.5	105
Çimtaş	60	3.5	210
Total Planned Person-Hours of Training			1,732.5



For 20 years now, I have been working in joint venture projects and as a consultant with ENKA, providing engineering services for energy projects. In the energy sector, ENKA is building facilities in a way that meets both the requirements of the international clients and the international environmental impact standards, supporting global development.

Bob Potocko, Bechtel Project Manager

ENKA is a qualified EPC consortium partner for GE to build full EPC power plat Typically, GE is the main equipment suppliers for power plants, and provides equipment and associated services to ENKA, as well as long-term solutions to end clients.

As a qualified partner for GE, it is understood that ENKA administers similar levels of integrity and ethical practices as GE. We have executed several large projects together and believe the practices and programs ENKA applies are of global standard.

ENKA's approach to social responsibility, environment and community is positive and supports the on-going activities they have in the market. Giving back to the communities we are active in is a core element of GE's culture, and it is always encouraging to see that our partners apply similar practices.

Karim Khoury, General Manager Sales, Iraq & Levant Region, GE Gas Power Systems

Human Rights Assessment

ENKA respects the human rights set out in the Universal Declaration of Human Rights, abides by the provisions of the UN Global Compact, to which it is a signatory, and acts in accordance with the conventions published by the International Labour Organisation (ILO).

Comprehensive activities have been conducted by ENKA Quality and Health, Safety and Environment (HSE) Departments in order to keep track of human rights requirements and to fulfil them, keeping international standards in mind, during the course of the company's activities and project assessments. The relevant stakeholders have been informed about these activities. The actions taken by the ENKA corporate departments in this respect within the reporting period can be summed up as follows:

- The ENKA Code of Conduct was revised and employees and all other stakeholders were informed.
- The ENKA Supplier Code of Conduct was drafted and sent to employees and suppliers.
- Provisions reflecting human rights requirements and requirements of social compliance consistent with the Sustainability Strategy were included in the Company Procurement Procedures and the Supplier Evaluation Criteria were revised in accordance with these requirements.
- The Ethics Hotline project was planned, for use throughout the ENKA Group, and the personnel to work on the project were identified.
- A procedure was developed for use by group companies and by projects in all places where the company operates, explaining the requirements of Social Community Engagement, and an internal announcement was made providing information.
- The "Ethics and Human Rights in Workplace" training programme to be conducted by ENKA Academy in the year following the reporting period was planned.

The right to collective bargaining and organisation and the prevention of forced labour and child labour are among the most prominent aspects of human rights. The stance of the company regarding these matters is clearly stated in the ENKA Code of Conduct and ENKA Supplier Code of Conduct.

Child labour and forced labour are not permitted under any circumstances, whether in projects under the responsibility of ENKA, or in the activities of the subcontractors and suppliers with which it collaborates. The Health, Safety and Environment (HSE) and Legal departments using prescribed procedures and tools inspect the latter activities constantly. No supplier with a negative record with respect to the employment of informal child and youth workers or to forced labour is collaborated with. During the routine controls and inspections conducted within the reporting period, no cases of infringement were encountered in this regard.

In all places where it operates, the company abides by the rights to collective bargaining and organisation in accordance with the applicable labour laws and legislation, and respects the rights of employees and suppliers to organise and join trade unions. During the reporting period, no request or complaint was made to us in this regard, nor was any infringement of these rights encountered during internal inspections. Workers and suppliers may communicate any requests and/or complaints which they may have in this area through the Worker Safety and Health council meetings which are organised regularly in the projects or contact the ENKA Ethics Hotline, which became active in 2017. At the ENKA subsidiary Çimtaş, labour unions are organised and collective bargaining is practised.

Labour Unions and Collective Bargaining at Çimtaş

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The trade union Türk Metal is the authorised labour union at the Çimtaş Steel, Cimtas Pipe and Çimtaş Precision Machining plants, while Türkiye Dok Gemi-İş is the authorised union at Çimtaş Shipyard. At Cimtas CNBO

(China), there is an NFTZ committee.

At Çimtaş Shipyard, a collective contract was signed with the trade union Türkiye Dok Gemi-İş on 27th March 2017 covering the period from 1st March 2017 to 28th February 2020. The collective contract for employees at the Çimtaş Steel, Cimtas Pipe and Çimtaş Precision Machining plants expired on 31st August 2017 and talks on a new contract are continuing with the trade union Türk Metal.

In the reporting period, 62% of the total number of employees at Çimtaş's workplaces in Turkey and 82% of the employees at its workplace in China were union members. The percentage of the total number of employees at all of Çimtaş's workplaces who were union members and were covered by collective bargaining in the reporting period was 67%.

No case was encountered in the reporting period of any risk being posed to the freedom of organisation and collective bargaining at any of the Çimtaş plants.

Numbers and Proportions of Employees who are Members of a Union and Covered by Collective Bargaining

Workplace	Total Number of Employees	Number of Employees who are Members of a Union	Percentage of Employees who are Members of a Union
Çimtaş Steel	503	316	63%
Cimtas Pipe	933	583	62%
Çimtaş Shipyard	85	36	42%
Çimtaş Precision Machining	276	173	63%
Cimtas Ningbo (China)	377	347	92%
Total	2,174	1,455	67%



Prevention of Corruption and Unfair Competition

ENKA shares are traded on the stock exchange and it operates under International Financial Reporting Standards. It expects its employees, business partners and all individuals with which it has a service relationship to act in accordance with the laws and the rules of ethics. In order to counter any risk or risks that may arise with respect to corruption, regular financial reporting is conducted, preventive mechanisms are established, and internal auditing procedures are followed. Any act that could be considered to constitute corruption is regarded as an infringement of the ethical rules. Under the ENKA Code of Conduct, bribery, the acceptance or presentation of inordinate gifts, and any actions directed towards obtaining unjust and personal benefits, are considered to constitute totally unacceptable ethical infringements. Actions of this kind, which contravene the law, are liable to cause material or moral damage to the company and/ or constitute offences, are taken very seriously and followed up vigorously. No case of corruption was encountered during the reporting period, and no public lawsuit was opened against the company.

Training is organised by ENKA Academy for employees and all other stakeholders including business partners, shareholders and suppliers in order to ensure that ENKA's ethical principles are understood and adopted, and to combat corruption.

ENKA is active all over the world, mostly through overseas construction projects. It carries out all its projects and activities in conformity with the laws of the countries concerned. It avoids anti-competitive behaviour, abides by predetermined confidentiality rules and contributes to the sustainability of the free market economy by taking a firm stance against any action that could be regarded as monopolistic or conducive to the formation of trusts.

Ethics, Compliance and Anti-Corruption Training

The main training programmes which the ENKA Academy organises in the area of ethics and compliance are as follows:

- ENKA Code of Conduct
- ENKA Supplier Code of Conduct
- Ethics and Human Rights Training the Ethics Hotline
- Combating Corruption

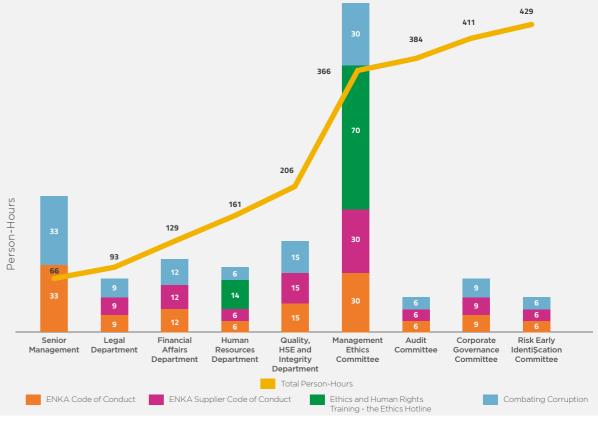
Details of the training received by the senior management units of the company on combating corruption and ethical matters in 2017 are presented in the following table:

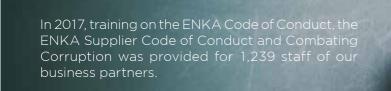
dours		
Person-Hours	33	
	33	

Senior Management Units	Number of Persons Receiving Training
Representatives of the Senior Management	11
Legal Department	3
Financial Affairs Department	4
Human Resources Department	2
Quality, HSE and Integrity Department	5
Executive Ethics Committee	10
Audit Committee	2
Corporate Governance Committee	3
Early Identification of Risks Committee	2

The figure below shows the breakdown of the ethics and anti-corruption training activities organised within the company, and in which a total of 42 members of the management group took part, by topic and person-hours.

Distribution of Ethics Training Provided to Company Internal Management Organs



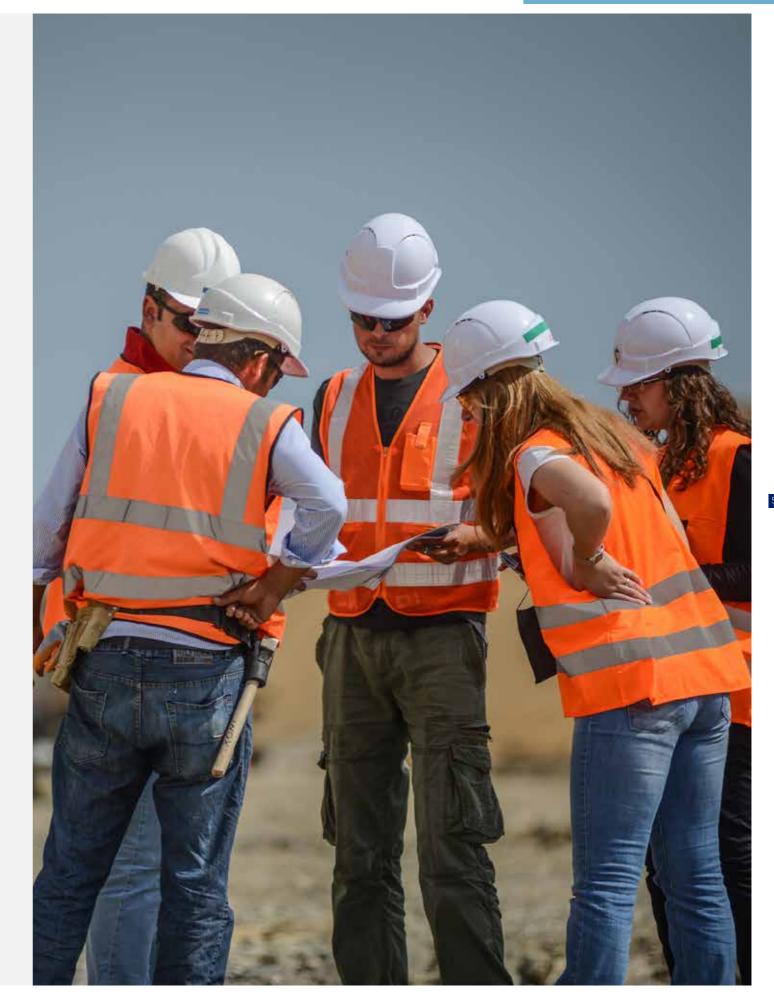


Aside from the training programmes mentioned above, a total of 18,483 persons took part in training on the ENKA Code of Conduct, the ENKA Supplier Code of Conduct and Combating Corruption in the Istanbul Headquarters and in the projects during the reporting period, depending on the categories of the countries in which the company operates. The total number of person-hours of training given on these topics in 2017 was 166,347. The distribution of the participants by nationality is as follows:

Number of Turkish personnel	2,783
Number of local personnel in the countries	8,142
Number of other personnel	7,558

ENKA also organises ethics and compliance training so as to diffuse the basic principles of human rights throughout the value chain and ensure that the organisations it collaborates with act in accordance with ENKA's ethical rules. In 2017, training on the ENKA Code of Conduct, the ENKA Supplier Code of Conduct and Combating Corruption was provided for 1,239 staff of our business partners. The distribution of the personnel who took part in these training activities which we organised by business partner is as follows:

Number of Bechtel personnel	1,020
Number of GE personnel	40
Number of Caddell personnel	54
Number of Kentz personnel	105
Number of Clean Energy Group personnel	20



Responsible Supply Chain Management

ENKA recognises that its suppliers play an important role in its achievements. As the company progresses, it also seeks to make its whole supply chain a part of this progress. Within the framework set by the principles of transparency and the rules of ethics, ENKA builds its relations with the suppliers with which it collaborates on a basis of quality, a competitive environment, conformity to international standards, sustainability and honesty.

In all of the fields in which it operates, ENKA carries out its work in accordance with the local legislation of the countries concerned and the requirements of international standards, and without compromising its ethical rules. In this context, it expects its suppliers and collaborators to act in accordance with the rules of ethics and fulfil the requirements of responsible management. With its philosophy of constant improvement and joint value creation, ENKA assesses all its suppliers depending on their fields of activity, and reviews their supply chain risks and environmental, social and economic sustainability.

As noted under the heading "Ethics and Compliance", ENKA published the ENKA Supplier Code of Conduct in four languages in 2017 - Turkish, English, Russian and Arabic. It informed its new and existing suppliers about this through various communication channels and on its own website. This requirement is included in all the contracts signed with suppliers, and these firms and their employees are expected to conduct their activities in accordance with the ENKA Supplier Code of Conduct.

In the same way, the ENKA Ethics Hotline, available in six languages, was established and went into operation in 2017. All stakeholders including local communities, suppliers, service providers, subcontractors and their workers are able to report any

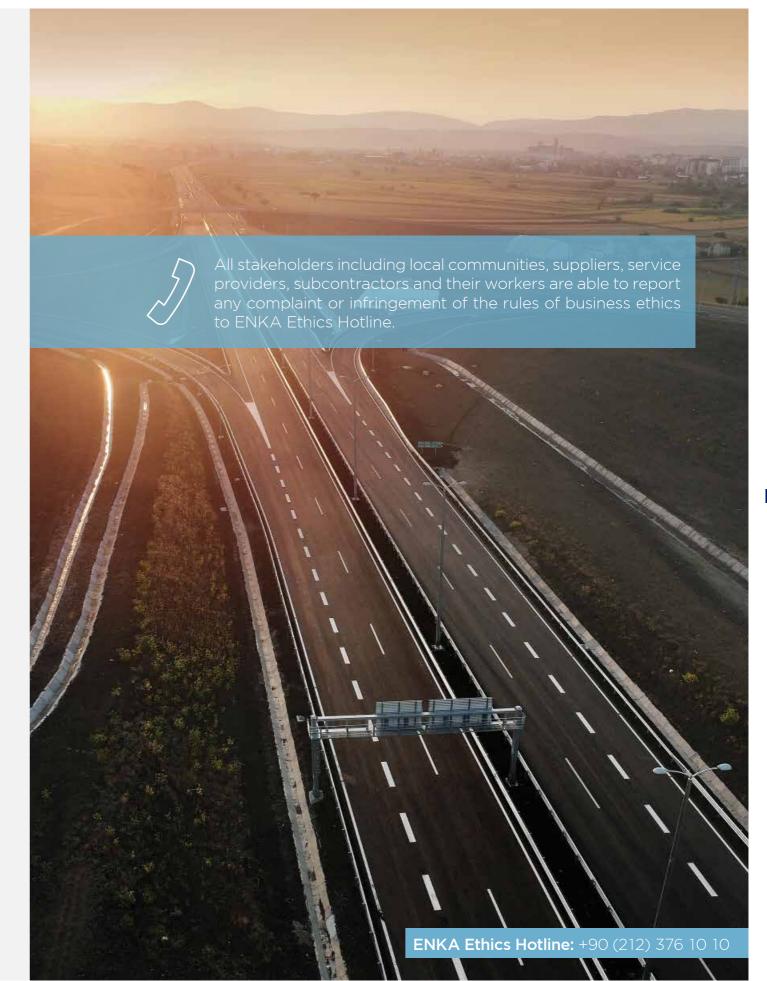
complaint or infringement of the rules of business ethics to the ENKA Ethics Hotline Unit using the telephone number +90 212 376 1010.

Selection of Suppliers

Suppliers are selected by the procurement units taking into account criteria related to the business lines in which they are active, the needs and expectations of the parties and the particular requirements of the product or service which has been requested. All suppliers are treated fairly and equally during the procurement process, which is conducted in accordance with the procurement procedures, supplier selection procedures and other relevant requirements drawn up by ENKA and its subsidiaries.

Any company which wishes to enter into a business relationship with ENKA can register on the ENKA Global Vendor Portal. This portal, known as the ENKA Global Vendor Network (EGVN), contains company information for all suppliers, service providers, subcontractors and all other kinds of third party with which a business relationship has been entered into in the company's fields of activity. Information about these companies is retained within ENKA.

The ENKA Global Procurement Management System (EGPS) is a global purchasing and warehouse management software programme which has been developed to keep track of the whole procurement process from end to end, starting with procurement planning and proceeding via the receipt of offers, opening of tenders, evaluation of tenders and issue of purchase orders to shipping, warehouse acceptance and stocking and finally the issue of the goods. The programme makes it possible to record and control purchases and movements of materials and equipment at all stages of the procurement process.



Before reaching an agreement with any supplier, the ENKA procurement units make a pre-qualification assessment of the company in question. The criteria for prequalification include the supplier's conduct and attitudes in matters of ethics, compliance and sustainability as well as the quantity of the product or service to be purchased, the level of risk, the supplier evaluation results, time and cost analyses, quality assessment analyses and the supplier's environmental performance and business experience.

During the reporting period, issues related to sustainability were added both to the corporate procurement procedures and to the criteria for the prequalification and evaluation of suppliers. Chief among these issues were the following criteria:

- Management systems for the Environment and Health and Safety at Work
- Measurements for water consumption, carbon footprint and waste management
- Pledges to do business in conformity with ethics and human rights
- Policies and procedures for preventing child labour and forced labour
- Policies and procedures concerning bribery and corruption
- Policies and procedures for the prevention of discrimination and harassment
- Legal compliance with employee rights and working hours
- Social responsibility projects
- Assessment of the supplier according to social and environmental compliance criteria by firms with which it is in contact

Considering the business lines in which ENKA operate, one of the topics of greatest importance among the selection and assessment

criteria is the supplier's performance in terms of the Environment and Health and Safety at Work. Suppliers with which ENKA works or is contemplating working have to meet comprehensive and detailed selection criteria in the areas of Worker Health and Safety (H&S) and the Environment. Some of these criteria are as follows:

- Existence of a pledge concerning H&S and the Environment
- H&S and Environment Management Systems
- The supplier's plans and procedures for H&S and the Environment and the related records
- The number and frequency of H&S accidents in the past five years
- The number and volumes of leaks and spills resulting from the supplier's activities in the past five years
- The number of personnel within the organisation of the supplier who are directly concerned with H&S and the Environment
- Legal penalties incurred by the supplier
- Engagement in social responsibility projects

Suppliers are classified according to the sectors in which they operate, the amounts and values of purchases made, critical materials or the services they provide, the continuity of the business relationship, the conformity of products and services to international standards, time and resource limitations and their reasons, and strategic importance and risk categorisation. This approach guarantees the procurement of outputs which are in accordance with the requirements and which provide the maximum value added and overall benefit.



Supervision of Suppliers

In line with the aims of sustainable supply chain, monitoring and evaluation of the performance of the suppliers is one of the most important conditions for the healthy operation of the supply chain.

ENKA operates an evaluation system on an electronic platform in order to measure the success of its suppliers in terms of performance, time, cost, quality, health and safety at work, and environmental and social matters.

In 2017, a number of new items related to sustainability were inserted in question-naires used for performance evaluation. Performance evaluations were carried out for a total of **470** firms during the course of the year. These evaluations were conducted electronically via the ENKA Global Vendor Database.

In future years, sustainability audits will be a part of ENKA's cooperation with the suppliers and service providers which hold a strategic importance for the company. These audits are planned to be conducted in conjunction with independent audit institutions commissioned by ENKA, and will particularly focus on the suppliers' management of Human Rights, Social Compliance, Safety at Work, Health and the Environment, and Operations. The sustainability audits are to be held in addition to the existing worker health and safety, environmental and quality audits.

In the light of these audits, areas where improvements are needed are identified with the aim of contributing to the preparation of action plans by the suppliers containing the necessary corrective and sustainable actions, to the conduct of the suppliers'

activities in line with these plans, and hence to the suppliers making improvements in their existing systems. During the reporting period, audits were conducted at approximately 200 supplier firms.

If the supplier evaluations reveal cases of non-compliance, then the management of the supplier is informed as a matter of urgency. Depending on the nature of the failure and the provisions of the contract made with the supplier, other measures may also be taken, such as warnings, penal action and the cancellation of the contract.

ENKA evaluated 7% of the suppliers with which it was working or intending to work in 2017 from the point of view of H&S and Environmental and Social matters. As a result of these evaluations, 19 suppliers were deemed unfit to work with.

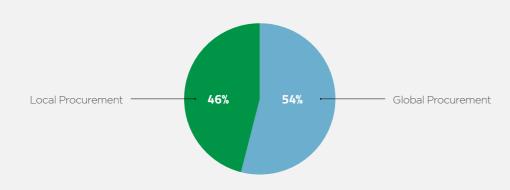
Local Procurement

ENKA does a considerable amount of local procurement for its projects in various regions of the world. In this way, it supports the economic progress and development of the local communities. ENKA uses the concept of "local suppliers" to refer to suppliers registered within the geographical borders in which it operates.

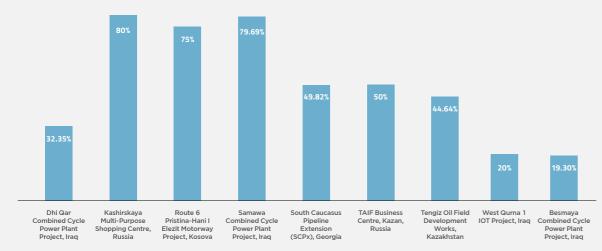
Through its local procurement strategy, ENKA does not only support the development of local communities; it also prevents the loss of the natural resources and time that would be spent on logistics in the case of an international procurement and obviates related social and environmental impacts.

The ratio of products and services ENKA inşaat purchased from local suppliers to its total procurements within the reporting period, is at 46% on a consolidated basis.

ENKA İnşaat Local Procurement Ratio



Local Procurement Ratios By Project



These ratios have been calculated using local procurement numbers in 2017, and therefore differ from the project's overall procurement ratios.

Preference is also given to local firms at ENKA's subsidiaries, although they have not made any formal commitment in this respect, provided the firms meet the technical specifications and standards. In 2017, ENKA Power had a local procurement ratio of 36% (Purchases from BOTA\$ and GETSA\$ are

not included in this ratio for reasons of confidentiality). Cimtas Ningbo made 90% of its purchases in China, where it is located. CCI and ENKATC, which are active in Russia, respectively conducted 90% and 80% of their procurement locally.



We at ABB offer many products to ENKA and we receive orders for some of the projects.

We are proud of ENKA's ethics and compliance programme. As you know, ABB is one of the leading companies worldwide in terms of the implementation of Rules of Conduct and Business Ethics.

ENKA has similar concepts, which makes our collaboration with them easier. ENKA carries out its work honestly and on time, and its work is of high quality. The company also ensures that a responsible and ethical approach is adopted at every level.

As a part of its responsible supply chain management, ENKA encourages, trains, monitors and develops its business partners, subcontractors and suppliers. I therefore think it is very advantageous to work with ENKA, both on behalf of myself and on behalf of my company.

Recai İnel, ABB Electric Marketing Manager, Transformers and Power Grids

enexion designs and supplies air cooled condensers (ACCs) for various power plants on which ENKA is engaged as the EPC contractor.

In general, the relations between ENEXIO (formerly known as GEA Energetechnik GmbH) and ENKA are conducted in a framework of mutual trust, respect and transparency. This creates a win-win situation for both parties.

In our opinion, ENKA is a global player with significant experience in plant engineering and construction.

Steffen Schneider, ENEXIO Germany Project Manager



Risk Management

Risk Management heads the list of areas to which ENKA attaches priority in all of its processes and activities. The implementation of the risk-based thinking approach is constantly being encouraged by ENKA's senior management.

An "Early Risk Identification Committee" (the Committee) has been established under the Executive Committee, and a "Risk Management Working Group" (the Working Group) has been set up to operate in conjunction with the Committee in order to ensure that an effective risk management programme is implemented throughout the company, to determine the principles and methods on which this programme is to be based, to guarantee the continuous development of a corporate culture of risk management extending to all projects, units and individuals, and to conduct the risk management function effectively.

The Committee was established for the purposes of identifying early any risks that could endanger the existence, development and continuity of the company, implementing measures in response to the risks identified, carrying out other work related to the management of risk and reviewing the risk management systems at least once a year. The Committee convenes at least once in every two months and a minimum of six times a year. The Committee is made up of the non-executive members of the Board of Directors.

The Working Group was set up under a

decision taken at the meeting of the Early Risk Identification Committee held on 27th November 2017 with the aims of identifying ENKA's corporate risks, determining the risk reduction measures to be taken, and assessing and reviewing the risks which are identified.

In view of the characteristics of the ENKA Group companies and their fields of activity, the risks addressed also encompass sustainability issues. The risk categories have been grouped as follows:

- Strategic Risks
- Financial Risks
- Operational Risks
- Compliance Risks
- External Environment Risks
- Trade Mark Management Risks

The risks identified and the related risk management procedures are evaluated under each heading on the basis of their likelihood and impact. For the most important risks, managers are given responsibilities at the level of the company and/or group of companies. The risks identified are categorised under the risk management strategy into those which are to be avoided, transferred, reduced and retained. The most appropriate of these strategies is selected in such a way as to ensure that each risk remains below the tolerable levels specified by the Board of Directors.

Products and Service Quality

ENKA has set up and certified a reliable Quality Management System for the purpose of increasing productivity in the

projects which it undertakes, constantly developing its corporate knowledge and capabilities, and systematically meeting the

needs and expectations of its customers. The Quality Management System is based on the principle of continuous improvement. Compliant with the ISO 9001 standard, it was first certified in 2001 by the British Standards Institute (BSI).

In addition to ISO 9001 certification, the ENKA Quality Assurance Programme, required for the realisation of construction works that encompass engineering and design, quality control, contracting and manufacturing or assembly activities, is in conformity with the ASME Boiler and Pressure Vessel Code.

For each of its projects, ENKA develops a reliable quality management system that is regularly monitored based on the ENKA Corporate Quality Standards and the requirements of the project contract.

For each of its projects, ENKA develops a reliable quality management system that is monitored based on the ENKA Corporate

Standard Quality Practices

Quality Standards and the requirements of the project contract. The quality management systems developed for the projects do not concentrate on identifying problems once they have arisen, but on preventing problems from arising in the first place.

ENKA's culture of quality is founded upon ensuring that the resources necessary for the establishment, operation, continuity and constant improvement of the quality management system are available, that authorities and responsibilities with regard to quality are spelt out for duties within the company and that internal and external factors that may affect the capacity of the quality management system to achieve the intended results are identified, monitored and reviewed. This culture also brings forth the ideas that the conditions of the quality management system shall be integrated with the company's business processes, that a process approach and risk-based thinking management are encouraged and the intended and targeted outputs of the quality management system achieved, and that customer satisfaction and the principle of client-focused working is adopted by all employees, and upon the provision of support and incentives for constant improvement.



Health and Safety Effects of Products and Services

As part of quality management, the effects of products and services on health and safety are also continuously assessed. The efforts made by ENKA İnsaat in this respect can be cited as an example. The most important products of ENKA İnşaat are the infrastructure, buildings and industrial projects which for the most part it carries out in an integrated manner, encompassing both engineering activities and supply and construction works.

All of the stages of these projects, from the design stage via construction to test operation and commissioning, are assessed for their potential impacts on health and safety at work. At the design stage, analyses made by professional firms are used. During the processes of construction and commissioning, inspections are conducted using internationally accepted risk management techniques, the hazards related to each activity are identified, the risks are calculated and the measures to be taken to counter these risks are determined and included in the relevant construction procedure.

Read more...



For details: http://www.enka.com/corporate-groups/quality-integrity/ About the ENKA Quality Policy: http://www.enka.com/en/wp-content/uploads/media/posters/ QUALITY POLICY ENG.pdf

Quality Management at Çimtaş

With the aim of taking the lead in its sector, Çimtaş Steel has established its own Çimtaş Management Systems and obtained a total of 19 national and international certificates - eight for its management system and eleven in technical areas. The Çimtaş

Management Systems is a complete set of systems established with a view to achieving and continuously maintaining the requirements of the ISO 9001 and the American Institute of Steel Construction (AISC) Quality Management System, the American Society of Mechanical Engineers (ASME) PP, R, S, U and U2 stamps, the ISO 10002





Customer Satisfaction Management System, the OHSAH 18001 Occupational Health and Safety Management System, the ISO 14001 Environmental Management System, the ISO 50001 Energy Management System, and the ISO 27001 Information Security Management System. The most important features of the Çimtaş Management Systems are to prevent defects, to identify any defect on the spot and prevent it from being passed on to the next station, and to meet quality requirements and ensure customer satisfaction at all stages from the production of the product to its delivery.

Cimtas has developed a quality management system based on the ISO 9001 standard. Cimtas Pipe manufactures in accordance with the following management systems and standards: ISO 9001: ISO 14001; OHSAS 18001; ISO 27001; API Q1, 5L and 2B; PED 2014/68/EU; EN 13480, EN 3834-2. EN 12952-5 and EN10219-1: AD 2000 HPO: the ASME U. PP and S stamps. and ISO 17025.

Cimtas CNBO, meanwhile, renewed its quality management system at the end of 2017 and revised it in the framework of the BS/EN/ISO 9001:2015 and AS9100 standards. Product quality and customer satisfaction are assured, together with the most efficient use of resources, by scrutinising risk analyses and CTQ items. Of the 153 kaizen projects completed in 2017, 35 were related to sustainability. These projects focus on issues of safety, worker satisfaction, the environment and energy gains.

The systems which Çimtaş Shipyard has established, maintains and manages

continuously are the ISO 9001 Quality Management System, the ASME S, U, U2 and NB stamps, the OHSAH 18001 Occupational Health and Safety Management System, the ISO 14001 Environmental Management System and the ISO 27001 Information Management Security System.

Çimtaş Precision Machining conducts its activities in line with the AS9100, ISO 9001, ISO 14001, OHSAS 18001 and ISO 27001 management systems. Besides these, it assures the quality of its products and services through manufacturing standards that meet the requirements of the customer concerned..

Quality Management at ENKA Power

The Quality Management System at ENKA Power Plants has been inspected and certified by the Turkish Standards Institute in accordance with the TS EN ISO 9001 standards, and certificates have been awarded for all three plants.

Quality is one of the most fundamental values of the ENKA Power Plants Management System. The quality activities at the plants also ensure the development of the operation and maintenance services, reduce losses of time and materials, increase the effectiveness of production, planning and employees, and improve the working environment. Routine quality audits are therefore carried out at the plants with the aim of maintaining the effectiveness, efficiency and sustainability of the Quality management System.

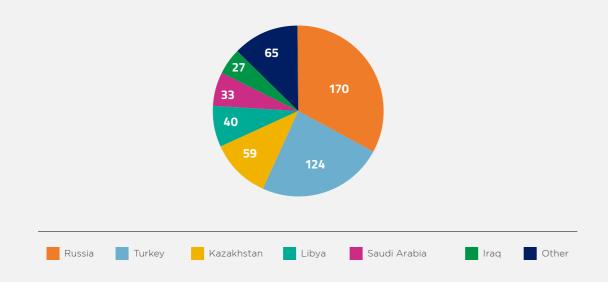
Customer Satisfaction

As stated in the first article of the Corporate Quality Policy, ENKA's top priority is Customer Focus and Feedback. In this spirit, ENKA seeks to ensure that customer satisfaction is lasting, and to maintain sustainable relations with its customers. ENKA values customer views at all times. It determines criteria for projects, and the indicators to be used to determine whether or not these criteria have been fulfilled, in conjunction with the customer themselves. In addition, it immediately activates its relevant units to consider concerns and ideas expressed by customer, and takes care to respond to their questions in the shortest possible time.

In line with its customer-focused way of working, ENKA has a long tradition of obtaining and analysing the feedbacks of its customers after projects are completed by means of customer surveys and correspondence. In this way, ENKA has succeeded in creating a dynamic structure for continuously updating its corporate structure and manner of operation in accordance with customer's views and suggestions.

The figure below shows the distribution of the projects carried out by ENKA Construction by country. Countries in which ENKA has worked on less than 25 projects have been grouped together in the "others" category. As can be seen from the figure, with its customer-focused approach and quality of work, ENKA has been able to put down firm foundations in every region where it has started to work and hence to establish sustainable, long-term customer relations.

ENKA İnşaat - Distribution of Projects by Country

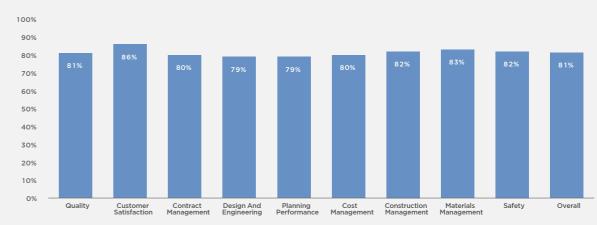


Besides requesting its clients to evaluate projects as a whole, ENKA makes use of its "Customer Satisfaction Monitoring" procedures in order to be able to evaluate more clearly their expectations and views concerning each and every aspect of the work done during the project.

Within the reporting period, ENKA İnşaat conducted customer satisfaction surveys for a total of five projects. The results of these surveys are presented below. The

feedback from customers is used both to improve existing systems so as to contribute to improvements in future performance and to carry out root-cause analysis and performance improvement efforts with a view to increasing customer satisfaction further in future projects. For the most part, this procedure is carried out when projects are at the completion stage, but there are plans to implement it at more than one stage of each project in future.

ENKA İnşaat Customer Satisfaction Survey Results - 2017



At Çimtaş, customer satisfaction and the management of complaints are based on the basic principles of accessibility, answerability, objectivity, confidentiality, client-focus, accountability and continuous improvement. In 2014, Çimtaş Steel documented that it had fulfilled all the conditions of the ISO 10002 Customer Satisfaction Management System. It thus became the first company to begin to implement this system among all the Çimtaş workplaces and within the ENKA group of companies. Çimtaş Shipyards initiated actions to adoptthe ISO 10002 Customer Satisfaction Management System in 2017.

ENKA Systems implements a policy of "Unconditional Customer Satisfaction". Aware that the software sector is also a service sector, it has structured itself in such a way as to provide a seamless service to its customers to enable them to derive the maximum benefit from its products. In this context, the company supports its customers and gathers feedback from them throughout the lifetimes of its products.

Innovation and R&D

Ever since it was founded, ENKA has succeeded in supplying the highest level of design and engineering services in the projects in which it has been involved, and attached great value to innovation and research and development (R&D) activities, with a view to developing these capacities continuously. ENKA's design and engineering expertise encompasses capacities for architectural, civil, structural, electrical, instrumentation and mechanical engineering as well as piping, process and control systems engineering.

In 2016, ENKA established the ENKA Design Centre at its Headquarters with a view to maintaining its years-old culture of design and innovation and of bringing the design and engineering activities which its experienced staff were already carrying out together in a wide-ranging organisation. As a result, it became the first Turkish construction company to have a Design Centre recognised by the Ministry of Science, Industry and Technology of the Republic of Turkey.

The ENKA Design Centre has set itself the strategic goal of developing joint projects and collaborations with institutions such as the Technology Development Foundation of Turkey (TTGV), the Scientific and Technological Research Council of Turkey (TÜBİTAK) and the Ministry of Science, Industry and Technology, which provide considerable support to the private sector for R&D and Design projects.

The ENKA Design Centre hosts groups of ENKA engineers working in three different areas:

• the Energy Engineering Design Group

- the Architectural Project Design Group
- the Civil Engineering Design Group

The Design Centre has an important place in the company, with a staff of around 150, 100 of whom are designers. It is responsible for the general design, development, innovations and engineering works of all new designs to be offered in building and industrial structure projects, for managing the process stretching from the proposal of the designs to the implementation phase, and for work to improve and increase the efficiency of production processes.

The ENKA Design Centre offers internship opportunities to students studying in relevant departments of universities and vocational and technical schools. Through these internship programmes, ENKA aims to contribute to the sector, to share with the students the internal culture of engineering and innovation which it has developed, and to train up potential future personnel.

In 2017, preliminary discussions commenced with Istanbul Technical University concerning training, the development of joint projects and support for academic work on topics related to "Sustainable Buildings and Building Information Modelling (BIM)".

Under the TÜBİTAK 4005 Project, there are plans for the ENKA Design Centre to support the Science, Technology, Engineering and Mathematics (STEM) education project as well as teachers serving in the Science and Arts Education Centres (BİLSEM) throughout Turkey. This project will be carried out as a partnership between ENKA, TÜBİTAK and Marmara University in the summer of 2018.



Examples of Innovative, Environment-Friendly Practices in ENKA Projects:

Kashirskaya Multi-Functional Trade Center One aim of the project was to make the most effective possible use of natural light in the interior of the centre. Accordingly, daylight studies were carried out and use was made of Building Information Modelling (BIM) to help reach a solution whereby the interior volumes benefit most effectively from natural light.





Kashirskaya Multi-Functional Trade Center

Sadi Gülçelik Adminsitrative Centre: This building is to be constructed at the ENKA Sadi Gülçelik Facilities in Istanbul. During its design, daylight and shadow analyses were carried out, taking the topography of the land into account, so as to make maximum use of daylight.







Sadi Gülçelik Administrative Centre

Gelendzhik Multi-Functional Medical Centre: The facade of the medical centre has been designed in an optimal manner to ensure maximum use of natural light without compromising the comfort of the patients.





Gelendzhik Multi-Functional Medical Centre

Riverside Business Centre Renovation Project: During the renovation of the frontage of this office complex in Moscow, arrangements were made to meet the needs of a modern business centre and derive maximum benefit from natural light by analysing the apertures.



Use of Natural Light for Internal Illumination (ENKA Health Centre): While renovating the health centre for the use of employees working at ENKA Headquarters, the need for natural lighting in the reception area was met with the aid of light tube lighting elements which make use of lenses to bring the sun rays into the interior volume. When there is no daylight, the sun is still used for lighting, with electricity derived from solar energy.



ENKA Health Centre



Roofing Practices: In projects designed within ENKA, every effort is made to abide by LEED green building principles. Reflective surfaces are preferred over absorptive surfaces with the aim of making savings on the cooling loads within the building.

Mechanical Heating and Cooling: In the design of mechanical heating and cooling systems in projects designed within ENKA, low energy-consumption equipment is preferred in order to save energy, provided that it is suitable for the design.

Innovation and R&D at ENKA Systems

ENKA Systems is a technology and software company which was established as an ENKA subsidiary in 2017 to develop technologies for the construction sector, turn innovative ideas into products with real-life applications, and engage in R&D activities. The basic aim of the company is to carry out technological innovations and R&D activities within the ENKA organisation.

ENKA Systems is operating in the following three main areas:

- the development of work processes providing for the emergence, management and implementation of innovative ideas in the construction sector, and particularly in large-scale projects
- the conduct of R&D activities concerning the technological solutions required to manage large-scale projects
- ensuring that the technological products generated are developed, supported and marketed

In December 2017, ENKA Systems was recognised as an R&D Centre by the Ministry of Science, Industry and Technology of the Republic of Turkey. In addition to the software programmes which it develops, its R&D projects lead both to the emergence of new products and to the addition of new features to existing software.

Innovation and R&D at Çimtaş

When Cimtas Steel was recognised as the 274th R&D centre in 2016, following its application to the Ministry of Science, Industry and Technology, this represented a first for all of the Çimtaş companies and for the entire ENKA group. In line with its target of pioneering R&D and innovation, the centre engaged in 51 projects and three patent exercises in 2017. These projects included three TÜBİTAK projects and one "VAP" project (a state-supported efficiency-increasing project for energy management systems). Meanwhile, the work which began in 2017 on establishing an R&D centre at Cimtas Precision Machining continues. One TÜBİTAK project was completed in 2017 and the application and approval processes for two other TÜBİTAK projects are under way.