



# Sustainability in the Time of Crisis

GRI  
Report

2021

Social Responsibility Report for  
MAPNA Boiler  
Engineering & Manufacturing Co.

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## The second statement of the company's social responsibility report

Nowadays, paying attention to collective responsibility is the key to success in peaceful coexistence with one another, and the world today, more than ever, needs to pay attention to the concepts of social responsibility and sustainability at all levels, from macro-policies to corporate strategies. This will not be achieved unless by adhering to each element to the obligations they have in controlling their effects on the ecosystem. Commitments that will ultimately result in sustainability for all elements. MAPNA boiler engineering and manufacturing company has always been trying to identify the principles related to sustainability as much as possible and to play its role in fulfilling its obligations for a comprehensive balance of economic, social, and environmental ecosystems. It has been reported during this period that our company has dealt with most unstable situations during its lifetime. Sanctions and economic crises against the country, on the

one hand, and numerous adverse events, such as natural disasters and the onset of corona disease, have put the organization from a social perspective at the worst possible terms. In such a critical situation, creating a balance between economic, social, and environmental dimensions and not neglecting any of them will be more difficult than ever, and the development of sustainability policies and programs becomes an important necessity in the organization's strategies. In the last two years, MAPNA Boiler Company has tried to take a step beyond the concept of social responsibility to the concepts of creating shared value and organizational sustainability and has also developed programs in this direction.

But he is aware that there is still a long way to reach the sustainable organization in all dimensions, therefore, the current report has been named as the second report of its social responsibility in sustainability in crisis.

In the last three years, despite the problems, MAPNA Boiler has tried to control its negative economic effects on its stakeholders, especially in the social field, because the vast economic pressure on the organization has led to restrictions on all the aspects of this view. In addition, the organization has taken valuable steps to create positive effects and shared growth with stakeholders. Improving the organization's products in terms of environmental characteristics such as reducing water and energy consumption and developing new products in the water purification industry, While the country is facing the problem of lack of water resources of the year, this has been the case. Complete construction of the company's treatment plant using internal power to convert wastewater into drinking water and sewage water, to reduce water consumption has been one of these other achievements. MAPNA Boiler Company, as a responsible organization, hopes

to be able to develop sustainable values for all its stakeholders by adopting a sustainability approach in critical situations and to support its values in all circumstances. The publication of this report is evidence of the transparency of the organization and the sincere information of effective activities on all stakeholders in its positive and negative dimensions. The contents of this report testify that if the indicators of the company's effectiveness have been reduced in some cases, not only has it not been due to the negligence of the policies of this collection, but it has been a redoubled effort to sustain and maintain the continuity of the organization's business in difficult conditions. It is hoped that the development of interactions and discourse based on tactics in the international environment can lead the country out of the economic crisis and the industry to flourish as much as possible, and consequently the MAPNA Boiler Company.

Abdul Majid Rajabi  
CEO and vice-chairman

# About the report

The Sustainability Report of 2021 (Sustainability in Crisis) is the second report of MAPNA Boiler & Equipment Engineering and Manufacturing Co. in the field of sustainability, which has been compiled based on the latest 2020 changes in the GRI standard and at Comprehensive Requirements level and the report of the standard required indicators is presented in the standard indices table in the appendix.

This report has been prepared voluntarily and will be available to everyone in both Persian and English for the MAPNA website on the social responsibility page and also for operation in the collection of the GRI organization report bank at [globalreporting.org](http://globalreporting.org). The report is presented in the Triennial. The first report of the company in this area is more focused on the formation of social responsibility system and creating value for all: a 360-degree approach to expressing interactions and creating value for all stakeholders. The report provides the company's approaches to address sustainability issues and

describes the activities carried out to pass through economic and social crises in this period. The massive economic sanctions on the macro environment bring pressure to the organization and conflict of interest among the stakeholders, which the company has attempted to provide with preserving the sustainability of the stakeholder interests. In the preliminary chapters of this report, the introduction of the MAPNA boiler and describing the management process of the company are discussed, and in continuation, the crisis and its impact on the company and how the company dealt with the crisis were explained. In the following chapters, the economic, social, and environmental sustainability of each is examined in one chapter. The next version of this report will be presented based on the company's practices focused on social responsibility for three years from 1400 to 1402 in 1403. In case of any questions, suggestions, or criticism about the report, please contact us via 982 1275 83 431 or email [CSR@mapna.com](mailto:CSR@mapna.com).

# Introduction

The Sustainable Development Goals include a coherent set extracted by the United Nations and has set the goals of countries sustainability by 2030 and using earlier experiments, it provides strategies for resolving land problems in the fields of poverty, clean water, environment, justice, energy, and education. This set includes a concise package of goals and strategies to solve these mentioned problems, which has been relatively successful in achieving its goals. The New York Assembly took steps in September 2015 by setting out these 17 ideals to an end to poverty, tackling inequality, and climate change, and introducing actions that will lead to the stabilization of the world, the provision of welfare, and security for the future generations. regarding the particular importance of the goals of sustainable development on the global level and the necessity of attention to them at the national level and to align with these goals to move in line with the global development model, MAPNA Boiler Company has also considered these goals in its activities and social responsibility report and has reported related cases in the form of related chapters.

## The ideals of sustainable development 17 ideals for world change







# Profile of

MAPNA Boiler  
Engineering &  
Manufacturing Co.

Chapter 1

GRI  
Report

2021



# MAPNA dedicated to excellence

MAPNA Group was established as Iran Power Plant Research Management Company or briefly MAPNA on August 13, 1993. The main purpose of the establishment of the MAPNA was the general contractor and the power plant projects as key and due to the developments, MAPNA has gone from being a contractor in the 1970s and a manufacturer of licensed equipment in the 1990s to a collection of technology owners in various fields, a symbol of indigenous engineering, production, and manufacturing capabilities. The group operates

as a holding containing the parent company, along with several specialized subsidiaries and affiliates in the energy, oil and gas, transportation, and medical industries.

Areas of activity of the company include engineering services, construction, and development of thermal power plants, renewable energy power plants, simultaneous generation of electricity and heat facilities, facilities of simultaneous generation of electricity and water desalination, engineering, implementation and development of oil and gas projects on land and sea and engineering and construction of rail transportation projects, production of medical and electrification equipment, providing

water and treatment equipment and providing services to the operation, repair and maintenance of these mentioned industries, as well as investment and financing of the mentioned projects within the framework of various contractual and investment methods. The group manufactures a wide range of advanced industrial products including gas and steam turbines, turbine accessories, turbine blades, wind turbines, mobile boilers, and heat recovery, heat and water generators, protection and control systems, passenger and cargo locomotives and turbochargers, train and car electrification equipment, membrane and distillation desalination and water purification packages.



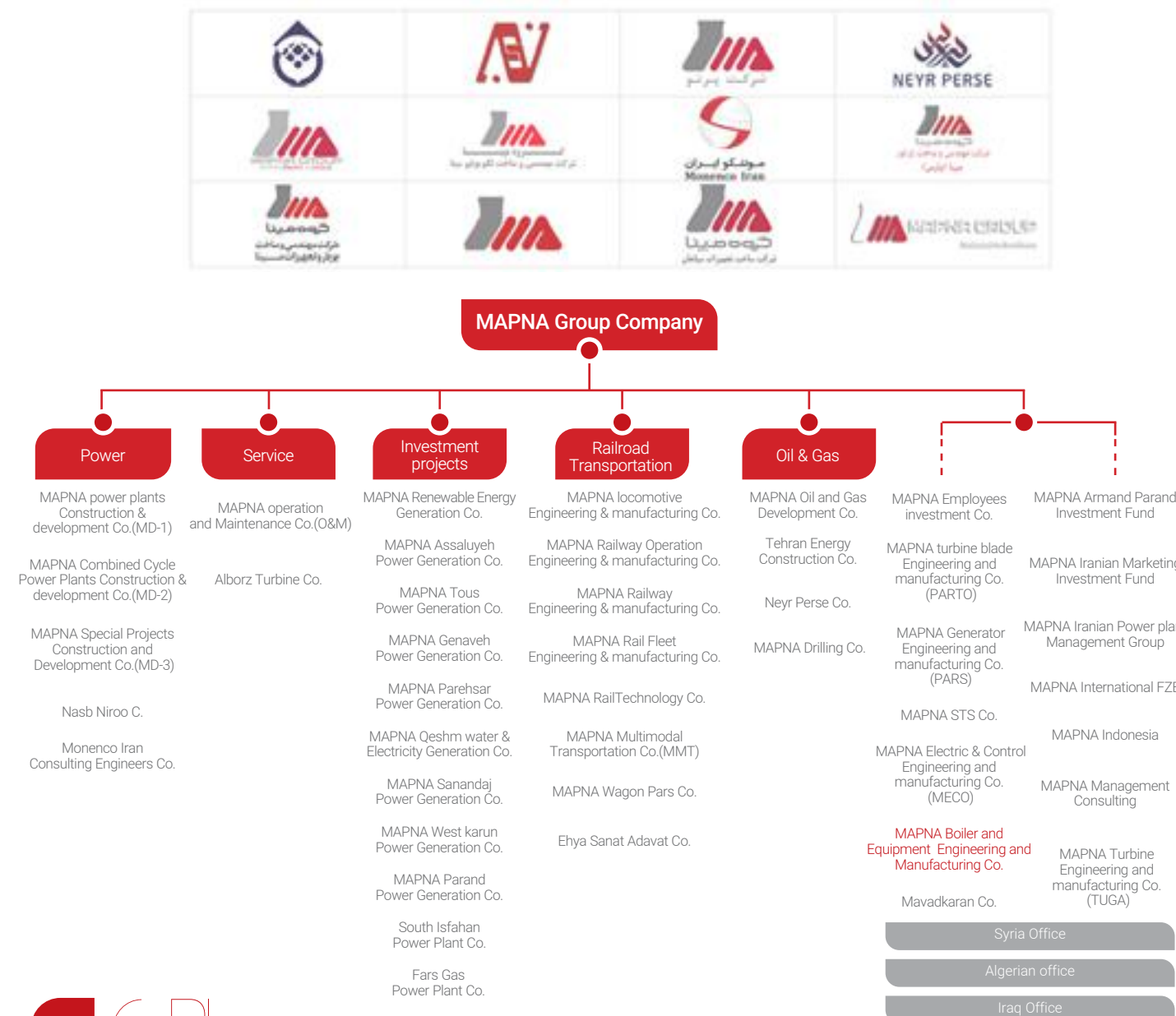
## MAPNA Group Mission

- Committed to developing the national economy, stabilizing and developing the MAPNA Group, and increasing shareholder profits
- Equipment manufacturer, investor, provider, service, operator, developer
- Focus on production in the fields of electricity, oil, and gas, along with rail transport and other energy-related sectors

## Directional elements of MAPNA Group

- Reference industrial group in the energy sector
- Reference industrial group in the field of rail transportation

MAPNA Group has 41 subsidiary companies, of which MAPNA Boiler Engineering and Manufacturing Company and MAPNA Boiler, which is briefly called MAPNA Boiler, is one of them that operates in the production sector. The mission of subsidiaries is to complete the value chain of the holding activities that contribute to the value of sustainable value in the business domain by engaging each other.



## MAPNA in the international arena

MAPNA Group has a wide presence in international markets. The group's companies are currently based in the United Arab Emirates, Germany, Italy, China, Indonesia, and Iraqi Kurdistan. MAPNA Group has offices in Algeria, Iraq, Syria, Oman, Nigeria, and South Africa.





## International projects

### Ongoing projects:

- Iraq, Ramila Power Plant, Capacity: 3,000 MW
- Syria, Latakia power plant, capacity: 540 MW

### Units entered into orbit in international projects:

- Oman, Raysut Gas Power Plant, Steam Section of Gharn-e-Alam Power Plant, Capacity: 126 MW
- Syria, Tishreen Combined Cycle Power Plant, Gondar Combined Cycle Power Plant, Capacity: 484 MW
- Iraq, Al-Sadr Gas Power Plant in Baghdad, Capacity: 324 MW
- Heydariyeh gas power plant in Najaf, 166 MW
- Indonesia, LTE project to extend the life span of two gas units of Blawan Power Plant
- Pakistan, Godot Power Plant, Capacity: 314 MW
- Benin, Benin Power Plant Capacity: 50 MW

### International projects under negotiation:

- Iraq, Najaf power plant, capacity 322
- Turkmenistan, Construction as a switch in the hands of substations and transmission lines of 400 to 500 kW in the route of Marv, Sarakhs, Mashhad and increasing the output capacity of gas turbines of the Turkmenbashi refinery up to 70 MW

## International Partnerships:

Conclusion of more than 20 cooperation agreements with reputable international companies with the aim of transferring technical knowledge of design, engineering, equipment manufacturing, and project management.





# MAPNA boiler at a glance

MAPNA boiler engineering and manufacturing company, hereinafter referred to as MAPNA Boiler, was established in 1999 by MAPNA Group Company with the aim of developing the country's energy industries in the field of boilers. During the first years of its activity, the company implemented four construction projects of thermal and industrial recycling boilers with the participation of internationally renowned companies such as

CCT, Hanjung, and Si Fang, which provided customer satisfaction in the power plant and petrochemical industry. Following these successes, in 2003, through a consortium with Doosan, South Korea, it was able to design and build 44 Heat Recovery Boiler (HRSG) plants for multiple power plants nationwide, transferring technology and receiving License from Doosan Company to become a credible supporter of the design, manufacture, installation, and commissioning of thermal recycling boilers in the country's electricity generation chain. Since 2010, in line with the company's strategies to improve the supply chain and capacity building of boiler equipment, MAPNA has utilized the full capacity of MAPNA

Engineering and Manufacturing Company in the form of boiler plant and equipment. MAPNA Boiler Company has had an acceptable performance in the field of boiler products, such as the statistics of the prestigious McCoy magazine, which rank companies in the boiler industry. In its 5-year statistics up to 2019 in the company ranking, MAPNA Boiler is among the top 10 companies in the field of technology in heat recovery boilers. The company has also started entering new markets in recent years, foremost of which is the water industry, which is based on the country's needs in this regard and intends to become one of the most influential players in the industry in the coming years.

MFG, 1			ENR, 1		
TOP 10 HRSG TECHNOLOGY OWNER			TOP 10 HRSG TECHNOLOGY OWNER		
	2019	%		2019	%
GENERAL ELECTRIC	19,275	22.1%	BOOTH ELECTRIC	184	22.2%
BOOTH ELECTRIC	18,785	21.7%	GENERAL ELECTRIC	141	16.2%
GEA-ENR ENERGY	11,514	13.1%	GEA-ENR ENERGY	100	11.9%
JOHN COCKERILL	10,721	12.4%	JOHN COCKERILL	86	10.2%
MITSUBISHI POWER	7,540	8.6%	MITSUBISHI POWER	71	8.6%
MAPNA BOILER (SDEC)	4,812	5.6%	VOGT POWER INTL	62	7.3%
VOGT POWER INTL	3,936	4.6%	MAPNA BOILER (SDEC)	54	6.2%
WOOD GROUP POWER	3,145	3.7%	WOOD GROUP POWER	39	4.8%
AC BOILERS	2,346	2.7%	AC BOILERS	23	2.9%
SHANGHAI BOILER CO	1,881	2.2%	SHANGHAI BOILER CO	14	1.8%
OTHER (26)	2,220	2.6%	OTHER (26)	80	9.2%
TOTAL	86,323	100.0%	TOTAL	873	100.0%

**McCOY**  
POWER REPORTS

## MAPNA Boiler CEOs



**abdul majid rajabi**  
oct 2004-May 2007  
July 2010-2021



**Mohammad Nabi Faraji**  
2007-June 2010



**Javad Aminian**  
2001 - September 2004



**Mohammad Ali Borhani Dayani March**  
1999 - December 2001



**Seyed M. Tahani**  
(Head of Influential Company) 1999

- Entering the field of engineering and manufacturing of membrane desalination equipment and water purification packages for portable and fixed power plants,
- Transferring the technical knowledge of design and construction of EDI systems,
- Developing the manufacturing capacity inside duct burner equipment, damper stack, and silencer
- Execution of pilot project, design, and construction of a Demin water production plant from the factory effluent.

- Entering the field of manufacturing main parts of boilers through integration with MAPNA equipment Co.
- Developing product basket
- Entering the field of R&D and designing new products
- Improving services and customer relations

- Transferring technical HRSG knowledge and creation of design and engineering core
- Being equipped for the ultra-project of 44 HRSG units
- Focus on project management and construction supervision cores

- Transferring the technical knowledge of F and H class boilers and above
- Entering water desalination,
- Entering the field of engineering and production of fixed oil and gas equipment such as pressure vessels and converters

- Focusing on increasing the capacity of design and supply of power plant recycling boilers in form of NIAM and 40-boiler plans
- Focusing on project management (multi-project entity) and supply (increasing the range of supply) cores

- Establishment of MASBA Co.
- Implementation of projects limited to construction

## Orientation Elements of MAPNA Boiler Co.

### Mission

As one of the MAPNA Group companies, we act towards creating sustainable value for our customers, shareholders, and other stakeholders through the design, supply, construction, installation, commissioning, financing, service delivery, and project management of all types of boilers and power plants, oil, gas, petrochemicals, and other industries.

### Perspective

Being the leader in Iran boiler industry, capable of designing and manufacturing equipment well known in international markets by 2022

### Values

- Customer (being customer-oriented)
- Innovation
- Excellence (Organizational Excellence and Outcome-oriented)
- Safety (safety and environmental friendliness)
- Responsibility (teamwork, responsibility, and knowledge sharing spirit)
- Ethics (Business Ethics)



### Social sustainability:

### Environmental sustainability:

### Economic sustainability:

- Protecting the mental and physical health of employees
- Developing a culture of ethics
- Improving the level of welfare of society
- Development of localization and fair employment
- Awareness-raising to stakeholders
- Development of community-based actions and social cooperation
- Training capable and specialized staff

- Legal protections and licenses
- Talented or specialized workforce
- The public and common culture of the society
- Laws and regulations of government institutions

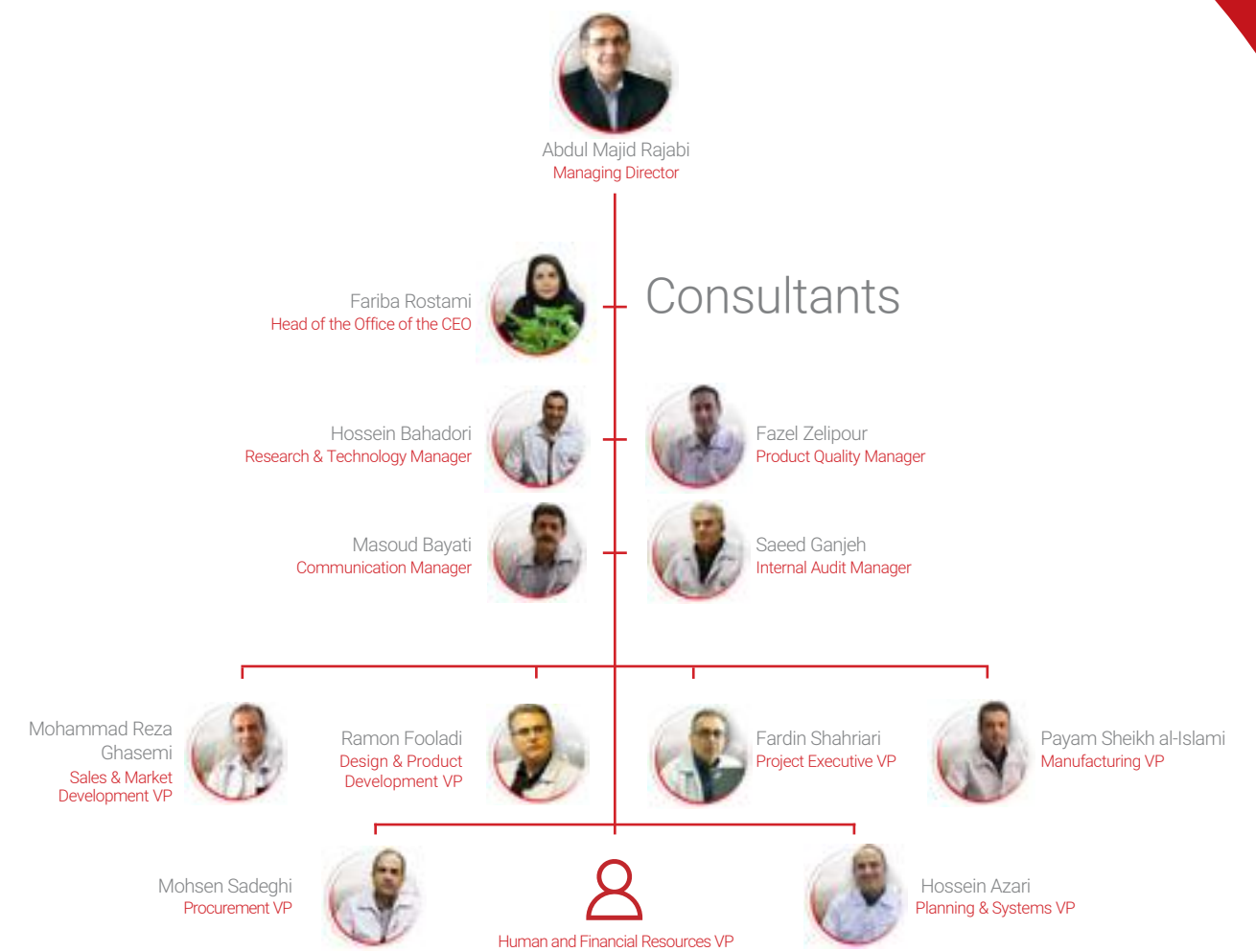
- Optimal use of energy and other environmental resources
- Adherence to environmental laws and standards
- Production of environmentally friendly products

- Energy and other environmental resources
- Reasonable environmental conditions
- Environmental standards and laws

- Participation in increasing GDP
- Employee salaries and benefits
- Pay to contractors
- Sustainable profit
- High-quality products
- Promoting technology and knowledge sharing
- Development of national and regional infrastructure

- Fund
- Public infrastructure
- Qualified contractors
- Knowledge and technology
- Market demand

## The organizational structure of the company



### 1. Factory:

Kavosh BLVD., Karaj-Qazvin Highway, 12th kilometer, Karaj, Iran

Consisting of an area of 10 Ha with nearly 35000 m<sup>2</sup> of closed salon equipped with machinery and preparatory and manufacture equipment, machining process lines, welding and assembly lines



### 2. Tehran Headquarter:

No.7, Golkhaneh St., Nelson Mandela AVE, Tehran, Iran

Consisting of 4500 m<sup>2</sup> useful area



### 3. Elahiye Complex:

MAPNA Boiler Co., Elahiye Complex, Delpazir AVE., 20th ST., Rezvanieh, Kamalshahr, Karaj, Iran

Consisting of an area of 22 Ha with 27000 m<sup>2</sup> of closed salon



Project Type	Project Name	Project characteristics	
		Taskmaster	Description
Power Plant	Parand combinatory-cycle Power Plant	Parand Power Plant	design, supply and manufacturing 6 Heat recovery boiler units Weight of the manufacturing equipment: 13077 Tons Technical characteristics of each boiler: 241.2 t/h, 520 °C, 90 bar.a (HP Steam)
Power Plant	West Karun CCGP	Petroleum Engineering and Development Company (PEDEC) (West Karun CCGP)	design, supply and manufacturing 2 three-pressure Heat recovery boiler units The manufacturing equipment:: 4270 Tons Technical characteristics of each boiler: 180 t/h, 532 °C, 130.5 bar.a (HP Steam) 48 t/h, 532 °C, 32 bar.a (LP Steam) 28.4 t/h, 234 °C, 4.7 bar.a (LP Steam)
Power Plant	Tous CCGP	Tous Power Plant	design, supply and manufacturing 6 Heat recovery boiler units The manufacturing equipment:: 13140 Tons Technical characteristics of each boiler: 241.2 t/h, 520 °C, 90 bar.a (HP Steam) 32.4 t/h, 230 °C, 8.5 bar.a (LP Steam)
Power Plant	Asalouyeh combinatory-cycle Power Plant	Asaluyeh Power Plant	design, supply and manufacturing 6 Heat recovery boiler units The manufacturing equipment: 13090 Tons Technical characteristics of each boiler: 241.2 t/h, 520 °C, 90 bar.a (HP Steam) 32.4 t/h, 230 °C, 8.5 bar.a (LP Steam)
Power Plant	Kangan Petroleum	Kangan Petro Refining Company	design, supply and manufacturing and commissioning of 4 package boilers The manufacturing equipment:: 2040 Tons Technical characteristics of each boiler: 140 t/h, 420 °C, 43 bar.a (HP Steam)
Power Plant	Sabalan combinatory-cycle Power Plant	sabalan bargh omid company	design, supply and manufacturing 6 Heat recovery boiler units Weight of the manufacturing equipment: 13190 Tons Technical characteristics of each boiler: 241.2 t/h, 520 °C, 90 bar.a (HP Steam) 32.4 t/h, 230°C, 8.5 bar.a (LP Steam)
Power Plant	Oromiye combinatory-cycle Power Plant	Tadbir Sazan Saramad Co.	design, supply and manufacturing 6 Heat recovery boiler units Weight of the manufacturing equipment: 6540 Tons Technical characteristics of each boiler: 241.2 t/h, 520 °C, 90 bar.a (HP Steam) 32.4 t/h, 230°C, 8.5 bar.a (LP Steam)
Power Plant	Rumaila combinatory-cycle Power Plant	Shamara Co.	design, supply and manufacturing 12 Heat recovery boiler units Weight of the manufacturing equipment: 26154 Tons Technical characteristics of each boiler: 241.2 t/h, 520 °C, 90 bar.a (HP Steam)

Project Type	Project Name	Project characteristics	
		Taskmaster	Description
Power Plant	Chabahar combinatory-cycle Power Plant	Saba Power and Energy Group	design, supply and manufacturing 2 Heat recovery boiler units The manufacturing equipment: 4359 Tons Technical characteristics of each boiler: 241.2 t/h, 520 °C, 90 bar.a (HP Steam) 32.4 t/h, 230 °C, 8.5 bar.a (LP Steam)
Power Plant	Roud Shour combinatory-cycle Power Plan	Amir Kabir Electricity Generation and Development Co.	design, supply, and manufacturing 2 F-Class heat recovery boiler units The manufacturing equipment:: 10817Tons Technical characteristics of each boiler: 219.7 t/h, 560 °C, 140 bar.a (HP Steam) 49.2 t/h, 560 °C, 42 bar.a (LP Steam) 40.7 t/h, 235 °C, 4.97 bar.a (LP Steam)
Power Plant	Khorramabad combinatory-cycle Power Plant	Khorramabad Power Generation Company	design, supply and manufacture 3 Heat recovery boiler units The manufacturing equipment:: 13140 Tons Technical characteristics of each boiler: 241.2 t/h, 520 °C, 90 bar.a (HP Steam) 32.4 t/h, 230 °C, 8.5 bar.a (LP Steam)
Water	Water Production Complex of Bushehr	Water and Sewerage Company(Bushehr)	design, supply and manufacture the desalination plant with a capacity of 35.000 cubic meters per day
Power Plant	Qeshm Power and Water Generation Plant	Ghadir Investment Holding	design, supply and manufacture 2 Heat recovery boiler units Weight of the manufacturing equipment: 3980 Tons Technical characteristics of each boiler: 482.4 t/h, 520 °C, 90 bar.a (HP Steam) 64.8 t/h, 230 °C, 8.5 bar.a (LP Steam)
Water	RO+CEDI West Karun power plant	petroleum Engineering and Development Company (PEDEC)	design, supply and manufacture the RO+CEDI with a capacity of 384 cubic meters per day
Water	Tous CCGP	MAPNA Tous power Co.	design, supply and manufacture the RO+CEDI with a capacity of 648 cubic meters per day
Water	RO+CEDI Roud Shour Power plant	Amir Kabir Electricity Generation and Development Co	design, supply and manufacturing the RO+CEDI with a capacity of 540 cubic meters per day



Project Type	Project Name	Project characteristics	
		Taskmaster	Description
Power Plant	Zanjan (2) (Arian) combinatory-cycle Power Plant	North-South Energy development Co.	design, supply and manufacturing 2 three-pressure Heat recovery boiler units Weight of the manufacturing equipment: 6100 Tons Technical characteristics of each boiler: 196 t/h, 560 °C, 135 bar.a (HP Steam) 38 t/h, 560 °C, 34 bar.a (LP Steam) 28.4 t/h, 235 °C, 5 bar.a (LP Steam)
Power Plant	Latakia combinatory-cycle Power Plant	Syria Ministry of electricity	design, supply and manufacturing 2 Heat recovery boiler units Weight of the manufacturing equipment: 3980 Tons Technical characteristics of each boiler: 246 t/h, 533 °C, 96 bar.a (HP Steam) 44 t/h, 236 °C, 9 bar.a (LP Steam)
Oil and Gas	Razi petrochemical	Razi petrochemical Co.	design, supply and manufacturing and installation of 1 package boilers unit Weight of the manufacturing equipment: 385 Tons Technical characteristics of each boiler: 150 t/h, 385 °C, 41 bar.a (HP Steam)
Oil and Gas	NGL3100	OIEC Co	design, supply and manufacturing and installation of 3 package boilers unit Weight of the manufacturing equipment: 385 Tons Technical characteristics of each boiler: 70 t/h 204 °C, 11 bar.a (HP Steam)
Oil and Gas	Sabzevar combinatory-cycle Power Plant	Persian Gulf energy development horizon Co	design, supply and manufacturing 2 three-pressure Heat recovery boiler units Weight of the manufacturing equipment: 6100 Tons Technical characteristics of each boiler: 170 t/h, 535 °C, 122 bar.a (HP Steam) 44 t/h, 528 °C, 34 bar.a (LP Steam) 31.4 t/h, 240 °C, 6 bar.a (LP Steam)
Oil and Gas	Hengam ( Bandar Abbas) combinatory-cycle Power Plant	Heat Power Plants Holding Co.	design, supply, and manufacturing 3 F-Class heat recovery boiler units Weight of the manufacturing equipment: 10817 Tons Technical characteristics of each boiler: 340 t/h, 560 °C, 118 bar.a (HP Steam) 38 t/h, 560 °C, 31 bar.a (LP Steam) 30 t/h, 235 °C, 9 bar.a (LP Steam)
Water	RO+CEDI Zanjan (2) Power plant	North-South Energy development Co.	design, supply and manufacturing the RO+CEDI package with a capacity of 10 cubic meters per day
Oil and Gas	The third boiler of the Isfahan refinery	Isfahan refinery	design, supply and manufacturing and installation of pressure equipment for the third boiler of the refinery Technical characteristics of each boiler: t/h Equipment temperature exposed to sunlight: 85 °C200
Power Plant	Torbat Heydarieh combinatory-cycle Power Plant	Rashid Torbat Heydariyeh Power Generation	design, supply and manufacturing 2 two upgraded-pressure Heat recovery boiler units Weight of the manufacturing equipment: 4300 Tons Technical characteristics of each boiler: 249 t/h, 565 °C, 99.71 bar.a (HP Steam) 33 t/h, 238 °C, 9 bar.a (LP Steam)

Project Type	Project Name	Project characteristics	
		Taskmaster	Description
Water	RO+CEDI Sabzevar Power Plant	Persian Gulf energy development horizon Co	design, engineering and manufacturing the RO+CEDI package with a capacity of 12 cubic meters per day
Water	RO+CEDI Torbat Heydarieh Power Plant	Torbat Heydarieh power production Co.	design, engineering and manufacturing the RO+CEDI package with a capacity of 12 cubic meters per day
Oil and Gas	The third boiler of Damavand	Damavand petrochemical	Design, purchase, construction of the third boiler of Damavand petrochemical. At present, it is not possible to provide tonnage information for construction equipment Technical characteristics of each boiler: Design case: GT 80%-Fired 48°C HRCG Steam Temperature:430°C HRCG Steam Flow Rate:310T/hr HRCG Steam Pressure: 44 bar. a
Oil and Gas	Khark industrial boiler	K.P.C Co	1 boiler unit package 50 tons per hour Weight of the manufacturing equipment: 268 Tons Technical characteristics of each boiler: 50 t/h, 520 °C, 11.5 bar.a (HP Steam)
Power Plant	Isfahan Mobarakeh steel	Isfahan Mobarakeh steel	design, supply and manufacturing and installation of 1 Boiler of Isfahan Mobarakeh steel Weight of the manufacturing equipment: 1505 Tons Technical characteristics of each boiler: 200 t/h, 467 °C, 67 bar.a (HP Steam)
Water	RO+CEDI Khorram Abad power plant	Khoram Abad power production Co.	design, engineering, and manufacturing the RO+CEDI package with a capacity of 16 cubic meters per day
Water	RO+CEDI Rumaila Power Plant	Shamara Co.	design, engineering, and manufacturing the RO+CEDI package with a capacity of 33.5 cubic meters per day
Water	RO+CEDI Latakia Power Plant	Syria Ministry of electricity	design, engineering, and manufacturing the RO+CEDI package with a capacity of 25 cubic meters per day



## Active industries of MAPNA boilers Co.



Water and wastewater industry



Petrochemical, oil, and gas industry



Power Plant industries



Municipal waste management

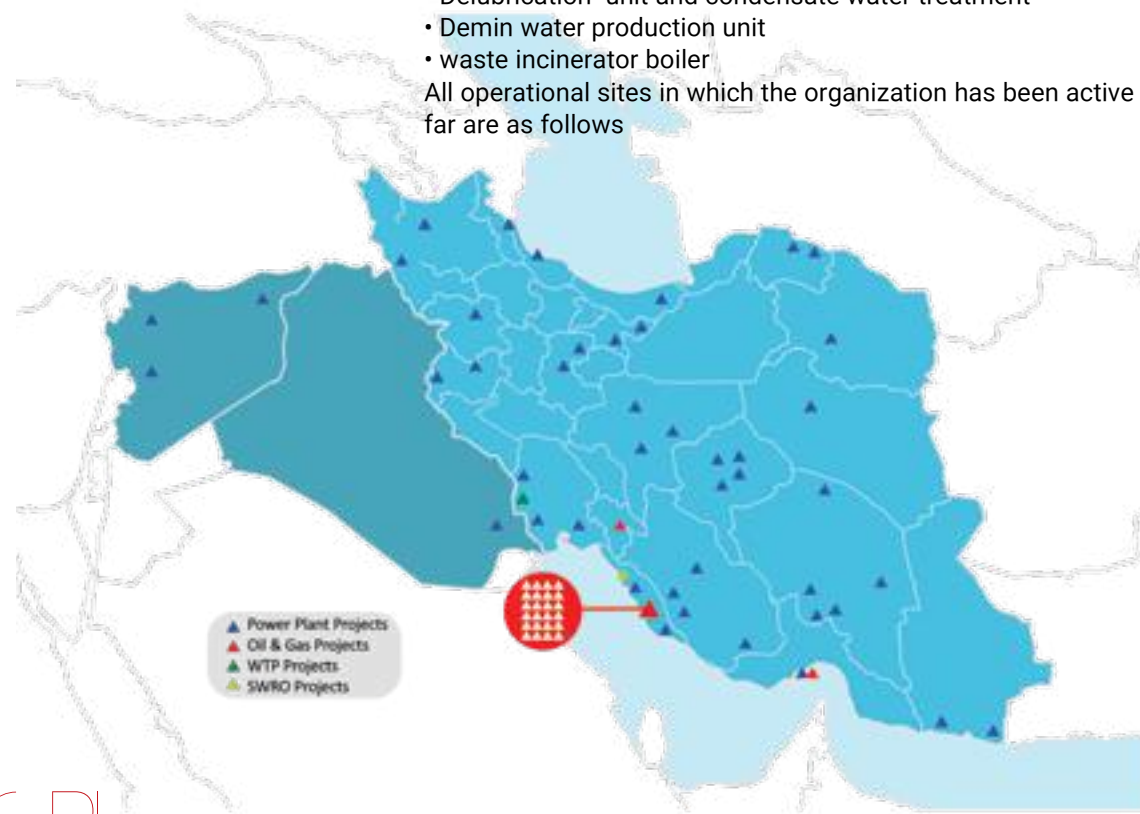


Mining industries

### Products List:

- HRSG Heat Recovery Boilers
- Industrial Water Tube Boilers
- Conventional steam Power Plant boilers
- CHP boilers for simultaneous production of electricity and steam
- Shell & Tube Converters
- de-aerator
- Pressure Vessels
- Membrane desalinators
- Container desalinators
- RO and EDI water treatment systems
- Pretreatment systems include UF and DAF
- Delubrication unit and condensate water treatment
- Demin water production unit
- waste incinerator boiler

All operational sites in which the organization has been active so far are as follows



## Types of Projects:

### Power Plant Projects

Recovery Boiler, Steam Boiler, CHP, water treatment systems (WTP)

### Oil & Gas Projects

Reservoir, Heat Converter, Delubrication, Distillation Tower, Reactor, water treatment systems

### Petrochemical Projects

water-tube boilers, Reservoir, Converter, Reactor and water treatment systems

### Water projects

The industrial and urban water treatment plant, water de-salination with RO method

### Recovery Boiler Projects (HRSG):

- 47 heat recovery boiler units
- 43 projects in the field of oil, gas, petrochemical and power plant
- 39904 tons of steam per hour

### Water Tube Boiler Projects (industrial)

- 40 industrial water tube boiler units
- 11 projects in the field of oil, gas, petrochemical and power plant
- 6240 tons of steam per hour

### Boiler Projects (conventional)

- 2 conventional boiler units
- 1 project in the field of power plant
- 2080 tons of steam per hour

### Water Projects (Packages)

- 1 Lian water desalination project ( Bushehr) with SWRO method with a capacity of 35000 m3 per day
- 1 WTP project in the field of power plant with RO+CE DL method with a capacity of 33 m3 per hour (For a total of 10 power plants)
- MAPNA Boiler plant effluent treatment project with a capacity of 65 cubic meters per day (completed)





Active industries of MAPNA boilers Co.

#### Domestic Markets:

- MAPNA Power section (including development 1, 2 and 3)
- MAPNA O&G section (including Neyr-perse)
- MAPNA Manufacturing Companies (Tuga, Pars ...)
- MAPNA IP section
- Power Generation Management Companies
- Oil, gas, and petrochemical companies
- Non- MAPNA GC Companies
- Steel companies
- Other Mining Companies (Iron, Copper, Cement, etc.)
- Municipalities Organization
- ABFA Organization
- Thermal Power Plants Holding Company

#### Foreigner Target Markets:

- Iraq
- Syria





## ■ The Perspective of Company Certifications:

- Certificate of Quality Management System according to ISO9001: 2015 standard
- Certification of Environmental Management System according to ISO14001: 2015 standard
- Occupational Health and Safety Management System Certificate according to on OHSAS 45001: 2018 Standard
- Certificate of Information Security Management System according to ISO27001: 2013 standard
- Certificate of Energy Management System according to ISO50001: 2011 standard
- ISO 17025 Laboratory Verification Certificate
- Contractors Safety Verification Certificate
- ISO 13485 Medical Equipment Certificate
- Proficiency test certificates in the field of impact and hardness tests

## ■ The Perspective of Company Appreciation:

- Silver Statue of National Organization Excellence in 2018
- Silver statue of national green industry
- The first rank and the golden statue of the country's top safety workshop for safety performance
- Silver Statue National Award of Iranian Premier Project in South Pars Phase 15 and 16 Projects
- Alborz Province Elite Industrial Employer (Abdul Majid Rajabi)
- Certificate of Appreciation from Iranian Oil Industry Equipment Manufacturers Association (OIEMA)
- Receiving a statue and a certificate of appreciation as a sample engineering unit
- Elite Statue of the Fourth Conference of Users of Kerman Hybrid and Gas Cycle Units
- The Statue of the First International Conference on Welding and Non-Destructive laboratories
- Certificate of Elite Supporter at the 39th Power Plant Chemistry Conference in Isfahan
- National Prize for Industry and Mining
- Golden Rank in Business Card Ranking Plan

# Take a look at the Silver Statue of Excellence

Organizational excellence models are models for evaluating and measuring performance that is applicable to any organization (including public, private, etc.).

Using these models, organizations can evaluate their success in implementing improvement programs at different times and compare their performance with other organizations, especially with the best of them in the industry related to the global balance. The use of these models will provide numerous benefits to organizations, which are mentioned below:

- Training forward-looking and successful leaders
- To help develop and implement strategies and create a clear understanding of organizational goals.
- Encourage the creation of management systems for appropriate and timely decision making
- improving stakeholder management approach and facilitating organizational communication
- The development of agility and change management
- Deepening and developing the culture of organizational excellence
- Achieving balanced results
- Increasing the satisfied staff consistent with the organization's culture
- Strengthening the organization's capabilities in difficult situations
- Improving the organization's ability to manage and effectively use the information and organizational knowledge
- Increasing the ability to identify and create improvement opportunities in the organization
- Creating an atmosphere of creativity and innovation in the organization, etc.

According to the above explanations, MAPNA Boiler has been on the excellence path since 1990, based on a strategic decision. The course of organizational excellence maturity in MAPNA Boiler Company, the achievements achieved in recent years, and the goal of the coming years has been outlined in the form of the company excellence roadmap:



Other achievements of the implementation of the organizational excellence model in MAPNA Boiler Company in recent years, the following can be mentioned.

- Improving the external image and upgrading the MAPNA Boiler brand
- better understanding of the strengths and weaknesses of these points for market and products developments
- Creating a balance between different groups of stakeholders and balanced growth
- Goal setting, striving to achieve goals and improving or maintaining trends
- Paying attention to the past, improving performance in the present and looking ahead
- directing all the activities and resources of the organization in the direction of strategies
- Measuring and comparing the performance of the organization with other organizations



## Receiving Silver Statue of National Organization Excellence in 2018



Holder of Silver Statue of National Organization Excellence in 2018

## Foreign Corporations and Commercial Partners

**Sulzer Co.**  
Designing and Manufacturing various industrial, power plant, oil, and gas pumps

**Tubos Co.**  
Manufacturing various pipes and tubes

**CNIM Co. (France)**  
Designing trash-burning boiler

**Veolia Co. (France)**  
Designing water desalination equipment

**CMI Co. (Belgium)**  
Transferring technical knowledge on designing F and H- class recovery boilers, and engineering service projects



**Tenaris Co. (Italy)**  
Manufacturing various pipes and tubes

**Maci Co. (Italy)**  
Designing industrial boilers

**AST Co. (Italy)**  
Designing and manufacturing various safety valves

**MEGA Company (Czech Republic)**  
Designing and manufacturing of modules and EDI and EDR systems

**Hyflux Co. (Singapore)**  
Designing water desalination equipment

**Doosan Co. (South Korea)**  
Transferring technical knowledge on designing E- class recovery boilers of horizontal type

## Overview and performance of the organization



## Stakeholders satisfaction:

**64%**  
Total Employees Satisfaction (2020)

**84%**  
Customer Satisfaction (1<sup>st</sup> semester of 2020)

**83.1%**  
Society Satisfaction (2020)





Components and  
methods of

# leading the organization

Chapter 2

GRI  
Report

2021



In this section, the report deals with the methods, components, and structures employed by the company's governance system to guide and lead the organization. This method should be designed in such a way that it can lead to the acquisition and proper distribution of value among all stakeholders of the organization, which is very crucial. The Board of Directors, as the highest governing body, delegates the task of governing the organization and reporting to the CEO and, based on the management method, by delegating the appropriate authority of duties in the governance structure and enacting a set of corporate laws, manages the organization to have a balanced response to all stakeholders. In the following, the management method and its components in MAPNA Boiler Company are described:

Governance models and structures:

In MAPNA Boiler Company, the board of directors is considered the highest governing body of the organization. The governance structure of a company is in fact a mechanism that can assure any stakeholder group that their rights and expectations will not be violated in favor of another group. This mechanism, which becomes a set of rules within the company, procedures, and actions, will ultimately lead to the satisfaction

of all company stakeholders and create value for each of them. The governance structure of the company includes the responsibilities and practices used by the board of directors and executives to define a strategic path that ensures the achievement of goals, control of risks, responsible use of resources, and the correctness of the business. Corporate governance structure guides laws, regulations, structures, processes, organizational culture, and organizational systems toward accountability, transparency, fairness, creating solutions to achieve stakeholder satisfaction. As mentioned before, MAPNA Boiler

Company is one of the subsidiaries of MAPNA Group Company with a separate board of directors. General policies of MAPNA Boiler as a special joint-stock company are communicated to this company by MAPNA Group and the General Assembly. The General Assembly of MAPNA Group Company, by reviewing its annual report, will dismiss and install the members of the Board of Directors, and this board will also submit a report on its activities to the Assembly by next year. The percentage of the company's shareholders without major changes to the report is as follows:

MAPNA Boiler company's stock structure, based on the 2020 Assembly report

Description	Percentage of ownership
MAPNA Group Company	61.7
Neyr-perse Company	32.49
MAPNA Tuga Turbine Engineering and manufacturing Company	5.79

The board of directors is ultimately responsible for all the activities and financial integrity of the company, and its members can give the company more power and authority in line with the interests of shareholders and various stakeholders, including customers, employees, and investors. The most important tasks for the company board are as follows:

- Reviewing the annual strategic plans and setting policy and operational plans of the company with respect to the approvals of the assemblies
- Supervising the company's transactions and their approval (within the limits specified in the transaction regulations, etc.)
- Reviewing the company's activities report (report on company projects status, system projects)
- Reviewing and issuing licenses to purchase equipment and machinery for factories and civil development projects
- Reviewing the company reports in out-of-group tenders
- Preparing financial statements for submission to the General Assembly
- Execution of all resolutions of the assemblies
- Reviewing and organizational chart (top chart), financial transactional, administrative, and employment regulations and submit a proposal to the Assembly
- Reviewing the annual and reform funds for running the company
- Establishing and pursuing any lawsuit or defense against any lawsuit against participation in administrative, disciplinary, registration, judicial authorities, and referring claims to arbitration, both domestic and international, at all stages of proceedings and pursuing executive operations, and the right to peace, conciliation, and extradition of the case
- Prepare a summary of the company's assets and debts once every six months and submit it to the inspector
- Election or dismissal of the CEO upon the proposal of the board of directors and the approval of the assembly

The members of the board of directors of the organization are as follows, which according to the previous report of its members has been revised in accordance with the rules of non-membership in more than one board of directors in Iran in the company assembly.

First name and last name	Member position
Mohammad Reza Roshani Moghadam	Chairman of the Board
Abdul Majid Rajabi	Vice President and CEO
Mohammad Hadi Faqihzadeh	Member of the Board

According to the business routine, the board of directors appoints the CEO to run the organization and assigns the task of managing the organization and answering to the auditors and the board of directors. Independent auditor by the Assembly and internal auditor by MAPNA Group are responsible for reviewing the company's financial

statements and submitting the required reports to them and the role of submitting these reports to the auditors, as the representative of the board in the organization is the responsibility of the CEO. The duties of the CEO as the highest executive of the company are as follows:

- Implementation of the approvals of the board
- Approval of transaction regulations or financial and administrative regulations (mission, loan, salary, fixed assets, etc.)
- Control and management of company affairs
- Carrying out all administrative, employment, and personnel affairs to provide the required manpower
- Representation of the company in all judicial, disciplinary, administrative, governmental, non-governmental authorities and relation to all real and legal persons
- Signing all administrative correspondence
- Carrying out any transaction with all real and legal persons within the framework of the approvals of the board of directors

## Strategic management in MAPNA Boiler Engineering and Manufacturing Company

The CEO of MAPNA Boiler Company, to improve governance and attract the participation of various units and levels in decision-making and organizational thinking, uses several committees at the highest level and organizational operations and transformational and current affairs of the company in all economic, social, and environmental issues are implemented with the help of these committees and operational

units in the company. The supreme committee of the organization is the Council of Deputies, which is responsible for macro policies and their implementation in the organization. There are several other committees in the organization that are active in organization. Some of the most important organizational committees on economic, social, and environmental issues are as follows:

MAPNA Boiler Company is one of the strategy-oriented companies that coordinates, integrates, and manages the targeting and planning to achieve them throughout its strategy system. The company has always strived to keep its management style up to date. The Strategic Planning Unit, as a subsidiary of

the Systems and Programming Deputy, is responsible for planning and executing the organization's strategies. Due to the importance of strategic management in the company, a committee called the Strategic Management Steering Committee directs the affairs related to this area and is accountable to the CEO of the

organization for deviating from the program by evaluating strategic indicators. The members of the committee include the CEO and all deputies and immediate managers as senior managers of the organization and the strategic planning manager of the organization, who pursue the following missions:



### Economical

- Strategic management steering
- Organizational development and improvement
- Development of interior construction
- Trading Commission
- Productivity steering
- Product development and improvement
- Development of supply resources

### Social

- Work and family
- Education
- loan
- Mehr Afarinan Charity
- MAPNA Eco
- EBC Organizational Culture

### Environmental

- social responsibility
- MAPNA Eco
- HSE

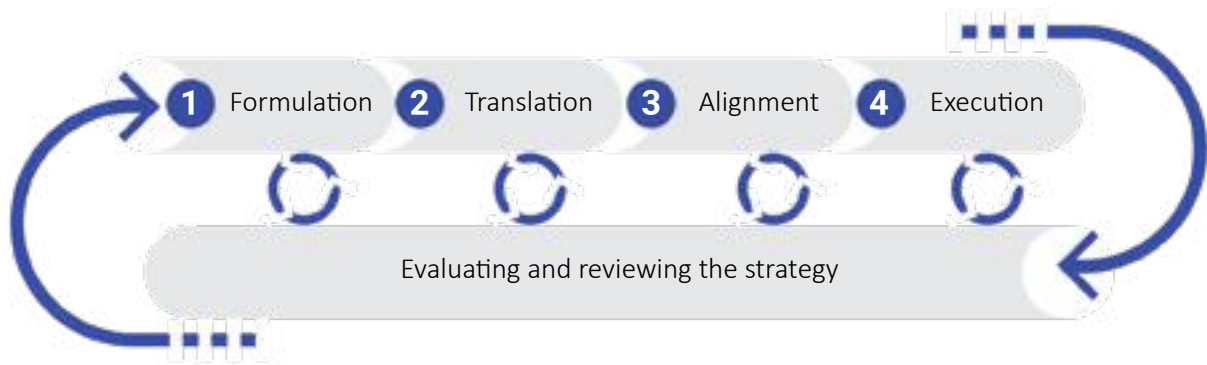
- \_\_\_\_\_ Determining the company's macro policies and goals
- \_\_\_\_\_ Revising the business level strategy
- \_\_\_\_\_ Controlling the realization of business-level strategic goals and programs
- \_\_\_\_\_ Issuance of task strategies



Programming and strategic performance history in the company is as follows:

Year	The most important actions
2008,2009	<ul style="list-style-type: none"><li>•Establishment of strategic management process (based on David's model), formulation and communicating the first edition of the strategic plan</li><li>•Implementation of strategic plans (such as the acquisition of MAPNA Equipment Company in line with the strategies of increasing capacity and backward vertical integration, creating a research and development unit)</li><li>•Creating strategic management dashboards with QPR_BSC software</li></ul>
2010,2012	<ul style="list-style-type: none"><li>•A fundamental revision of the strategic plan with regards to changes in environmental conditions (Such as stopping the country's development projects in the field of power plants, changing group marketing policies, increasing equipment capability) and announcing the second edition of the strategic plan</li><li>•Collaboration with Palladium Co. in implementing the project of reviewing the MAPNA Group strategies and partially editing of the company's strategy map to align with the group's strategy and to announce the third edition of the strategic plan.</li><li>•Implement strategic plans (such as establishment SAP, product development projects, service development plans, creation of sales and market development deputy, development of marketing and sales activities)</li></ul>
2013,2014	<ul style="list-style-type: none"><li>•Establishment of an independent strategic planning unit with OSM approach and annual strategic readiness assessment of the company with SFO model</li><li>•Strategic Management Process Review Based on the Kaplan-Norton Comprehensive Process (Figure 2c-1)</li><li>• Establishment of the annual strategic plan review approach and announce the three-year horizon plans</li><li>• Implementing the strategic plans (such as the establishment of standard PMBOK, design, and establishment of marketing and sales structures and processes, Product development projects to reduce current product technology gaps and new product creation, technology management process deployment project)</li><li>•Implementing scenario planning approaches and risk management of strategic goals</li><li>•Developing activities to increase employees' strategic awareness, such as holding conferences and competitions</li></ul>
2015,2018	<ul style="list-style-type: none"><li>•Establishment of strategic task planning approach</li><li>•Developing or revising a strategy plan and a balanced scorecard in the functional area of human resources, marketing and sales, product design and development, financing production, project implementation, CSR, ICT, HSE</li><li>•Developing support strategies in the areas of marketing and sales, technology, supply, human resources, knowledge, etc.</li><li>•Deepening the scenario planning approach and formulating the plan B, C, D</li><li>•Development and improvement of strategic management dashboards with Qlik view software</li></ul>
2019,2021	<ul style="list-style-type: none"><li>•Developing an initial version of the product roadmap</li><li>•Developing a scenario plan for the future of JCPOA</li><li>•Formulation of all functional and supporting strategies and annual revision of them.</li><li>•Development of strategic management dashboards at the macro and functional level</li><li>•Three-year KPI targeting based on the organization strategy plan horizon</li></ul>

The last row of the table shows the strategic changes that occur with respect to the latest report. MAPNA Boiler Company, based on the Norton and Kaplan method and by analyzing various environmental issues, formulates its strategies at the macro level of the company and its implementation at the level of functional maps. The method of formulating strategies in the reporting period has not changed significantly compared to the previous period, and some improvements have been applied in it as described in the table above.

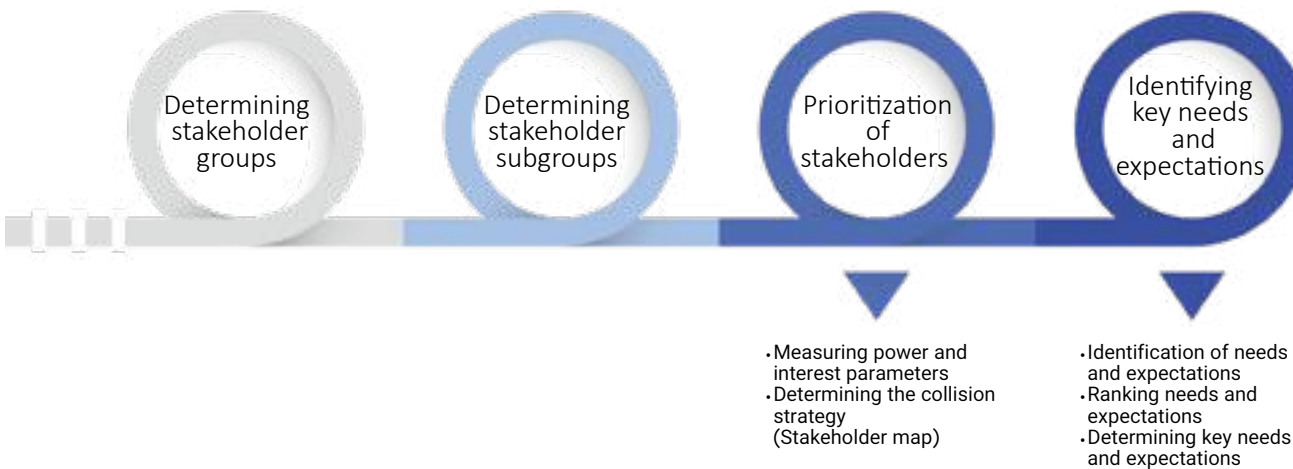


## Strategy Formulation

At this stage, the company formulates to edit or revise the company's strategies. In this step, the following steps are performed:

### Analyzing the needs and stakeholders' expectations:

Stakeholders are individuals, groups, or organizations that have a direct or indirect stake or interest in the organization because they either affect or are affected by the organization. Assessing the needs and expectations of stakeholders in MAPNA Boiler includes the following steps:



Organizational stakeholder groups are as follows. Each may have its own subgroups. After determining stakeholder groups, their needs and expectations are identified and key expectations are categorized. The process of identifying and prioritizing stakeholders' desires, the expectations, feedback, surveys of some of them, and experiences of day-to-day interactions with stakeholders are considered:



### Mission, Perspective, and Values:

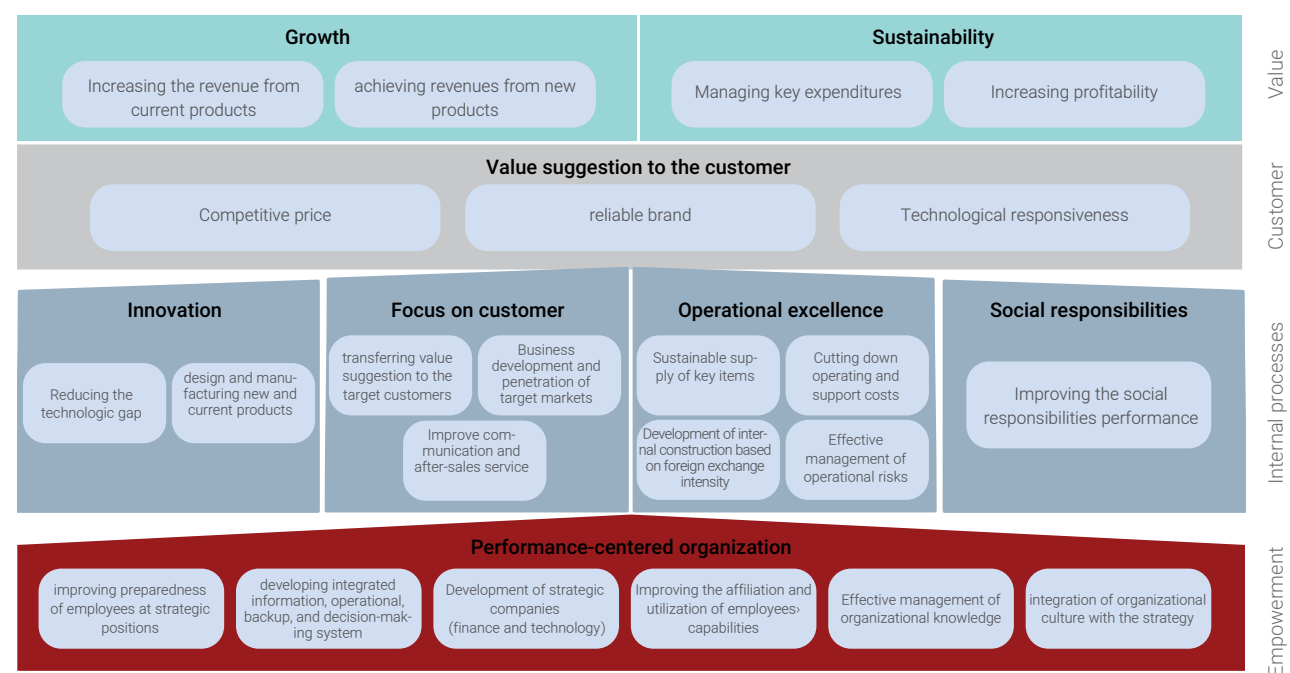
In this step, the orientation elements of the company are formulated and revised based on the key expectations of the stakeholders and the future of the company with the consensus of senior managers in the Strategic Management Committee.

### Analysis of macro environment, industry environment, and internal environment:

These analyses examine the opportunities, threats and strengths, and weaknesses of the key macro, industry, and internal environments of the company.

### Strategy Formulation:

After the environmental analysis, the strategies of the company are formulated and presented in form of a macro plan of the strategies of the company. Some strategic goals have been updated during the reporting period. The major change in the map in the field of social responsibility in the reporting period compared to the previous period is the addition of a strategy to improve the social responsibility of the map, which is the main area of the company in the horizon of 2020 to 2021 as follows



Translation, Integration, and Implementation of strategy:

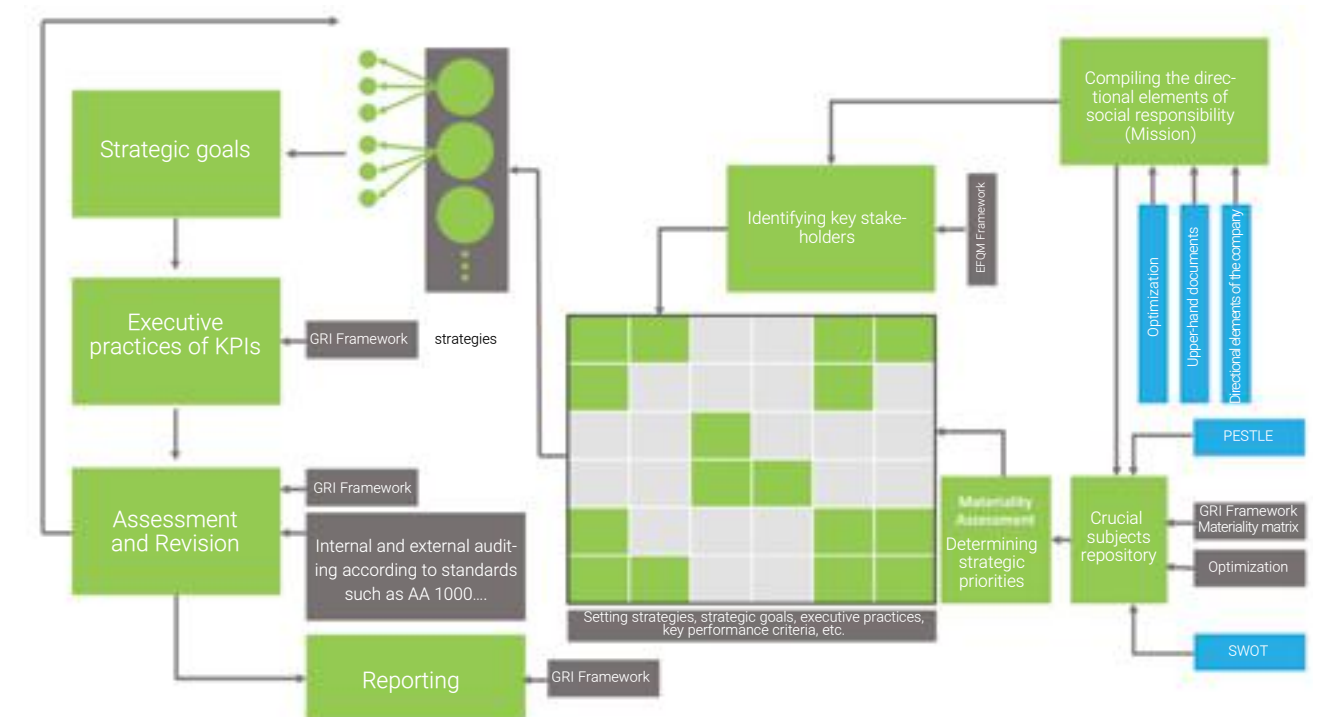
After formulating the strategies and the company's macro plan, the organization's task strategies are developed for the different parts in the form of 9 task plans, and action plans are planned and implemented. Afterward, key performance indicators for program assessment are compiled and measured annually, and so the implementation of strategies is evaluated.

### Method of formulating goals, strategies, and social responsibility plan

Social responsibility is a topic of concern for managers and staff at MAPNA boiler engineering and manufacturing company. The company has always held itself accountable to all stakeholders such as the community and has strived to keep this responsibility. The company has defined a codified system for goal setting and planning and implementation of programs to achieve these

goals by utilizing internationally-accredited standards and modeling top companies. MAPNA Boiler also defines its social responsibility goals, objectives, and mission statement along with its business goals. The company strives to take a step towards responsible corporate citizenship based on the model developed. In this regard, MAPNA Boiler Company develops the orientation elements of social

responsibility and its goals and strategies in line with business strategies of the company. The company uses the approach of implementing the strategic plans of the organization, namely the Norton-Kaplan scorecard approach, in the implementation of the corporate processes management system. The developed model of MAPNA Boiler's social responsibility is as follows:



Based on this systematic approach, the orientation elements of social responsibility were firstly formulated based on such issues as the orientation elements of the organization, and the content of upstream documents such as the Charter of Sustainability and Optimization. Then, key stakeholders were identified and their needs and expectations were extracted in terms of

issues through GRI framework, optimization, environmental analysis, and case studies and were prioritized by stakeholders on the basis of two important indicators for the beneficiary and importance for the organization in the Materiality Matrix. Next, after analyzing the internal strength and weaknesses within the company on key issues, the social responsibility plan and strategies

and related operational plans were formulated and were put within the frame of the organization's social responsibility plan. The implementation of this model has been on the agenda since the beginning of 2016, and the strength and weakness analysis stage has been added to it in the current reporting period.



■ The orientation elements of company's social responsibility

Social responsiveness

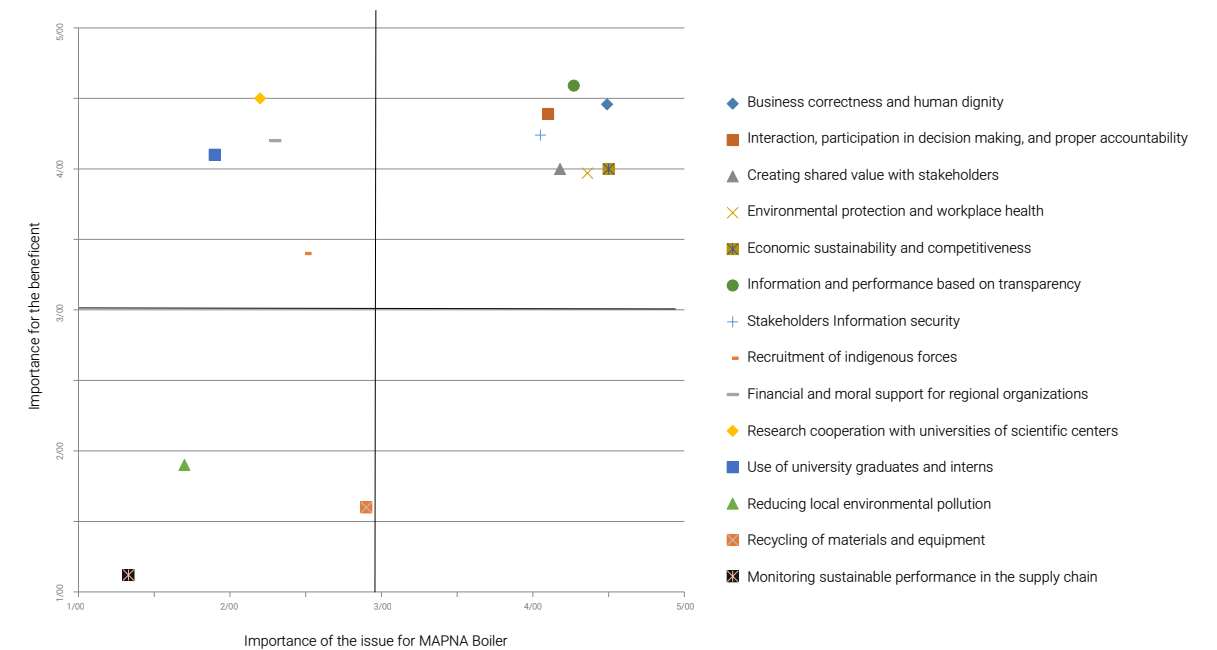
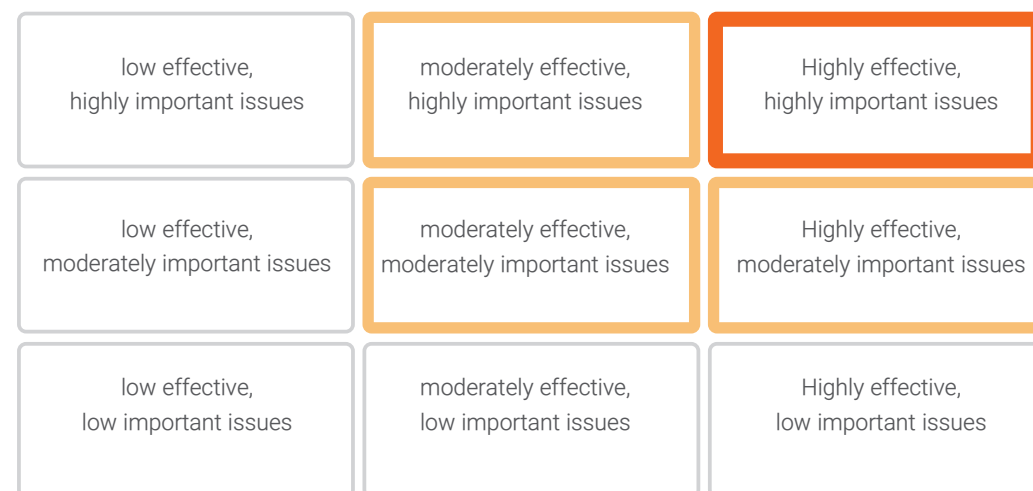
Economical dynamicity

Environmental sustainability



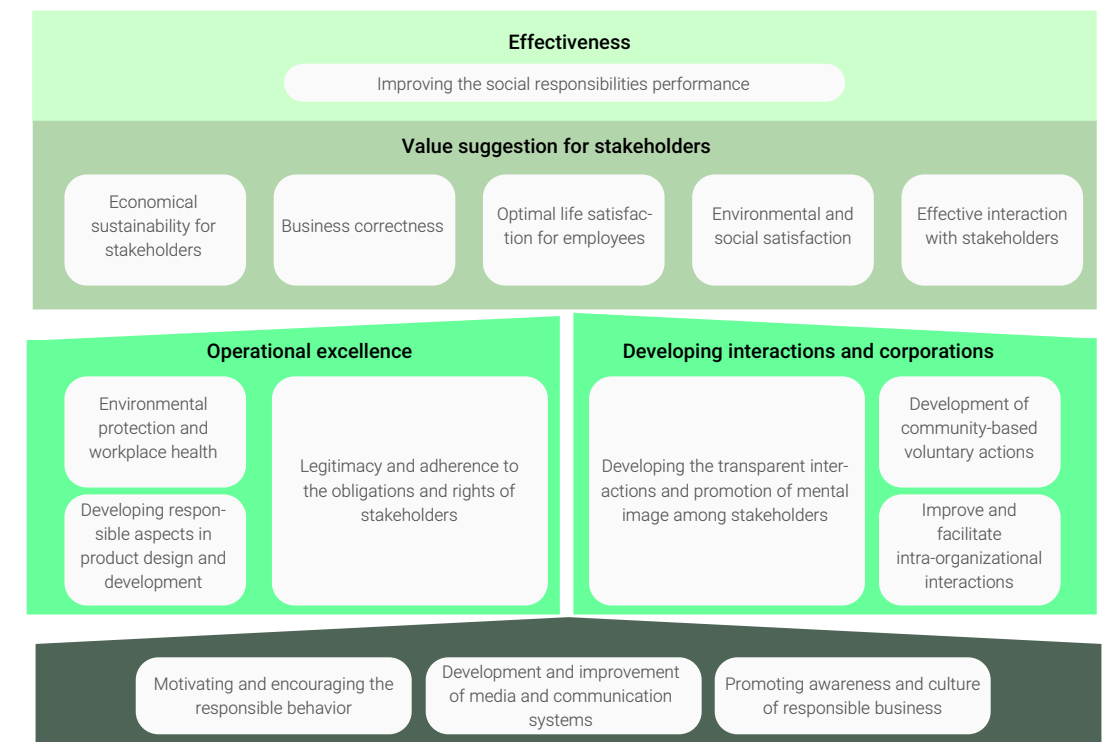
# Being recognized as the role-model in the field of social responsibility among Iranian organizations by 2025

To define the goals and macro-strategies of social responsibility based on the aforementioned model, after formulating the mission and vision of social responsibility, the company has prepared a bank of various issues on the basis of optimal GRI framework and environmental reviews considered by targets stakeholders. On the other hand, the organizational stakeholder groups identified in the firm's strategic management model is extracted and prioritized for sustainability issues and are placed in the Materiality Matrix, which expresses the importance of the issues to different stakeholders. These stakeholder sustainability issues are prioritized in meetings with stakeholder supporters. These supporters have been selected so that they have both an adequate understanding of the issues that are important to the company and experience of working with stakeholders. Hence, in the meetings held, the importance of the issues for the company and each stakeholder is identified, and then the issues that are of high priority to both are identified as strategic priorities in social responsibility.



## Formulating the strategic social responsibility plan

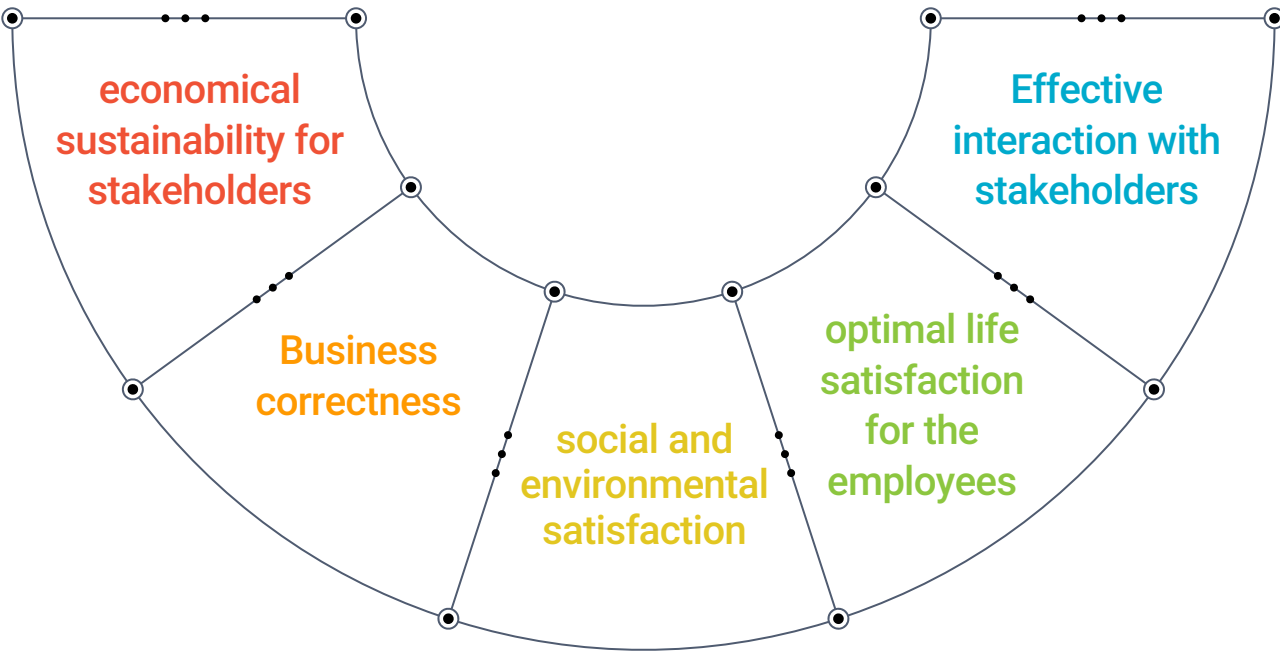
After identifying and strategic priority based on important issues, all organization strategies at the macro level and the task, as well as the organization processes to consider how they respond to these priorities, are discussed. Part of the strategic priorities that are not responded to is considered in the form of social responsibility strategies and it is formulated in the form of a strategic role, which is based on the strategic role of social responsibility for the three years of 2020 to 2021 that is revised twice during reporting from 2017 to 2019, is as follows:





# Social Responsibility Structures

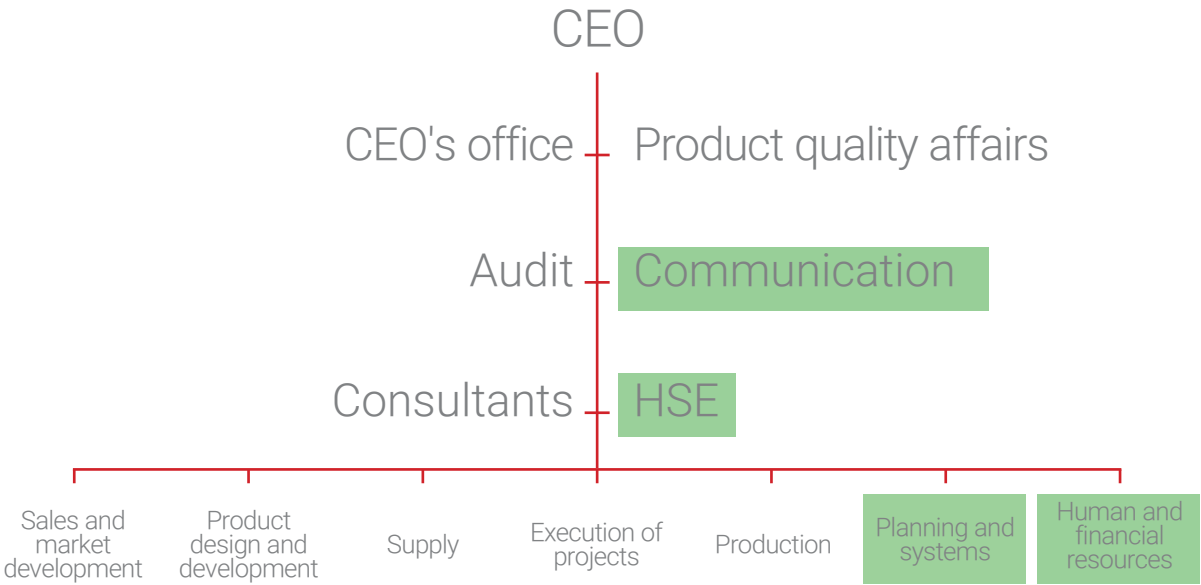
To implement social responsibility strategies based on what has been stated, MAPNA BOILER provides the appropriate infrastructure and platforms and establishes and reinforces processes within the company. It also defines actions in the organization to achieve these goals. The complexity of these infrastructures, processes, and activities leads to the creation of five priority values for the organization’s stakeholders that can be seen below. During the reporting period, the correct value of the business has replaced the legal value at the stakeholder level.



Since the social responsibility plan is a cross-functional plan, various sectors are involved in social responsibility strategies; hence, the implementation of these strategies is under the responsibility of the Higher Committee for Social Responsibility, chaired by the CEO and Vice Presidents and Senior Managers of the sectors involved in social responsibility. The committee is responsible for policymaking and overseeing the formulation and implementation of social responsibility strategies and programs and their evaluation and compilation and approval of the social responsibility report. The social responsibility engages various units of the company in social responsibility issues and programs, most notably public relations as a social responsibility and its macro planning officer, as well as being valuable in effectively interacting with all stakeholders, community satisfaction and business correctness, and other task units in the Social Responsibility Committee have the following plans in the field of formulating goals and implementing actions in this field. It is worth mentioning that during the reporting period, the Deputy Minister of Production and the Director of Finance and Economy, and the Head of Social Responsibility were added to this committee with the mentioned plans.

Status	Role in the committee
Director of Public Relations	Leader of the process of social responsibility and its trustee in the organization, supportive of the community, and responsible for the social and environmental impacts of the organization
Deputy of Systems and programming	Representative of the CEO and strategic supporter of the discussion of social responsibility and macro-policy in the field of social responsibility (on behalf of the CEO) as well as a supporter of staff in safety and health and responsible for environmental impact on behalf of HSE
Human resources management	Advocating the staff and responsible for welfare, education, legal rights, work-life balance, equality, and discrimination, and accountability on them
Deputy of Sales and Marketing	Supporting the Customer in sales, legal rights, and commitment to fair marketing principles
Deputy of Product Design and Development	Responding to the customers and the community for the impact of products on them
Deputy of Supply	Supporting suppliers for being dealt with in a fair, transparent, and accountable manner
Deputy of production	Supporting production co-workers, especially at the labor and bargaining levels for their interest
Financial and economic manager	Supporting the economic sustainability for all organization’s stakeholders
Responsible for social responsibility	Secretary of the Committee and Executive Officer of Social Responsibility Activities

Although the distribution of social responsibility in the company is not related to specific units and all of them are obliged to implement and commit to it, but some organizational units have more participation in this regard based on the defined tasks.



In addition to the Social Responsibility Committee, which is responsible for macro-planning and monitoring components, sustainability assessment, and reporting in the area of social responsibility, other committees operate independently in the company, whose activity is related to the social responsibility of the organization, which is associated with the Committee on Social Responsibility if necessary. The names and brief descriptions of these committees are as follows:

Committee Name	Function
Content Committee	The committee is responsible for planning and preparing the content of the company's communication channels from the organizational units and disseminating them to satisfy the stakeholders and to achieve organizational transparency. It will be a subcommittee on social responsibility.
MAPNA Eco Committee	Establishing Volunteer corporations with Partners, Families, and MAPNA community for implementing volunteer affairs and cultivating Social and Environmental Behavior Patterns for Corporate Social Responsibility
Poll and survey Committee	Conducting poll and Thought Survey of All Stakeholders to Monitor Their Satisfaction
HSE Committee	Determining and formulating strategic policies of HSE and energy consumption management and providing solutions to improve the safety, hygiene, and health conditions of the company
Labor and family Committee	Deciding on the implementation of welfare policies and proposing the necessary budget to the organization
Health committee to cope with the Coronavirus	Policy-making and decision-making to deal with the crisis in the field of coronavirus spread in the organization

After formulating policies and strategies in the company that is usually determined in the organizational committees, organizational units are responsible for implementing the relevant actions based on the job descriptions they have and have representatives in the mentioned committees. Due to the special focus of many key stakeholders of the organization on economic issues in the organization, the majority of task units in the organization strive to create economic value and sustainability. To maintain economic balance and pay attention to environmental and social issues in some units, there are jobs with job descriptions in this direction, the most important of which are social responsibility manager, communications manager, stakeholder, and communications department, human resources manager, HSE management and affairs department which works on social and environmental issues of stakeholders.

## Leading and implementing crisis-related actions

The Council of Deputies, as the highest policy-making body and resolving internal challenges, seeks to investigate and address crises. This committee is formed in case of any crisis affecting the participation of the company and determines the policies to deal with the crisis and, if necessary, organizes and allocates specific resources to resolve the crisis and try to implement it by appointing a trustee or trustees. The emergence of economic crises due to sanctions and the emergence of the crisis of the spread of Corona disease were examples of crises that in the company led to policy-making and implementation of several measures in this field. A detailed description of how to deal with these crises is given in the relevant chapters.





# Economic perspective, crisis transition

Chapter 3

GRI  
Report

2021

Earning money and creating sustainable economic value in the organization is the main element of establishing and developing organizations in the first place. A sustainable organizational economy means value creation and long-term protection for stakeholders. The premise of this concept is that the development of strategies based on attention to this concept can lead to the continuation and resilience of firms in the long term. Beyond applying this approach in a company, paying attention to the interests of stakeholders in a network of organizations in addition to providing satisfaction in it and ensuring responsible behavior in a network can lead to

the sustainability of the existing ecosystem stability. The economic instability has been exacerbated by international sanctions in the country in recent years. In this situation, MAPNA Boiler in the last few years, following its sustainability policies and based on its strategic principles that were examined, has tried to create sustainable values in the organization according to the interests of its stakeholders and in this regard has developed strategies at the macro and organizational levels and task areas and social responsibility strategies. In this regard, with the creation of common value for society, the organization develops products that in addition to creating value and profitability for the organization can lead to solving environmental problems in the country. Significant entry of the company into the water industry to build water desalinators and industrial treatment plants to increase clean water resources is

an example of a common value creation approach in this regard. Another case was the company's involvement in the manufacture of oxygen-generating packages for hospitals during the outbreak of coronary heart disease, which was formed to respond to a social need of the community. As reviewed in the management chapter, MAPNA Boiler Company plans and implements its economic activities through its macro strategy map. Cases that are neglected in terms of economic sustainability are addressed in the social responsibility strategy map. The development of responsible aspects in the design and development of products is a strategy that in this case is included in the social responsibility strategy map. The company's approach to economic sustainability, advantage creation, and economic regeneration is discussed below:

## Economic advantage

The Council of Deputies, as the highest policy-making body and resolving internal challenges, seeks to investigate and address crises. This committee is formed in case of any crisis affecting the participation of the company and determines the policies to deal with the crisis and, if necessary, organizes and allocates specific resources to resolve the crisis and try to implement it by appointing a trustee or trustees. The emergence of economic crises due to sanctions and the emergence of the crisis of the spread of Corona disease were examples of crises that in the company led to policy-making and implementation of several measures in this field. A detailed description of how to deal with these crises is given in the relevant chapters.

### Capturing value

- Utilizing the obtained results in improving profitability and reducing the costs resulting from the value creation system for stakeholders

### Creating and delivering value

- Connecting values to the management and performance system to regulate resources, key activities, partners, and technology and formulate executive measures to purchase and deliver value to stakeholders

### Value suggestion

- Extracting the proposed values for Stakeholder Groups and the continuous revision of the proposed values based on environmental analysis to the needs and expectations of stakeholders.

Value suggestion	Competitive Advantages	Some examples of actions taken
competitive price	<ul style="list-style-type: none"> <li>MAPNA (Trademark) brand</li> <li>Ability to design based on the technical knowledge bachelor of well-known companies Doosan, SMI and so on</li> </ul>	<ul style="list-style-type: none"> <li>Productivity management actions</li> <li>Crisis tactical plan</li> <li>Purchasing of major currency and consolidation of WTP, F, E projects</li> </ul>
Technological accountability	<ul style="list-style-type: none"> <li>Specialized and experienced manpower</li> <li>Providing services in the form of a complete value chain from design to after-sales service</li> </ul>	<ul style="list-style-type: none"> <li>Product and technology roadmap development</li> <li>Completing the designing power of tube and shell converters</li> <li>Completing the designing power of 50 to 200-ton water tube boilers</li> <li>Transferring the undergraduate technical knowledge of horizontal and vertical thermal recycling boilers downstream of H, F class and above gas turbines from CMI company</li> <li>Development of knowledge base of water projects</li> </ul>
Reliable brand (focusing on quality, delivery time, product and service authenticity, and reducing customer confidence concerns)	<ul style="list-style-type: none"> <li>Project Support Inventories</li> <li>Sustainable supply of projects in unstable conditions by utilizing the power of the international base</li> </ul>	<ul style="list-style-type: none"> <li>MAPNA Boiler Company Branding Project</li> <li>Establishment of the market research system</li> <li>Planning and conducting target market research</li> <li>A comprehensive program to transfer value proposition to the customer</li> <li>Supply Project</li> </ul>

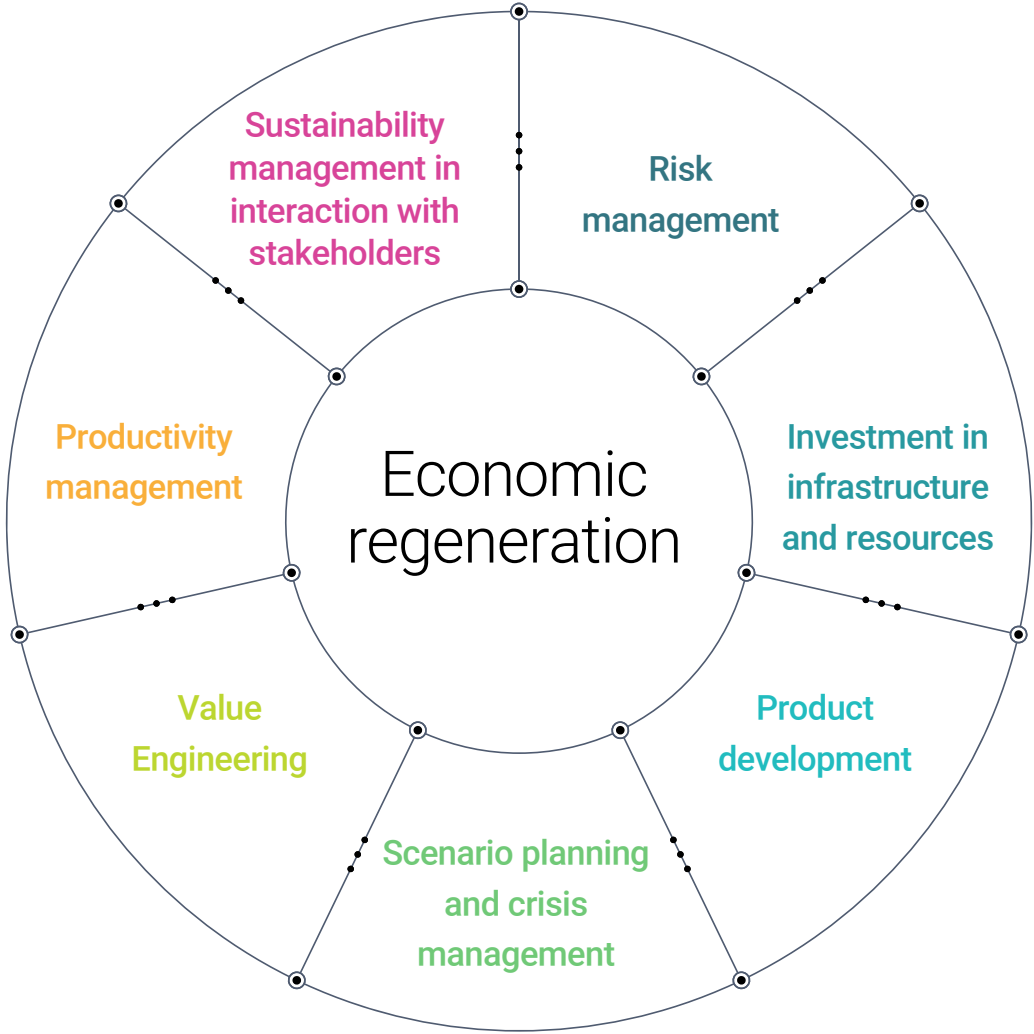


Economic advantage creation leads to the capture of value and profitability for the organization. A positive and sustainable trend of sustainable economic income and profit can lead to increased shareholder satisfaction, increase employee welfare, positive impact on the local and national economy, and strengthen the power of suppliers with the right guidance of the organization and this is the reason for MAPNA Boiler's diligent efforts to increase sales and sustainable profitability. The amount of revenue from the sale of the company's products and services and the amount of costs of the organization to create value, capital, operating income, and profitability in the reporting period have been as follows, which shows the volume of economic value produced and distributed:



## Economic regeneration

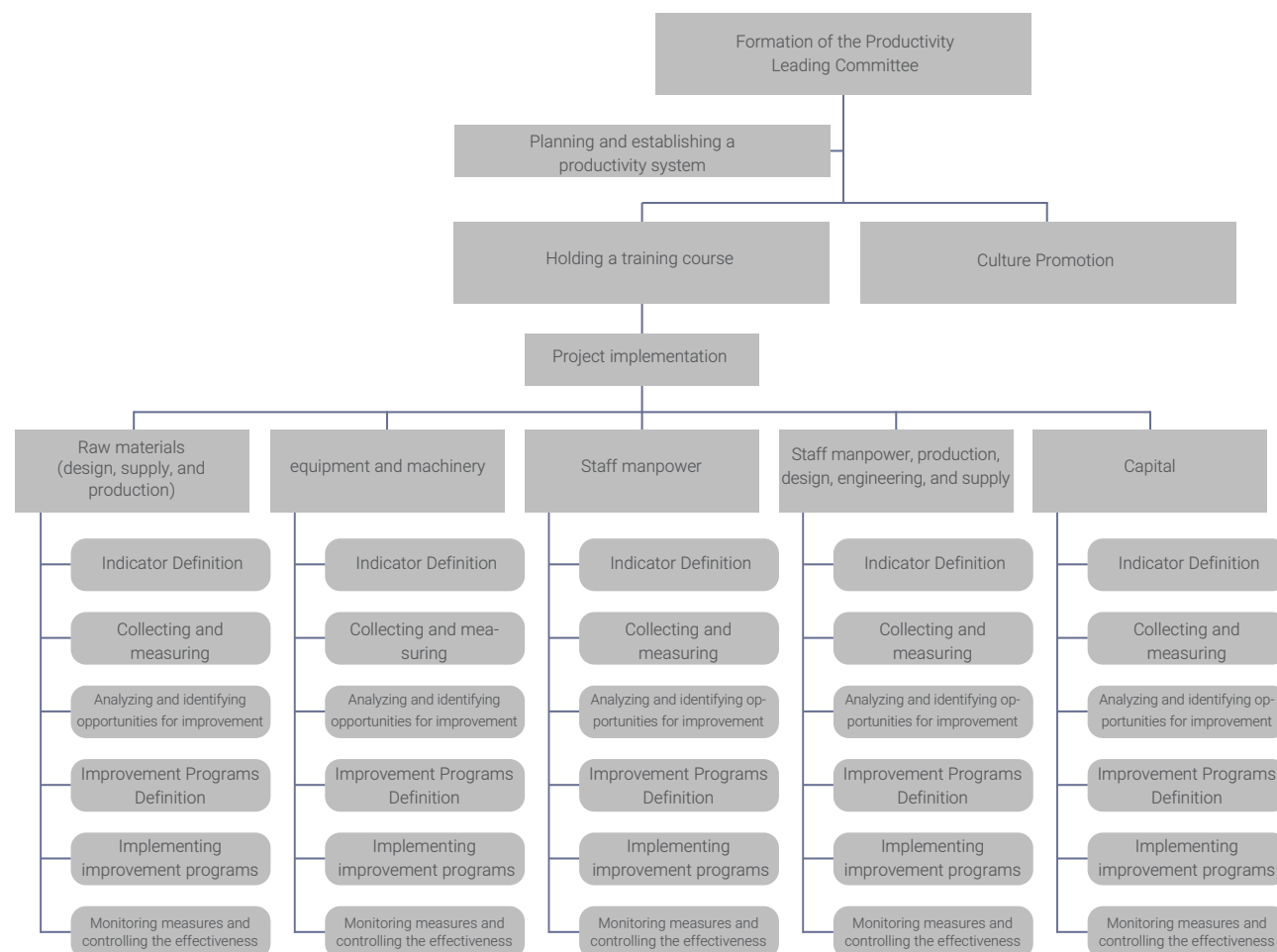
After economic advantage through value creation by the company, another part refers to sustainability to update and maintain values in unstable conditions. MAPNA Boiler Company, despite the attempts to design the best values and maximize them based on its capacity, has inevitably been affected by the unstable environment, especially in the current conditions of sanctions. The company will do the following for this economic regeneration.



## Productivity management

Continuous improvement of productivity is one of the things that can improve the organization's economic sustainability of the organization by improving methods and costs reduction. The productivity system of the organization in MAPNA Boiler Company, under the leadership of the Productivity Committee, has implemented the following programs in this direction:

- Developing a productivity roadmap
- Productivity culture by creating the cultural content of communication channels
- Thinking about productivity with stakeholder units in the company
- Creating productivity measurement infrastructure in the company
- Definition of productivity indicators in the areas of the capital, staff manpower, machinery and equipment, raw materials
- Collecting information and measuring productivity indicators in the field of macro-productivity and capital based on tax balance sheet information for the years 2015 to 2019.
- Collecting information and measuring the productivity indicators of the staff human resources (Deputies of production, design, supply, and executive engineering units for the years 2018 and 2020).
- Collecting information and measuring the productivity index of machinery and equipment for the years 2017 and 2018.
- Collecting information and measuring raw material productivity indicators in pilot projects
- Analysis and identification of improvement opportunities in the field of raw materials (for pilot projects)
- Presenting reports on actions taken in productivity steering committee meetings
- Analysis and identification of improvement opportunities in the field of productivity of the Deputy Minister of Manpower
- Creating system infrastructure for measuring productivity in the following areas in collaboration with the IT unit
- Staff Manpower Productivity (Vice President of Design)
- Raw material productivity (vice president of Design, Supply, and Production)



## Value Engineering

Value Engineering is a structured and functionalist methodology with the aim of group creativity following an increase in the value index of a product, project, or service that after defining and developing the initial value in a system, it can lead to the re-creation of value in it and improve its performance and stability. The value index is defined as the functioning ratio and quality of an item (product, project, or service) to the cost over its lifetime which value engineering tries to improve this index in certain steps. This approach has been systematically established in MAPNA Boiler since 2013 and so far has implemented several projects in this field, the most important of which are in the field of value creation as follows:

Project Name	Important Actions	The amount of energy consumption	Implementation Year
First study The value engineering with the subject (improvement of Harp value indicator)	<ul style="list-style-type: none"> <li>• Holding a pre-workshop seminar and teaching the basic concepts of value engineering</li> <li>• Holding a value engineering workshop</li> <li>• Preparing a study report and presenting it</li> </ul>	Equivalent to 1% savings per HRSG boiler	2013
Second study The value engineering with the subject (increasing the value index of boiler feed water system in a Niamey combined cycle block)	<ul style="list-style-type: none"> <li>• Holding a pre-workshop seminar and teaching the basic concepts of value engineering</li> <li>• Holding a value engineering workshop</li> <li>• Preparing a study report and presenting it</li> <li>• Implementation of study results in three projects of Ferdowsi, Assaluyeh, and Orumieh</li> </ul>	Equivalent to 5.5% savings per HRSG boiler	2015
Third study The value engineering with the subject of increasing the value index of high pressure and low-pressure drums	<ul style="list-style-type: none"> <li>• Holding a pre-workshop seminar and teaching the basic concepts of value engineering</li> <li>• Holding a value engineering workshop</li> <li>• Preparing a study report and presenting it</li> </ul>	Equivalent to 6% savings per HRSG boiler	2017
Fifth study The value engineering with the subject of increasing the value index of HRSG boiler tanks	<ul style="list-style-type: none"> <li>• Holding a pre-workshop seminar and teaching the basic concepts of value engineering</li> <li>• Holding a value engineering workshop</li> <li>• Forming teams to review workshop's selected ideas</li> <li>• Development Project management of selected ideas</li> <li>• Economic analysis of selected ideas</li> </ul>	Equivalent to 6% savings per HRSG boiler	2017
Sixth study The value engineering with the subject (increasing the value index of welding processes)	<ul style="list-style-type: none"> <li>• Holding a pre-workshop seminar and teaching the basic concepts of value engineering</li> <li>• Holding a value engineering workshop</li> <li>• Forming teams to review workshop's selected ideas</li> <li>• Development Project management of selected ideas</li> <li>• Economic analysis of selected ideas</li> </ul>	4,000,000,000 Tomans per year	2018
Seventh study The value engineering with the subject (pipe bending instead of elbow purchase) in the Zanjan project	<ul style="list-style-type: none"> <li>• Updating the parameters of the seventh study of value engineering to conduct economic analysis in the Zanjan project</li> <li>• Reviewing the computational parameters based on the sample of Zanjan master case</li> <li>• Economic analysis of the proposed scenarios</li> <li>• Preparing the final study report and presenting it</li> </ul>	It is under review in 2021	2020
Eighth study The value engineering with the subject ( increasing the value index of desalination projects)	<ul style="list-style-type: none"> <li>• Holding a value engineering module course (internal instructor)</li> <li>• Holding a pre-workshop seminar and teaching the basic concepts of value engineering</li> <li>• Holding a value engineering workshop</li> <li>• Establishing teams of selected ideas of the eighth study workshop of Value Engineering</li> <li>• Development Project management of selected ideas</li> </ul>	Calculating	2019-2021
Ninth study The value engineering with the subject ( increasing the value index of axillary boilers)	<ul style="list-style-type: none"> <li>• Holding a pre-workshop seminar and teaching the basic concepts of value engineering</li> <li>• Holding a value engineering workshop</li> <li>• Establishing teams of selected ideas of the eighth study workshop of Value Engineering</li> <li>• Development Project management of selected ideas</li> </ul>	Calculating	2019-2021



Risk management

The designed risk management system follows an integrated and structured approach to identify, analyze, respond to and control all the risks that threaten the company to achieve its goals. Indeed, the risk management system provides the opportunity for the company to identify and systematically manage all possible threats and opportunities. This system leads to the protection of sustainable organizational

value creation by managing the effect of environmental changes and dynamics on the organization. The organizational risk management system examines and manages the risks of strategies, processes, executive operations, and organizational projects. This comprehensive system was established during the reporting period. Previously, the organizational risks projects were examined, which were

designed and implemented for this purpose during the reporting period of the macro system. At the time of compiling the report, the organization's process risks have not been formulated and the strategy risks have been examined at the macro level with a focus on economic risks. In the coming years, organizational risks will also be considered at the level of task strategies and will include social and environmental risks.



Risk	Cause	Stabilizing effects
Increasing the logistics costs of foreign supply	Economic sanctions of the country	Costs increase and profitability reduction
Increasing the logistics costs of domestic supply	inflation increase due to lack of raw materials	Costs increase and profitability reduction
Investment reduction in the fields of oil, gas, petrochemicals, and mineral industries.	International sanctions and investment reduction security in the country	Company projects reduction and profitability reduction
Investment reduction in desalination projects	Development reduction budgets or lack of responsible policies in the field of water	Company projects reduction and profitability reduction
Problems with access to foreign markets	Impossibility of financial transactions due to sanctions - the presence of national and regional competitors	Company projects reduction and profitability reduction

Scenario planning and crisis management

MAPNA Boiler Company always prepares its strategic set to deal with various scenarios and upcoming crises in a pessimistic state by designing its strategic plans in three program situations: optimistic, probable, and pessimistic under the current circumstances, the company is implementing pessimistic

sanctions scenario programs. The activation of the program in the crisis caused by sanctions is the most important program to restore stability in the reporting period, which the organization has tried to increase stability to cross the crisis. In addition to activating the pessimistic state of its strategy, the company has activated crisis

management and has defined about 30 programs to cross the crisis at the lowest cost for itself and its stakeholders, which it is currently implementing. Plans through which the organization is trying to safely pass through today's tumultuous conditions.

Some of the programs are as follows:

- Maximizing inventory
- Implementing research and development projects and design to reduce product manufacturing costs
- Operating costs reduction, overtime reduction, and reduction of the day-to-day running costs of the organization
- Finding new partners in the field of supply of materials and parts
- Developing interactions with individual international consultants for knowledge interaction

Product development

One of the dimensions of economic regeneration is product development, which can lead to the sustainability of the organization in long term by creating value for multiple stakeholders in both the production of new products and the improvement of existing products. The company improves or develops

a new product based on items such as market research review, competitors' technology monitoring, MAPNA Group missions, tender reports, and community needs. Product development based on the creation of shared value with the community is also one of the axes of the company's product

development. In this type of product development, MAPNA Boiler Company, in interaction with MAPNA Group, defines new products based on the current needs of the community and adds to the product portfolio. Some of the products developed in this field are as follows:

Community needs	Products
Lack of water resources for industrial processes	Industrial treatment plant
Lack of water resources to provide drinking water	desalination water treatment plants
Need temporary water desalination in deprived rural areas or natural disasters	Portable desalination water package
Hospitals need oxygen equipment during coronary virus	Oxygenator package
Health burning of municipal waste and exploiting them	Waste incinerator boilers



Portable water desalination unit



Company treatment plant

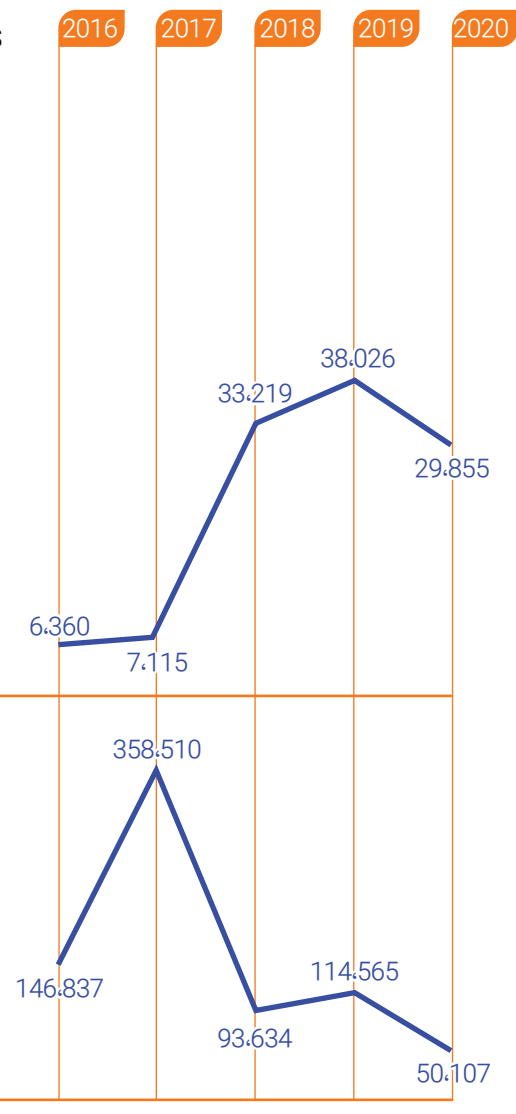


Oxygenator package

## Investment, infrastructure, and resources

The amount of investment and updating of tangible and intangible infrastructure and assets is one of the most influential factors in the growth and sustainability of the company. Upgrading and developing these infrastructures lead to improving the implementation of processes in the organization and provides the necessary resources for it. In terms of growth and operational excellence, despite the lack of capital increase brought from shareholders' equity in MAPNA Boiler Company in the last 5 years, a percentage of the company's profit is spent on investing in tangible and intangible assets, which are examples of sustainability. (In 2020, the company's capital has increased to 600.2 billion Rials from the retained earnings).

[ The amount of increase in intangible assets (million Rials) ]



[ Investment in infrastructure and tangible assets of the company (million Rials) ]

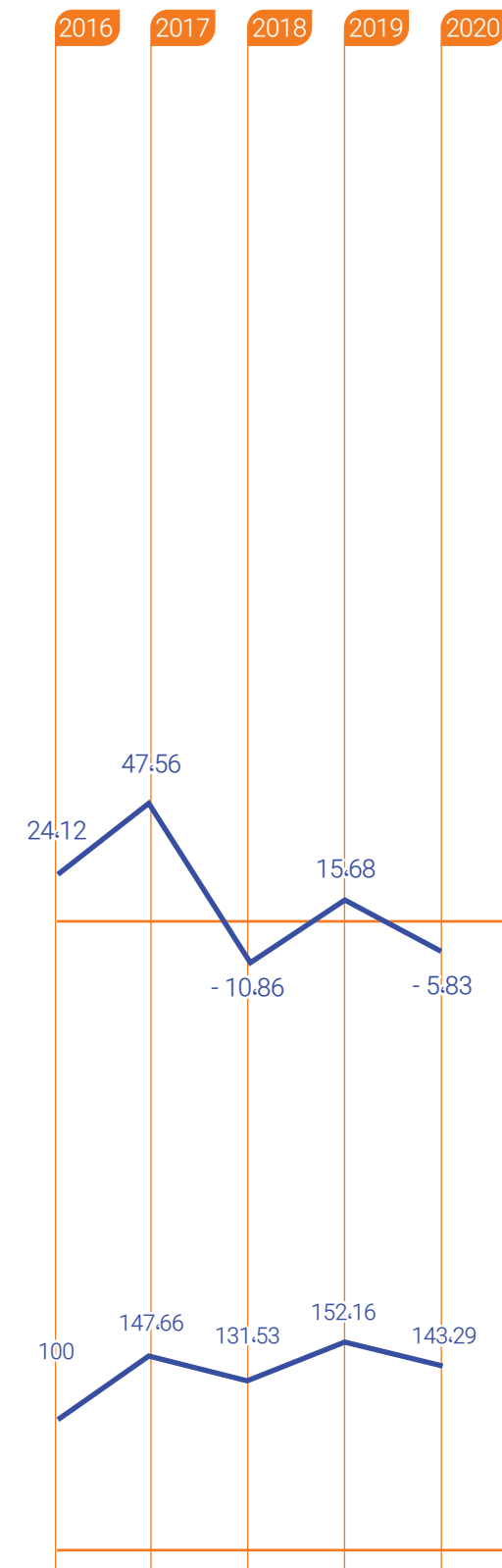
## Sustainability management in interaction with stakeholders

Developing interactions with stakeholders and establishing a win-win relationship with them is one of the things that lead to two-way economic sustainability, therefore, MAPNA Boiler Company always considers economic sustainability in interaction with different stakeholders, and this regard has put different approaches based on sustainability standards on the agenda, some of which are mentioned below. As mentioned before, MAPNA Boiler is a Private joint-stock company with limited shareholders, which are determined as the parent holding company according to the policies of MAPNA Group Company. It is worth mentioning that MAPNA Group Company is a public joint-stock company with several shareholders and its shares are listed on the Tehran securities Exchange. The company's approaches to adhering to shareholder sustainability are as follows:

- Sustainable growth of profitability
- Products development and markets are based on the company's strategies to increase sales and increase profitability, which is exemplified by entering the water industry. In this regard, the company is always trying to stabilize its profitability trend and increase its growth rate.
- Providing transparent reports to shareholders on the requirement to maintain sustainability
- Dealing with crises such as widespread sanctions in the country and trying to maintain profitability in these conditions.

## Shareholders

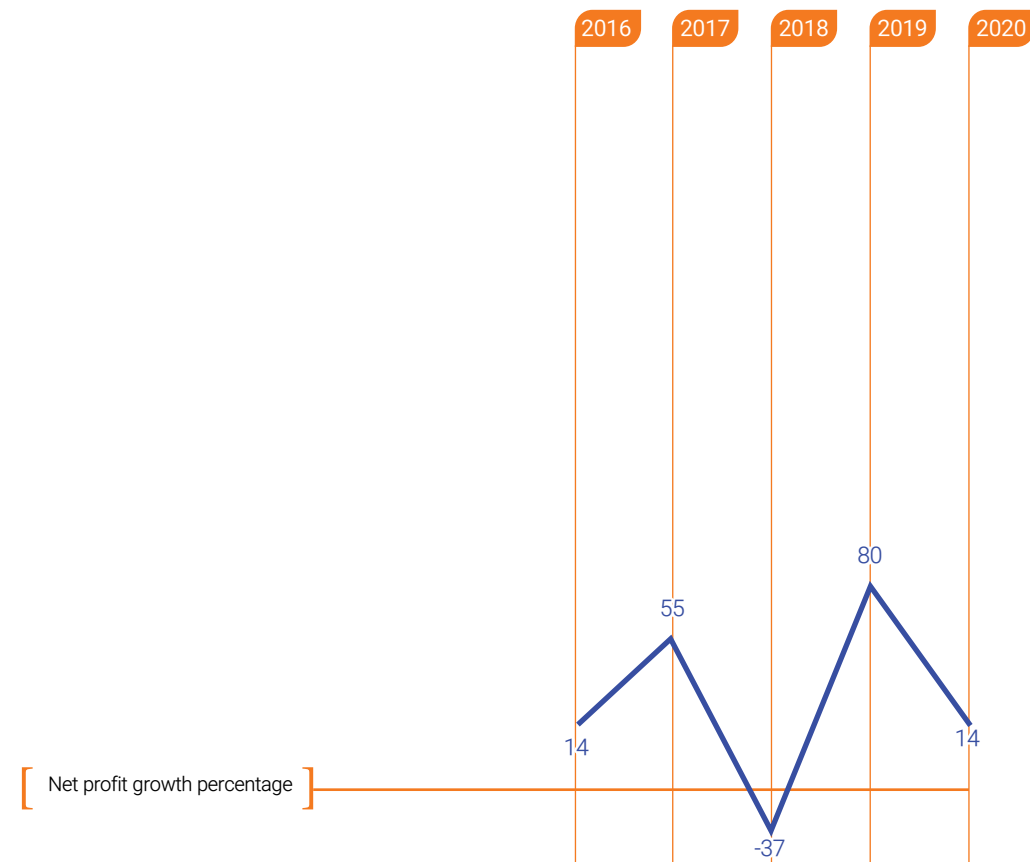
The company's shareholders are the first stakeholders to pay attention to the company's economic sustainability and profitability. The shareholders are the company's capital flow and capital supply is their key role in creating economic stability for the company. The biggest expectation of shareholders in return for Profitability capital supply is the profitability of the company. Thus the existence of an organization in such a way depends on the creation of profitability for shareholders and is always the primary goal of any economic firm.



[ Gross profit growth percentage ]

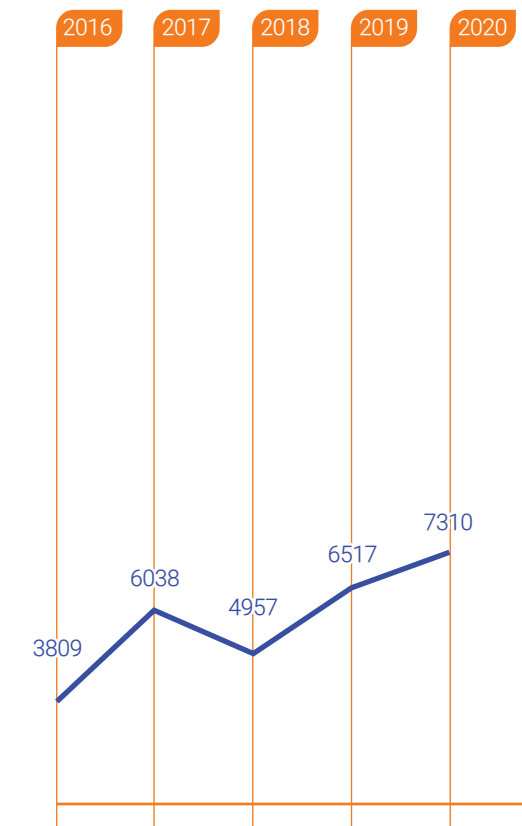
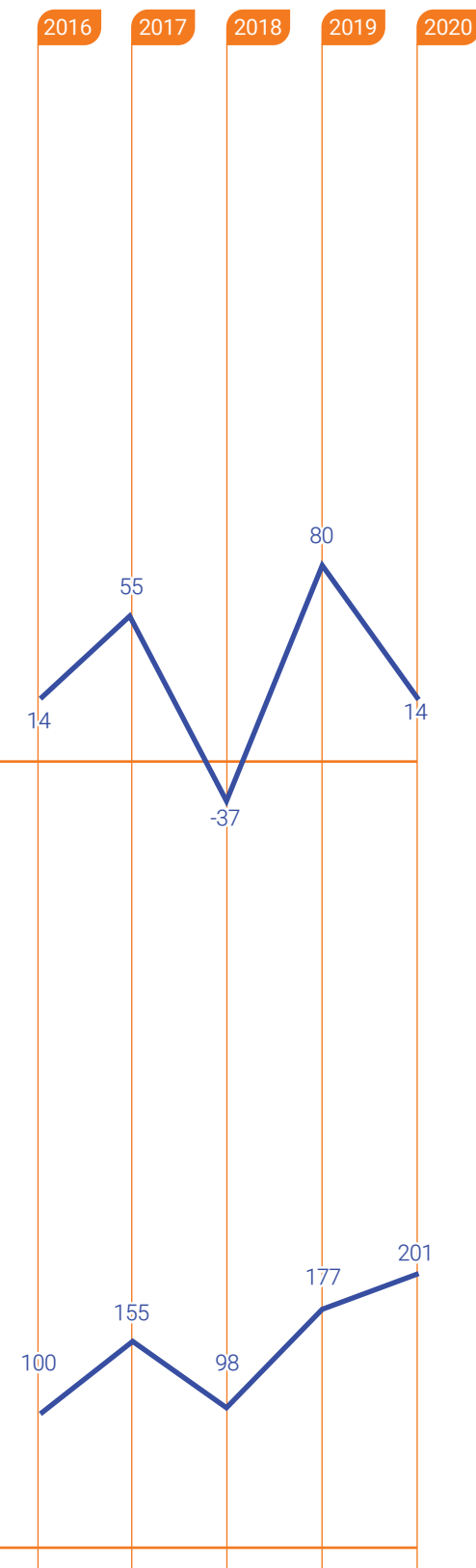
[ Gross profit growth percentage relative to base 95 ]





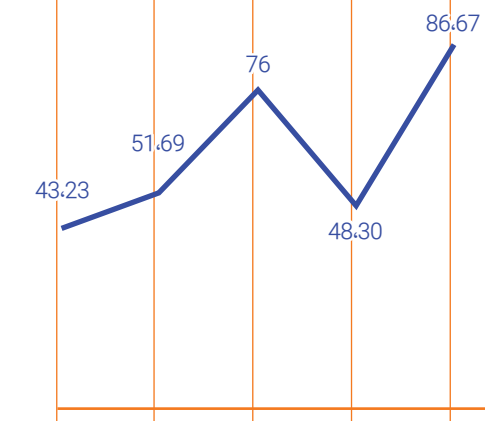
[ Net profit growth percentage ]

[ Net profit growth percentage relative to base 95 ]



[ Operating income ]

In the last 5 years, which includes the reporting period, in all years, the operating income and organization's profit has been a positive amount, the trend of which has been growing in different years. In 2018 due to sanctions imposed due to the withdrawal of the United States and in 2020 due to a significant increase in the price of production inputs due to inflation and the corona outbreak disease, which imposed costs on the company, despite the positive amount of profitability, its growth trend has been negative and the company's profitability has decreased in these years compared to last year.



[ Profit paid to shareholders (billion rials) ]

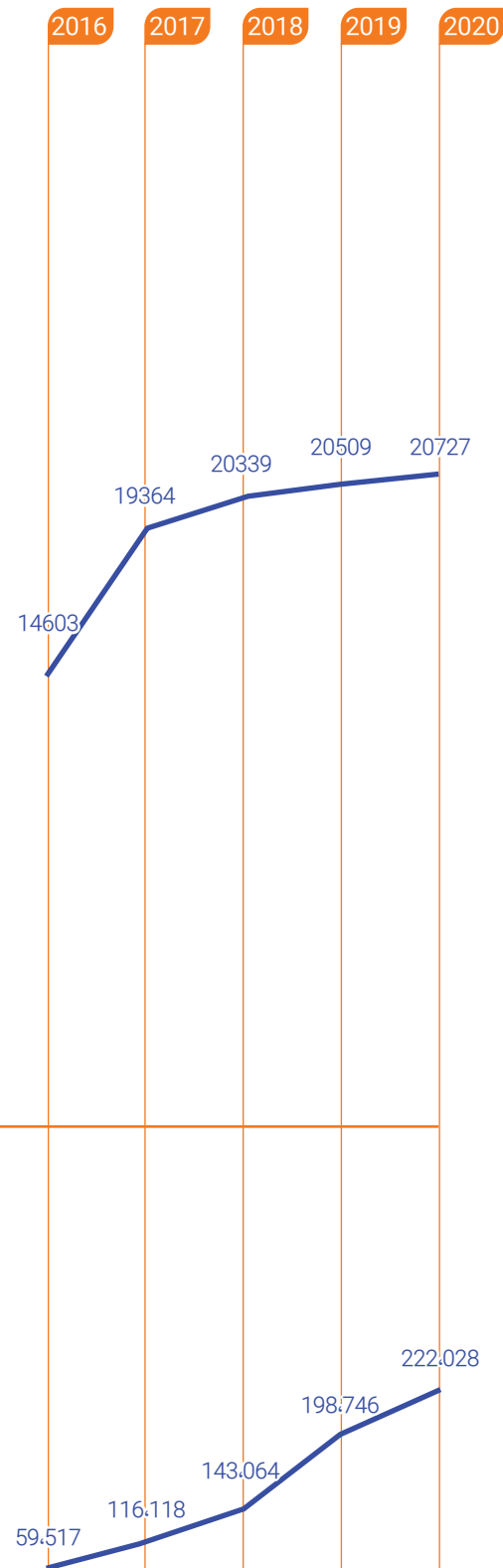
Profits paid to shareholders have also had a trend similar to revenue, which the pressure of sanctions has led to a decrease in the growth of this index in the year after the sanctions, ie 2019. However, in 2020, due to the increase in distributable profit in 2019, which is the place of profit distribution, the dividend shows a significant increase. The company also has no arrears in shareholder profit in the last five years, and the obtained profits from other activities are shown in numbers.

## Personnel

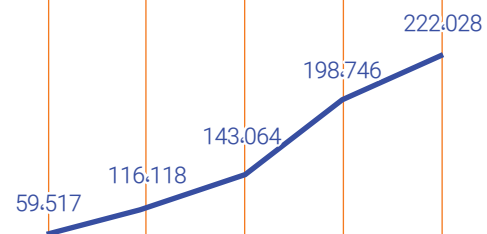
The performance of human capital along with financial capital is one of the most important factors of organizational stability. The ability of this stakeholder group plays a role in the quality of the process of converting raw materials into company products and can lead to the economic stability of the company by playing a role in various dimensions. These stakeholders have different expectations for their service that financial and economic needs are the most important need of their majority and the main reason for their service to the organization. MAPNA Boiler has always tried to go beyond its legal duties towards employees and in addition to their salaries, provide them with various welfare facilities and rewards, which will be discussed in detail in the chapter on social aspects. A large part of MAPNA Boiler's financial resources is devoted to the salaries and benefits and the growth and development of employees, and gaining their satisfaction leads to maintaining and improving performance. Maintaining stability and improving the performance of employees as the main actors in creating and protecting organizational value creation can play an appropriate role in organizational sustainability. Some examples of costs are as follows:

- Payment of salaries on time and beyond the legal minimum and at the level of top companies and annual growth over the legal amount (in 2017, 20% of the company's expenses are equivalent to personnel expenses).
- Providing welfare baskets and social security, supplementary, accident, and life insurance for employees
- Investing in human resource development such as skills development through training
- Employee insurance in accordance with the rules for using insurance at retirement
- Support payments to employees in poor conditions in the form of loans, grants, and charitable funds.

Training costs (million Rials)



Employee insurance costs (million Rials) including social security, supplementary, accident, and life insurance

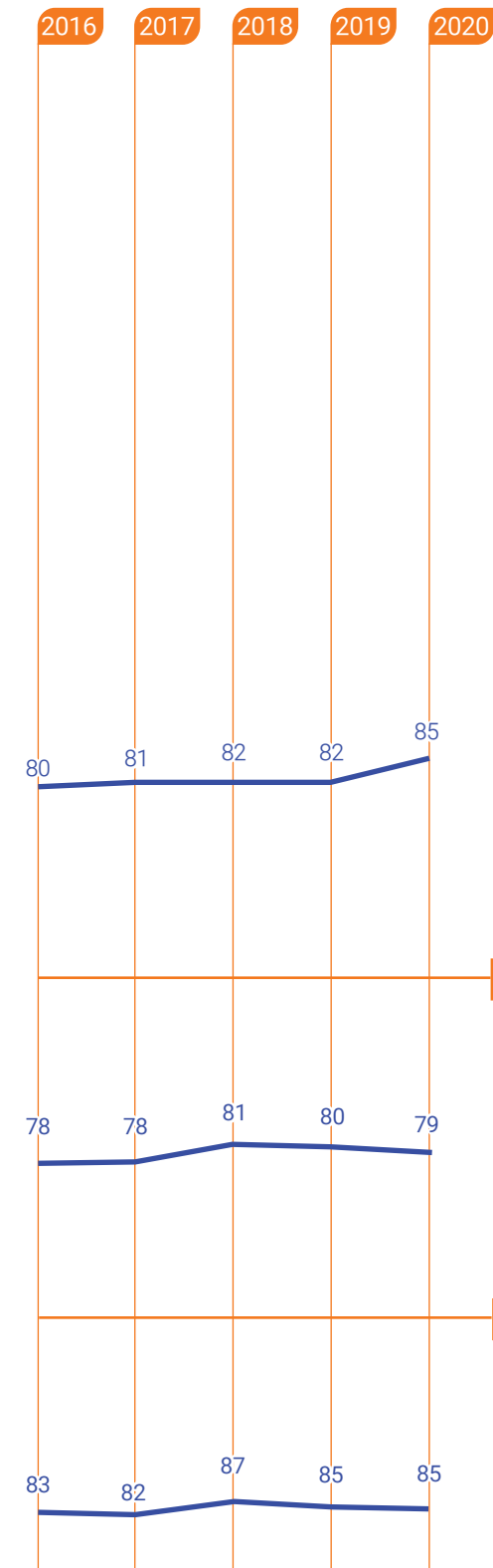


## Customers

Customers are one of the most important stakeholders that the economic viability of the company depends on their satisfaction because the company's activity depends on their demand for the producing product. Therefore, the company needs to satisfy these stakeholders to grow ever-increasing and to develop their number.

Based on its commitments, MAPNA Boiler Company always strives to strengthen economic stability through win-win interaction with its customers and provide their satisfaction and loyalty. Some examples of the company's efforts in terms of economic sustainability of customers are as follows:

- Defining multiple measures in terms of product quality and delivery time in accordance with the company's brand commitment to customers
- The innovation and development of new products based on customers needs and their interactions with them, such as Duct Burner design, Blu-dan Recovery design
- Providing services related to maintenance and repair of equipment after delivery
- Technical advice and knowledge transfer to customers in the required cases



Average satisfaction with the set of effective factors on the quality (percentage)



Average satisfaction with the set of effective factors on the delivery time (percentage)



Satisfaction with optimal and timely response to the employer's needs (percentage)



## Partners and suppliers

Partners and suppliers are among the stakeholders of the organization in which strengthening the economic sustainability in them that can lead to mutual growth for the company. Increasing the interaction, receiving more services and strengthening them, and considering sustainability principles in cooperation with them will improve their quality of services, which can affect the improvement of company services and its economic sustainability. In this regard, the company tries to act based on economic stability in the following cases:

- Creating equal opportunities in evaluating and selecting suppliers
- Payment of claims as soon as the company always tries to act its financial ability to these stakeholders in the shortest possible time based on paying its debts.
- Localization and development of the use of partners and suppliers in this approach, the company strives to bring economic stability to them by domestic manufacturing of equipment and products and engaging these stakeholders in a win-win situation. For example, MAPNA Boiler's interaction with Iran Pump Company to produce a type of pump that is imported from abroad and did not have a domestic sample was one of the aspects of strengthening local suppliers.
- Considering the principles of sustainability in evaluating and selecting suppliers

One of the examples of creating equal opportunities and observing the principles of sustainability in evaluating and selecting suppliers in the reporting period has been the establishment of a comprehensive system of relations with suppliers (SRM). This system is designed by MAPNA Group Company and is used in an integrated manner

in all subsidiary companies, including MAPNA Boiler. This system is a portal for all suppliers to enter and evaluate the vendor list of all the group's companies based on their capabilities so that they can participate in tenders and cooperate. To examine the principles of sustainability, in addition to technical and financial

criteria in the economic dimension in social and environmental aspects, the company is considered to be given attention to HSE and environmental certifications such as ISO 45001 and will be reviewed for admission to the suppliers ' lists.

## Society and indirect economic impact

In addition to other stakeholders, the community, which includes government organizations and institutions, as well as the general public (with a comprehensive local priority), can strengthen the economic stability of the company. MAPNA Boiler's interaction with various organizations and institutions, especially in the local community, has led the company to benefit from the support of

these organizations in various dimensions. Against government organizations such as finance, social security, banks, and other government centers, the company uses its facilities and exemptions in the performance of its duties. Among its examples, it can be mentioned that receiving six loans over two years, obtaining tax exemptions in the law, and obtaining some of the claims

followed by negotiations. In the local community and neighbors, the company also strives to increase the mutual positive effects and satisfaction of the company by creating an image based on trust in the mind and reducing the complaints of the company and the costs of possible imposition resulting from it.

The company also indirectly strengthens the economy in its local and national dimensions and thus has a positive impact on the Life of members of society by strengthening the economy. Some examples of the indirect economic impact of the company are as follows:

- 1 The company to provide sustainable required items on the one hand and support suppliers, the prosperity of domestic industries, and sustainable employment, on the other hand, the approach of maximum supply from domestic suppliers and the development of sustainable cooperation with them to supply the required items is on its agenda, and thus in a win-win relationship leads to the development of the national economy. For this reason, the company prioritizes domestic suppliers as much as possible in the supply of its desired materials, parts, and equipment.
- 2 The internal construction and localization approach of external equipment is one of the other things that the company is taking into consideration. Localization of equipment causes an increase in domestic production and a positive impact on the national economy. In this regard, companies buy technical knowledge, internal research, and development, or reverse engineering to increase the localization of equipment, some examples of which in the reporting period are as follows:

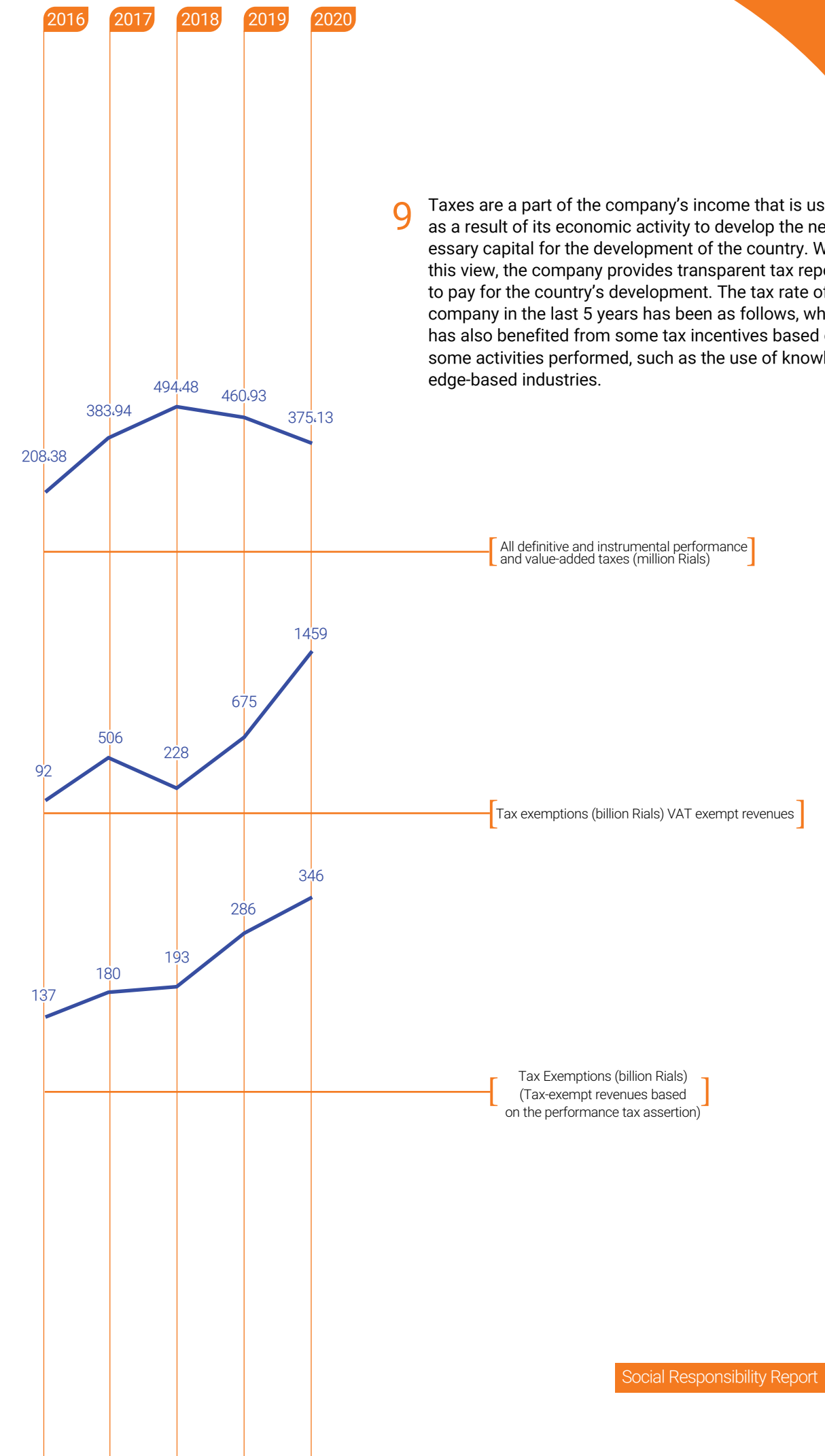
**Designing and producing a variety of power plant silencers**  
Boiler Engineering and Manufacturing Company and MAPNA Equipment with reverse engineering of the external sample of boiler silencers by analyzing the structure of two types of silencers, close type, and open type, standard samples have been designed and manufactured for operation in heat recovery boilers (Class E and F) and industrial boilers inside. The first close-type silencer of the company has been manufactured and operated for the Chabahar project according to its external sample specifications and the open-type silencer is also under construction according to the needs and specifications of the West Karun project. Boiler silencer construction of Urmia, Khorramabad, Zanjan, Latakia, Sabzevar, and 3100 NGL boilers projects is in processing.

**Duct burner production design**  
A duct burner is considered as one of the heat recovery boiler equipment. This equipment is also included in the definition of construction research and development projects. The developed Knowledge based on research and development projects including design of Duct burner and inlet and flow rectification systems, forecasting and improving the distribution of downstream combustion products equipped with an increasing performance-lifetime approach, duct inlet design with optimal location approach and economical use of materials, complex combustion calculations related to duct burner, troubleshooting and improvement and redesign of duct burner is made by other companies. This internal manufacturing equipment was used for the first time in the boilers of the Behbahan power plant which was put into operation in 2017. After 2017, this equipment has been used in several projects for the construction of the company's boilers.

## Percentage of construction in HRSG projects

88% of domestic purchases  
12% of foreign purchases

- 3 Improving energy efficiency in the country through green products of MAPNA Boiler Company is considered as an indirect economic impact. As previously described, the performance of some of the company's products is to convert the smoke and heat output of gas turbines into energy, which in turn leads to energy efficiency in the country (in detail in the energy sector).
- 4 One of the serious crises in Iran today is the issue of water. MAPNA Boiler Company has entered this industry based on its capability in designing and developing desalination equipment and in the form of water desalination projects, it seeks to provide healthy water and reduce the economic pressure caused by the crisis in the country.
- 5 MAPNA Boiler's participation in providing solutions in times of occurring crisis based on its internal capabilities and capacities, such as the construction of tanks and a complete oxygen generator package for hospitals at the time of corona disease, and the production of small capacity portable desalination plants and treatment plants for use in natural disasters or remote villages are examples of this indirect effect.
- 6 Other indirect economic effects of the company are transferring the up to date knowledge and technology through cooperation with reputable companies (such as CMI Belgium) and the possibility of using knowledge to develop and manufacture domestically and supply knowledge-based products for different parts of the country and reducing dependence abroad in the category of power plant boilers.
- 7 The direct employment of local community forces in the province where the factory is located and the company's active sites, as well as the creation of indirect employment capacity by providing items from suppliers, are important economic effects at the local community level.
- 8 Another effect of the development company is the location of the factory and the Elahieh complex. The company has planted trees in its region, settled the region and road building, and exploited sports and educational facilities developed at the regional level.







## Social perspective, stakeholder support

GRI  
Report

2021

### Chapter 4



The organization's stakeholders and responses to their needs and expectations will contribute to the multifaceted and development of the organization as a social institution and also improve the

realization of its designed goals. In this regard, MAPNA Boiler Company pays special attention to all organizational stakeholders and responds to their needs and expectations on the one hand, and establishes effective interactions with them on the other hand, for this purpose, designs and implements a system method. As mentioned in Chapter 2, the needs and expectations of the company's stakeholders are considered one of the important inputs of strategic planning in the company that the company has always sought

to respond to the needs and expectations of the stakeholders in the design of appropriate strategies and measures. In addition, the company seeks to respond to the needs and expectations of stakeholders in the form of designing multiple processes. The information and interaction needs of stakeholders are also examined and the required information content is prepared and published and appropriate interactions with stakeholders are defined.

#### Needs and expectations of stakeholders

- Designing required strategies
- Designing the required processes

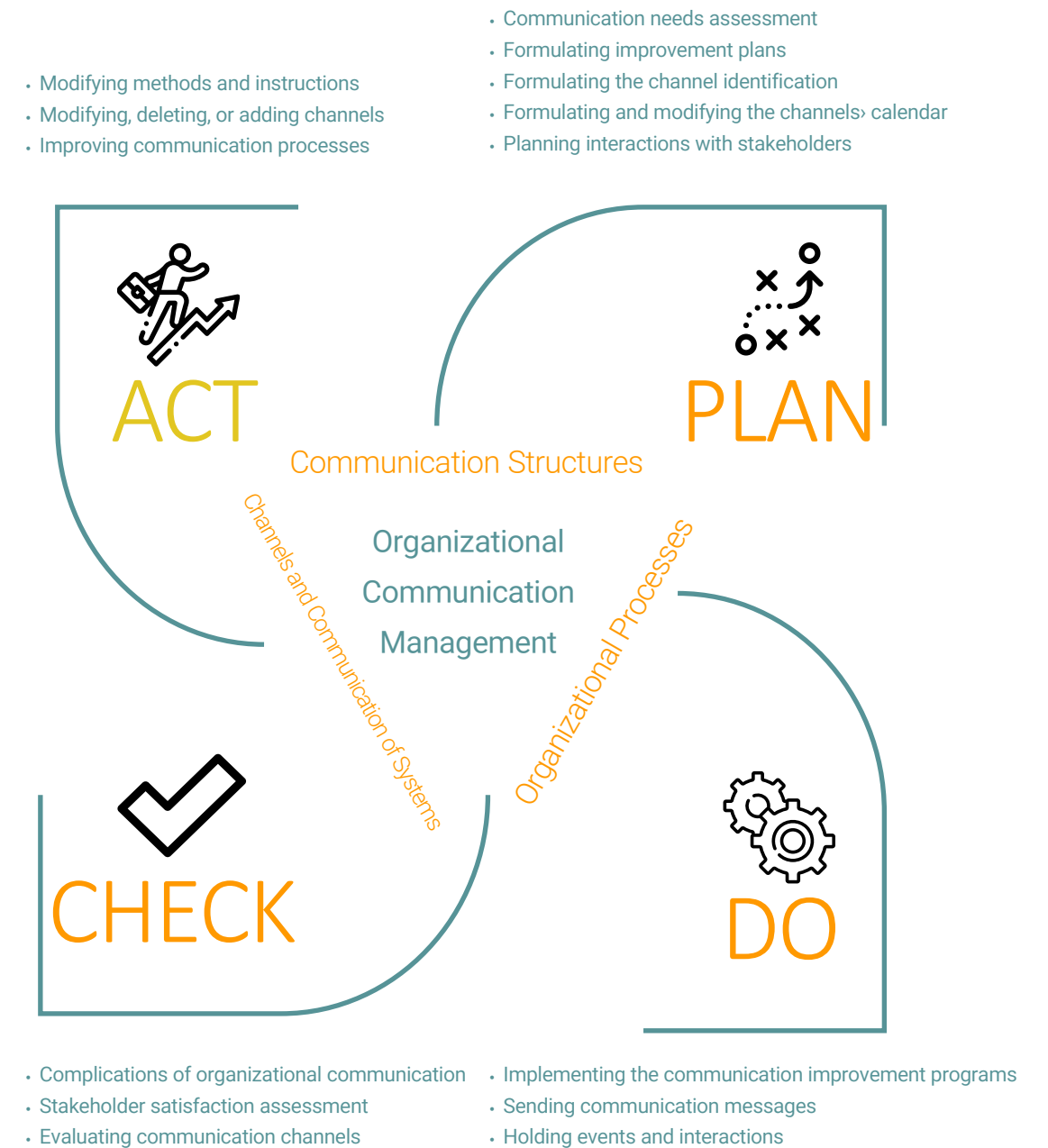
#### Information and interaction needs

- Content production and publication on communication channels
- Planning and implementing interaction with stakeholders

### Response to the needs and expectations of stakeholders

## Systematic management of stakeholder relations

MAPNA boiler engineering and manufacturing company has provided the appropriate infrastructure to enable effective interaction with all stakeholders to manage the processes associated with these interactions. After creating the necessary infrastructure for the communication management process in form of the PDCA cycle, the company plans, executes, monitors, and improves the system.





## Communication channel management infrastructure

1-1 To function properly, every organizational system needs the infrastructure which should be upgraded before any implementation of the plan. MAPNA boiler has well-established these structures within the organization. The types of these infrastructures can be described as follows:

### Organizational processes:

Organizational processes, as the source of operations, are one of the most important infrastructures for communication since all systematic interactions are based on a system of processes. MAPNA Boiler also has a systematic process system based on the needs of the company and process management models such as APQC. The system of processes in companies enables units to be connected based on related processes, thereby contributing to the systematic interaction of employees. However, the impact of processes is not limited to employees, and the types of organization processes that can be seen in the following table affect the stakeholders of the organization which can be seen as the impact of processes and stakeholders as follows.

Process sets	Mapna Group community environment government Banks and financial institutions suppliers Stakeholders and partners customers	External considerations
Strategies management	● ● ● ● ● ● ● ●	Obtain group strategies, credit feasibility, supplier technological capability
Products and services sales and marketing	● ● ● ● ● ● ● ●	Interacting with partners to gain market share, and meet market and customer needs
Design and development	● ● ● ● ● ● ● ●	Technological fitness with other products categories, national and customer requirements
supply	● ● ● ● ● ● ● ●	National and international constraints and regulations, quality approval of parts and equipment by the customer
production	● ● ● ● ● ● ● ●	Mapna Group Requirements, Obtaining Quality Approval from Customer
Project management	● ● ● ● ● ● ● ●	Mapna Group Requirements, Obtaining Quality Approval from Customer
Installation and delivery	● ● ● ● ● ● ● ●	Mapna Group Requirements, Obtaining Quality Approval from Customer, local supply of parts and services, supervision
HR management	● ● ● ● ● ● ● ●	Group assessment focus
Infrastructure and properties management	● ● ● ● ● ● ● ●	Supplying the credits
HSE EN	● ● ● ● ● ● ● ●	Educational interactions with the group, community surveys, environmental requirements
Management and development of business capabilities	● ● ● ● ● ● ● ●	National and international, customer, partners, environmental requirements
IT management	● ● ● ● ● ● ● ●	Government licenses, information security laws
External relations management	● ● ● ● ● ● ● ●	Updating laws and regulations, sharing knowledge and information
Financial resources management	● ● ● ● ● ● ● ●	Receiving and paying funds, financing, budgeting

### Communicative Channels and Systems:

These are the organization's communication hardware on the base of which organizational interaction is formed. MAPNA Boiler Co. manages various communication channels for interacting with all its stakeholders, as follows:

- Outlook
- Portal
- SMS
- Specialized Journal
- Banner and billboard
- Company's social channel
- Bulletin
- Video Wall
- Website
- CEO's social group
- Face-to-face talk with the CEO

### Communication structures

All organizational processes and activities formed in an organization need structures to properly manage and plan them. Since organizational communication is a pervasive thing in the whole company, the structures related to communication management in the MAPNA boiler engineering and manufacturing company are in the form of a committee. The content committee, with a combination of representatives from different units of the organization, provides the content needed by the communication channels and decides on the planning and modifications required by the communication channels.

### 1-2 Planning phase:

At this stage, communication planning is being formed. In the planning phase, actions are defined to suit communication needs and improvement. In addition, for each existing channel, the relevant communication needs, channel issues, audience, and authority are identified. An annual calendar is also created for each channel to communicate the information needed and to update the information regularly. The types of communication needs in MAPNA Boiler are as follows that based on the existing communication needs, different communication planning can be performed.



1-3 Implementation Phase

At this stage, defined actions are generated and sent to create and improve communication channels and planned interactions. Moreover, messages needed for a variety of organizational channels are generated and sent. Some of the channels planned for the year 2017 include a social channel for customers (Telegram), LinkedIn, etc.

1-4 Assessment Phase

At this stage, the organizational communication is annually debugged and the performance of the communication channels is measured and the weaknesses of the company’s communication system are identified.

1-5 Corrective Action Phase

At this stage, corrective actions are taken following the evaluation of the channels and the disruption of the communication, which may lead to deletions, additions, or modifications to the relevant guidelines and instructions.

Various types of organizational communication

1. Employees

Based on the communication system mentioned above, the company has formed various interactions with its stakeholders so far, some of which include:

Identified communicative need	Communication channels	Type of communication	Systematic components	Improvements made to the channel
Transferring ideas and problems to organization management	Communication with CEO and Senior Managers (in-person meeting with CEO -, CEO's Telegram channel)	down to up	Preparing a calendar for staff meetings with the CEO and other senior managers	Creating a social App communication channel
Business communication and receiving and sending internal and external correspondence	OUTLOOK/ E-mail	two way	Correspondence Execution Procedure (P11)	Periodic promotion of Out Look
Knowledge of staff performance and personal training records	OUTLOOK/ E-mail	two way	Correspondence Execution Procedure (P11)	Periodic promotion of Out Look
Receiving external information and informing outside the organization	Website- telegram channel- LinkedIn company	two way	Managing the Telegram Channel and Site through the Public Relations Unit	upgrading the company's website and improving search engine, speed improvement and creating a systematic framework to keep it up to date content- improving the company's LinkedIn update
Information on documentation, rules, regulations, and instructions	Portal	Up to down	Portal/ integrated documents	Portal transformation and updating portal software
Keep up with local news, projects, and views	Bulletin board p portal- banner - Video wall-	Up to down	Management through public relations unit	Creating internal news in the portal
Transferring staff's opinions and perceptions	Employers' poll	down to up	Execution Procedure of polls management	Reviewing the executive of polls, reviewing the questionnaire
Knowledge transfer and promotion of science	Special Journal	two way	Publishing scientific papers at MAPNA special journal	Publishing the Boiler special journal

During the reporting period, the forum channel was removed due to the lack of welcome from colleagues and the lack of up-to-date technology. In addition, the boiler letter, which was the general publication of the company for colleagues, was replaced with a portal newsletter and a specialized magazine for water and steam, so that it could better meet the colleagues’ needs. Also, a large part of the organizational meetings was removed due to the Coronavirus outbreak, and during this period, the meetings were held online and via Skype.

MAPNA boiler leaders also welcome the development of communications and participatory management at all levels. It has always been available to employees to pay attention to their demands and to the extent possible that the company and the regulations are accountable to them. Ease of access and interaction with company leaders have always been emphasized and is not subject to particular circumstances.



Some approaches to mutual relationship with employees

Open communication between staff and leaders through Outlook

Presence of the CEO and Assistants in Organizational Units, Public Places (Restaurant, Prayer Room, etc.) and various occasions

Staff meeting with CEO and Vice President

Deputies and managers meetings with the staff (such as working breakfast)

Public seasonal meetings in presence of the CEO and the staff, as well as national ceremonies and religious rituals

Communication with CEO through the Telegram and What's APP Channel

Academic conferences in presence of the managers and the staff, together with questions and answers

Direct communication fund with the CEO



## 2-Costumers

According to MAPNA Boiler's overall communication pattern, due to the necessity of effective relationships with customers, according to their communication needs, several channels have been identified and created with numerous improvements being made in these methods and channels over the years. The effectiveness of these communication channels is evaluated through customer surveys (components of speed and accuracy of customer response). The types of communication channels the company has with customers are as follows:

Communication needs	Communication channel	Year created/ improvements	Long-term short-term	responsible
Interacting with supplier groups by attending meetings and gatherings	Attending associated associations and exhibitions	-	Long-term	Deputy of supply
Company history, list and specifications of terminated and ongoing projects, company contact, products and services introduction	website	2003	Long-term	Public relations manager/ market development manager
Introducing company records as well as current products and services, receiving feedback from company clients	Participation in exhibitions	Since the establishment	Short-term	Market research and development manager
Reference to customers' sites, introduce company capabilities and troubleshoot equipment	Periodic visits to customers' sites	2011: preliminary phase Since 2014: advanced phase (systematic and objective)	Short-term	Deputy of sales and market development
Introducing the capabilities of the company in response to customers' needs	Invitation to visit the company	Since the establishment	Short-term	Deputy of sales and market development
Technical and commercial clarification at tender stage	Clarification Meeting	2010: the creation of communication channel	Short-term	Technical offer manager, Process equipment marketing and sales manager, Head of the customer service
Introducing project managers and communicative channels to the employer	Kick-off meeting	2004: the creation of Kick-off meeting 2005: the creation of communication channel (E-mail)	Long-term	Sales/project managers
Project-related affairs Introducing Design, Supply, Manufacturing, Installation and Planning Coordinators / Submission of Regular Project Planning and Control Reports / Creating Email Channels and Official Correspondence	Commercial correspondence through email and telephone, Coordination meeting	Since the establishment	Long-term	Project manager
		2005: the creation of communication channel (E-mail) 2008: beginning coordinating meetings 2009: introducing representatives to employers	Short-term	
Conduct periodic / case sessions with the employer to review the parties' requirements	Pre Inspection Meeting	Since the establishment	Short-term	Project manager
Determination of channels and procedures for inspection and delivery of products	Pre Inspection Meeting	2009: beginning meetings	Short-term	Project/quality control managers

## 2-Suppliers

MAPNA Boiler Company, like other stakeholders, is managing to deal with its suppliers through specific communication channels. These communication channels are:

Communication needs	Communication channel	Year created/ improvements	Long-term short-term	responsible
Interacting with supplier groups by interacting with supplier groups by attending meetings and gatherings	Attending associated associations and exhibitions	-	Long-term	Deputy of supply
Providing general information related to the company and its history, contact information of the company, introducing the products and services to suppliers	Interactive Meeting Website	In 2004	Long-term	Communications management
Interacting with new suppliers and entering the vendor list	Participating in exhibitions	Since the establishment	Short-term	Supply Resource Development Manager
Referring to suppliers' sites to evaluate their capabilities	Periodic visits to the suppliers' site	2011: preliminary phase Since 2014: advanced phase (systematic and objective)	Short-term	Supply Resource Development Manager
Transparency in the bidding phase	Telephone call correspondence suppliers system	2010: the creation of communication channel	Short-term	According to the responsibility in different stages of the supply process
Holding periodic/occasional meetings with suppliers to assess the parties' needs	Interactive meetings	Since the establishment	Short-term	Project or supply managers
Determining channels and routines for inspecting and receiving items	Interactive meetings	2009: beginning meetings	Short-term	According to the responsibility in different stages of the supply process
Getting feedback and evaluating supplier satisfaction	Correspondence survey	2010: the creation of communication channel 2012: Preparing an annual calendar of site visits and compiling a satisfaction questionnaire	Short-term	Supply Resource Development Manager

4- community

MAPNA Boiler Co. has considered the following channels to communicate with the community:

Communication needs	Communication channel	Year created/improvements	Long-term/short-term
Introducing the company practices	Website	Since the establishment	Communication management
Informing values, effects, and activities for the community	Website ( Social responsibility report, local media)	2018	Communication management
Controlling environmental impacts and efforts to improve a sustainable environment together with relevant organizations	Periodic meetings and interactions, correspondence and reporting	Since the establishment	HSE management
Controlling social impacts and efforts to improve a sustainable social together with relevant organizations of insurance, health and labor, and social affairs	Periodic meetings and interactions, correspondence and reporting	Since the establishment	Human resource management, HSE management
General interaction with universities	Holding conferences and exhibitions	Since the establishment	Research and technology management
Interactions with the elite	Organizational telephone and email	Since the establishment	Human resource management
Familiarization of the elites with the company capabilities	Visiting the company/ advisory meetings	Since the establishment	Communication management
Request to visit the company by local communities	Organizational telephone and email	2011	Sales and market development, Communication management
Familiarity of the staff family with the company	Organizational publication/ visiting the company	2013	Communication management
Strengthening communication and interaction	Organizational events	2010	Communication management

One of the most important issues in relation to society is to participate in social institutions and institutions and support them. Some of the partner-ships conducted with these institutions are presented in the table below.

Some examples of membership and interaction with associations and social institutions
Iranian Quality Management Association
Iranian Informatics Association
Association of Oil, Gas and Petrochemical Engineering and Contracting Companies
Oil Industry Equipment Manufacturers Association (AMEIO)
Iranian Industrial Equipment Manufacturers Association ( AMEII)
Iran-Tehran Chamber of Commerce, Industries, Mines and Agriculture
Industrial Management organization
Secretariat of the National Awards for Excellence
Tehran Chamber of Commerce with Iraq countries

Stakeholders’ engagement in organization processes

MAPNA Boiler Co. has always tried to benefit from stakeholders’ engagement in its processes with economic, social and environmental subjects, thereby creating win-win and value-creating interactions with them. Some examples of this approach can be seen in the following table:

Stakeholder	Subject	Approach	Examples
Factory contractors	Economic	Suggesting system	Providing creative ideas and opinions, such as installation of plug sockets on welding machines, use of semiconductor electrodes for single-stroke, anti-ignition and washable tube replacement instead of welding mask glass.
Suppliers	Economic	Localization and domestication of manufacturing equipment	Using ideas and capabilities of domestic suppliers to local-ize the domestic production (such as Mist Extractor with Euro Slot Pars Co. Iran pump company, etc.)
Technology suppliers	Economic	Design and development of new products	Collaboration with Doosan, Macchi, IPS, CMI, NEM, etc. to develop new products (such as HRSG behind E, F and H class turbines, package boilers, CONVENTIONAL steam power boilers)
Customers	Economic	Attracting customer participation in product design and improvement	Niam plan, removing the tank and the Dumping line control valve in the Iran LNG project, eliminating the Purge stage in the boiler setup which shortens the startup time.
Community	Economic	Creating products in line with the needs of community	Construction of treatment plants for water shortage crisis in the country, Construction of portal treatment plant for use in crisis situations,Construction of oxygen generator package for operation in hospitals during the Corona
Employees	Environmental/ social	Holding volunteer campaigns	Participation pf colleagues in the Mehr Afarinan Fund fundraising for flood victims in the north of the country
local organizations	Environmental/ social	Holding volunteer campaign	Inviting Blood Transfusion Organization forces to collect blood from volunteer staff Cooperation with the Red Crescent and Fire Department to provide staff training and maneuvers
local organizations	Environmental/ social	Providing news of volunteer campaign	Publishing the news of the nature cleansing campaign Publishing the news of planting trees on the day of tree planting

Evaluation of communication and interactions, and corrective actions

In the field of evaluating its communication and interactions, the company performs various assessments as follows:





1. Evaluating communicational channels

The report annually reviews the satisfaction of the organization’s communication channels in general and their use and effectiveness separately. Channels whose indicators do not meet the set goals are reviewed and corrective actions will be defined.

Satisfaction rate with communicational channels	
Satisfaction with two-way channels	64.7%
Organizational clarity	67.70%
Meeting communication needs	68.35%
Satisfaction with the number of channels	69.65%



2. Detecting the bugs in organization’s relationships

Communication detecting the bugs is one of the stages of organizational communication needs that has been done in different years from different perspectives and in different formats. One of the most important complications planned and implemented in the reporting period has been the evaluation of single stakeholders. In this program, all organizational units express their needs and expectations from other units and express their satisfaction in these areas from the units and after expressing the opinions of each organizational unit, negotiate with customer units to make improvements in cases of dissatisfaction. Implementation of this program will provide feedback to organizational units and resolve communication conflicts through negotiation between them.

In this report, each year, the extent of satisfaction with the organization’s communication channels in general and the extent of their use and effectiveness is examined separately. Channels whose indicators do not meet the set goals are reviewed and corrective actions are defined for them. Some examples of this assessment are as follows:

- Surveying each group of employees
- Welfare Survey
- Supplier Satisfaction Questionnaire modeled on MAPNA Parent (Madar) Company
- Community Satisfaction Questionnaire based on EFQM model criteria
- Customer Satisfaction Questionnaires

2018	2019	2020		
60	68	64	Overall satisfaction of employees with the organization *	Staff
63	63	67	Willingness to stay in the organization	
60/9	65/4	65/6	Satisfaction with welfare	
59/5	59/2	53/6**	Satisfaction with sports facilities	
59/2	70/9	71/5	Satisfaction with health care services	
			<small>*Due to the Corona crisis in 2019, the production sector poll which was on paper was not conducted and the inserted results are related to the company's headquarters. **Due to the continuing conditions of the Corona virus epidemic and the imposition of social restrictions and the non-implementation of planned sports programs, there seems to be a decrease in satisfaction in the sports affairs sector of the region.</small>	
73	75/17	99/1	Satisfaction with the organization	Community
73/4	68/57	83	Image and reputation of the organization	
76/4	86/8	84/4	Law compliance and law-centrality	
78/5	78/9	88/2	Responsible, accountable and serving citizen	
81	81/3	84/2	Consideration of national interests and their dignity and authority	
74/7	69/9		Justice and equal opportunities	
68/5	63/3	65	Reflection in the media	
76/67	79/1	82/6	Transparency and accountability	
76/4	86/8		Respect for the next generation and the people	
72/1	72/85	83/3	Environmental consequences	
78/1	74/5	79/8	Social consequences	Customers (First half of 2020)
75/1	81/5	91/3	Respect for ethical values	
4/78	86/6	90/8	Impact on the economy (local and national)	
87	85	84	Overall customer satisfaction	Suppliers
82	82	85	Overall satisfaction with quality	
81	80	79	Overall Satisfaction with Delivery Time	
87	86	88	Organizations' image	
	61/9	62/21	Overall supplier satisfaction	

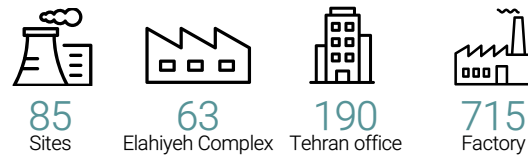
## Employees and their quality of life

MAPNA Group's ethical policy towards human resources

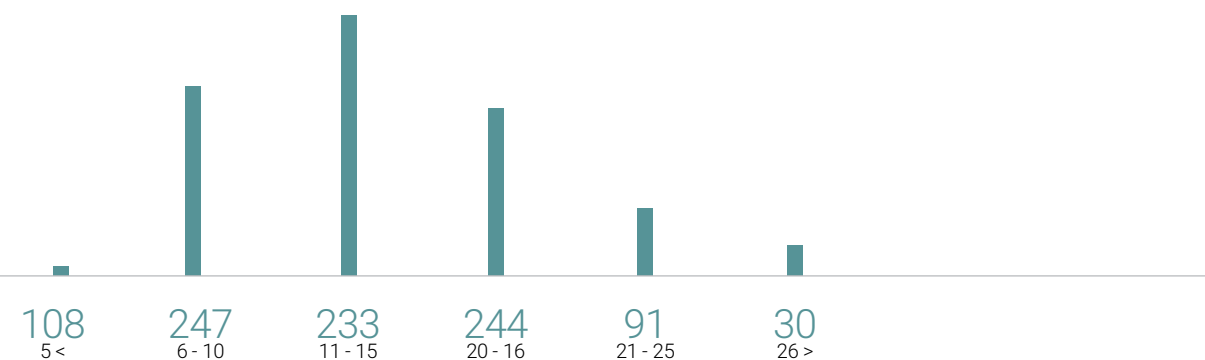
- 1 We consider respect for distributive and procedural equality and justice in all professional respects, and non-discrimination towards all human resources as pleasing to the Lord of the Worlds. Also, we have found it as a responsibility set by God to consider justice and neutrality in all decisions, regulations, donating opportunities, and professional systems.
- 2 Good manners and respect for the dignity of colleagues in all working conditions are the principles governing all practices and regulations. We manage the business environment so that a sense of value is a constant gift to the employees.
- 3 Being aware of everything related to the material and spiritual rights of colleagues are a human right; hence, transparent, timely, accurate, and complete information is the ethical duty of the organization.
- 4 Human resources, their interests, and secrets are divine trust in the organization; hence, trustworthiness and secrecy are our moral duty.
- 5 Scientific advancement and professional advancement is human resource right. By creating equal educational opportunities, we provide the path to career advancement for all partners. The road to progress in MAPNA is not closed to anyone.
- 6 Promoting job security, spiritual well-being, and the spiritual excellence of our colleagues is our moral concern.
- 7 Consideration of the employees' privacy and a system for protecting their privacy is our organizational character.
- 8 Keeping a balance between responsibilities, powers, and facilities is one of the most prominent examples of fairness in the profession.
- 9 Being honest and open about dealing with employees and responding to them, we consider the significance of the employees' perspective to the sustainability of MAPNA group.
- 10 It is the right of the employees to enjoy fair and proportionate labor market rights and we commit ourselves to ensure the security of our employees' livelihoods at all levels.
- 11 Appreciating the employees' good cooperation, informing, and giving an opportunity to change their ethical manner are the ethical foundations of a well-established reward-punishment system.
- 12 Correcting and facilitating the relationship of human resources with managers and promoting a model of authority-based communication behavior in keeping with our commitment.



## Employees' profile



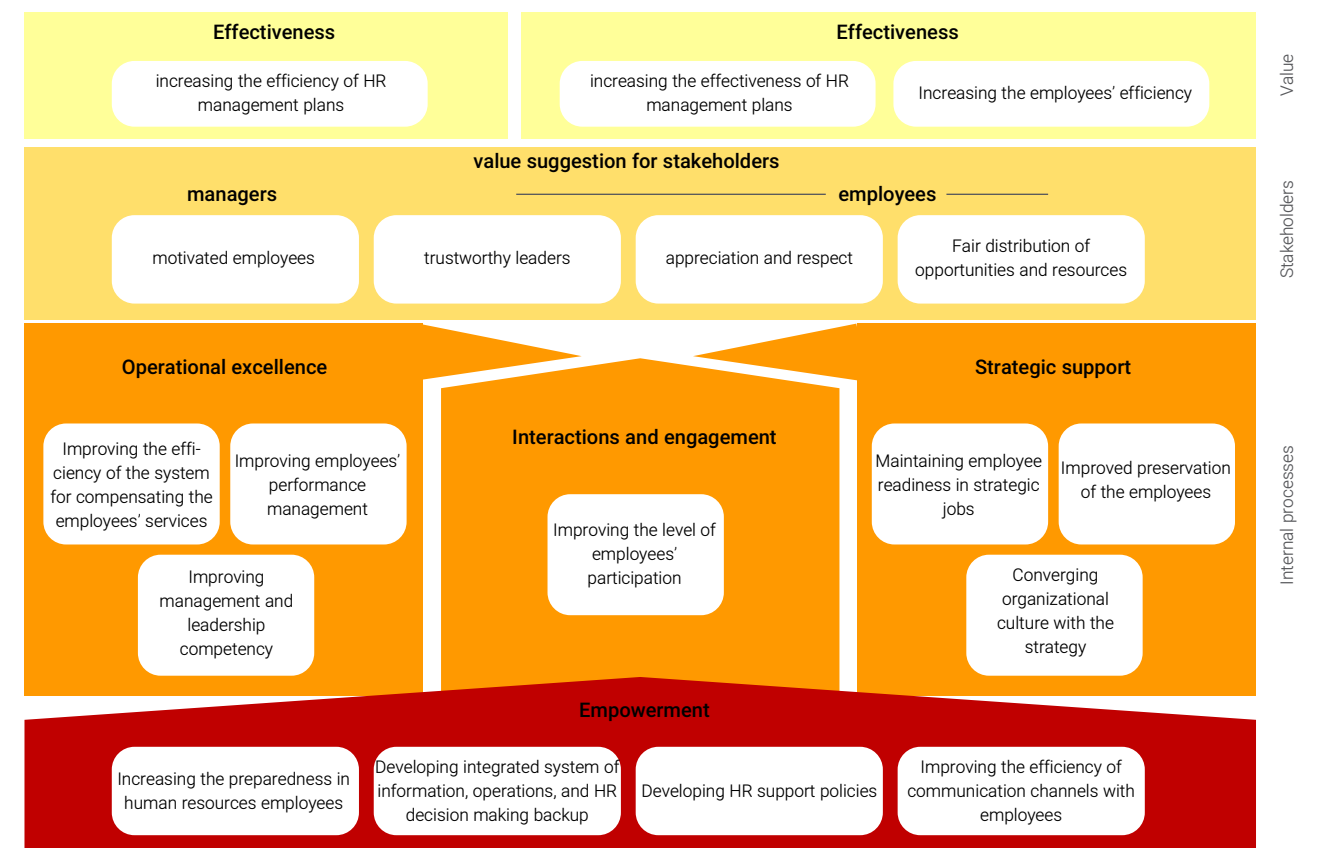
Organizational category		Education	
Senior manager	17	3	PHD
Other managers	50	237	MA
Boss	80		
Supervisor/head	69	421	BA
Experts	406	72	Associate
Technicians	122		
Worker	60	266	Diploma
Technical operator/technical worker	249	54	Less than a diploma



## Strategic approach towards human resources

MAPNA Boiler Co. regards its employees as their human capital and aims to improve the quality of life beyond their working life. In this regard, the company is engaged in various activities to improve the safety, welfare, health, hygiene and work-life balance, and to increase the awareness and behavior of its employees and to the extent possible to improve their quality of life. The company uses a variety of approaches in this regard. The company has developed a task strategy map in its human resources field.

### The HC strategy map (2020, 2021)



### Type of systematic documentation

### Name of systematic documentation

Instructions	Employees' employment Conversion - Socialization - Apprenticeship Recruitment Paying Medical Expenses - Issuance of Certificate and Business Card Employee Relocation - Salary and wages - Conducting surveys in the field of HR management
Implementation manner	Recruitment- education and training- suggestions
Regulations	Promotion- discipline- cooperation termination- attendance- mission- employees appreciation and motivation system- employees' welfare affairs- commute services - Workplace discipline Loan regulations - Regulations for holding sports competitions

## Service compensation system

The Employee Compensation Approach at MAPNA Boiler is designed based on new payroll models, centered on experience, and in line with MAPNA Group policies. The employee promotion system is also adjusted based on the results of the attitude assessment and in accordance with the strategic HRM program using the MERCE model. The service compensation system in MAPNA Boiler is designed, planned, and implemented in various headings in line with the mission of planning, attraction, developing, and retaining employees and in line with MAPNA Group policies in both financial and non-financial

sectors and accordance with the motivational needs of employees. Salary and wage, as one of the most important elements of the compensation system, is inspired by 3P model including three different types of payment for the position, person, and performance. This considers different factors such as occupation category based on MERCE model, job experience, education level, ranking in the organization, etc. In this approach, in the job section, job classification analysis, and mercer model, in the individual section, work experience, education, etc., and finally in the performance section, individual ranking is considered

based on performance evaluation scores and key Grid scores. Also, the career path of employees (professional promotion) has been designed in this direction and an integrated manner with the staff performance management system, the system of suggestions and organizational commitment and has been developed in the form of promotion regulations and the executive method of motivation and appreciation, and for transparency, the staff has been informed through the documents of the integrated management system and sympathy meetings.

Rewards and appreciation of hardworking employees in MAPNA Boiler include material rewards and spiritual recognition and appreciation. The approach is associated with paying rewards and observing distributive justice and procedural guidance. Rewards paid to employees at MAPNA Boiler are designed

based on the amount of effort they put into the complexity of the tasks and the creativity required to perform them. There is also a special emphasis on performance-based rewards. In this regard, encouraging and promoting a performance-oriented culture in the organization and aligning the basis for paying rewards with business goals and strategies is on the agenda.

MAPNA Boiler, based on the guidelines developed for motivation and appreciation, has described the types of mentioned rewards for employees, the most important of which are according to the table below:

Type of reward	Details	Coverage
Implementation representatives/ internal auditors	Representatives and executives are employees who, in addition to their job duties, work with other committees and systematic areas in other units, which are annually honored to keep motivated.	Representatives and auditors
Organizational competitions	To motivate the employees to participate in cultural, sports and systematic competitions, winners are rewarded and honored.	Winners of the competitions
Case rewards	In this type, certain rewards are given to individuals according to guidelines developed in the specialized field. In such cases, bonuses are also awarded to managers based on the special performance of the staff.	All employees
End of year rewards	This type of reward is approved annually by the board of directors and paid to the employees after the general meeting.	All employees
Suggestions system rewards	This reward is paid based on the ideas provided by the employees to the organization and based on the value creation of their ideas	All employees
Knowledge management system reward	This reward is paid based on the recorded knowledge experiences and knowledge behaviors of employees in the organization and based on the value creation of their knowledge.	All employees

Type of reward	Details	Coverage
Signing new contracts and taking new projects	Employees will be awarded percentages (commission) if they sign new contracts for new markets and products as well as execute projects at different development stages.	All employees
Strategy and improvement projects	In this type of reward, a defined reward will be paid for defining and implementing improvement and strategy projects at the organization level.	Project team
Selection of elite employees	In this type of reward, elite employees are selected and honored annually in different fields based on defined. These areas include top executives in the offer system, training, organizational culture, HSE, quality systems, organizational creativity, communication and social responsibility. They are also recognized and honored each year on the basis of the defined indices of the top workers in the manufacturing sector.	Elite employees
Motivating key employees	To improve retention and motivation, benefits are allocated to key staff as employees who have a greater impact on organizational goals.	Key employees
Privileges of job promotion	Employees in expertise and master levels will enjoy the anticipated benefits along the career path.	Occupational and expertise class



## Employees' welfare and honoring them

In addition to staff salaries and bonuses, a committee known as the Work and Family Welfare pursues the related affairs to increase the desirability of service compensation and employee satisfaction, as follows:

- Deciding on the implementation of welfare policies
- Allocation of the welfare budget announced by MAPNA to the collection of welfare baskets
- Determining types of welfare items for employees

The welfare basket covering all organizational levels, is designed and implemented based on the decision of the mentioned committee, as follows:

- 1** Welfare and product baskets: In various occasions such as Ramadan, Eid al-Adha, the new school year, the organization offers family welfare baskets for health, cultural, educational and encouraging to be used by employees and their families. Moreover, their credit cards are also recharged for purchasing products on various occasions, such as holidays, worker days and anniversary of company opening.
- 2** Transportation Services: The Organization provides daily transportation services to all personnel to facilitate the movement of personnel on a daily basis.
- 3** Social Security and Complementary Health Insurance: To improve the health and cover the medical expenses of its employees, the company insures them in the form of social security insurance in the form of commission and supplementary health insurance coverage by paying 100% of the supplementary insurance premium for employees and their families.

	2018	2019	2020
Employee insurance costs (million RIs) Including Social security insurance costs, supplementary insurance, accident insurance and life and accident insurance (million RIs)	143,064	198,746	222,028
Personnel costs to the total organization's costs (Percentage)	22	20	21
Employee training costs (million RIs)	20,339	20,509	20,720

- 4** Contracts with Sport Centers and Teams: The Company has entered into numerous contracts with Sport Centers for staff use. There are also numerous teams such as the futsal, volleyball, tennis and swimming teams, which are supported to take part in various competitions; so far, they have won some titles and trophies as well.

Due to the Corona crisis, sporting events have not been held since 1998 to protect the health of staff

Sport	Year	Title/Trophy
Futsal	2015	Champion of MAPNA Group futsal competitions
		4th rank in Alborz workers league futsal competition
	2016	Champion of Savejbolagh workers league futsal competition
		4th rank in Alborz workers league futsal competition
		Champion of Hashtgerd workers league futsal competition
Volleyball	2017	Vice- Champion of Alborz Workers league futsal competition
	2015	5th rank in MAPNA Volleyball league competitions
	2016	3rd rank in MAPNA Volleyball league competitions
	2018	4th rank in Alborz workers league
	2019	3rd rank in Alborz workers league
Table Tennis	2015	4th rank in MAPNA Table-Tennis league competitions
	2017	Champion of MAPNA Table-Tennis league competitions
Hiking	2015	Climbing Shah Karam Mount in Taleghan with a height of 4100 m

- 5** Housing Corporation and Loan Fund: MAPNA BOILER has set up a housing corporation and loan fund for the well-being of its employees, and a committee called the Loan Committee examines the staff demand and lends them money.
- 6** Employee consumption corporation: One of the centers established for employee welfare is consumption corporation. In this corporation, various consuming goods will be offered with high quality at lower prices than the markets, and the expenses will be reduced from future employees' salaries.
- 7** Allowances: In order to increase the well-being and entertainment of the staff and their families, the company has allocated travel and restaurant allowances to the employees. Sports Allowances are also allocated to staff to increase the health of employees and their families.

With the aim of providing fair conditions and equal employment opportunities, the company has created a unity of procedures and designed and established an executive method of attracting and employing human resources, and has revised it based on strategies and experiences gained at different stages. By expanding Employment and employee channels (such as placing advertisements in magazines, referring to specialized job search sites), the information rent in the field of employment

will be prevented and in this way, the company makes every effort to ensure the fair selection of qualified individuals by avoiding discriminatory practices (such as ethnicity, gender and religion discrimination). Empowerment and development of employees' knowledge in different ways are one of the things that have always been considered by MAPNA Boiler Company. For all of its organizational posts, the company has created a competency profile and tries to enable employees to

achieve their current competencies in their job. According to this model, employee competence is improved by using development programs, and the effectiveness of this approach is evaluated through the capability component of the staff attitude questionnaire and the periodic performance management system of employees. The effectiveness of the above approaches for employees is conducted through periodic performance evaluation

Also, in MAPNA Boiler succession program, efforts have been made to provide the necessary infrastructure and prerequisites in the following dimensions for the successful implementation of the program:

- The organizational culture encourages and supports leaders
- Organizational structure and career path transparent
- Coherent and effective training and empowerment system in the organization
- Accurate identification of talents with an emphasis on meritocracy
- Aligning the goals of the succession program with the strategy and vision of the organization
- Correct identification of strategic jobs and definition of necessary competencies for this group of jobs
- Adequacy of incentive mechanisms and service compensation for successors

Career path development

One of the approaches to empowering employees is career path development. MAPNA Boiler has developed a career path to develop the capabilities of employees. In this career path, a professional movement path is provided for all employees.

1. Talent and succession management

One of the important approaches of the organization to maintain leadership and strengthen the human capital of the organization is talent management and succession in which competent and potential employees, or intellectual and leadership talents, are nominated for holding key jobs within the organization and evaluated trained through development programs. At MAPNA Boiler, the succession program is implemented with the aim of creating growth opportunities for talented employees, ensuring that key positions are not vacant, assisting the organization in meeting operational and strategic challenges by placing the right people in the right positions and at the right time to holding key jobs.

Therefore, the main steps of implementing succession management in MAPNA Boiler are as follows:



1. Staff training

Another approach to employee empowerment is to train them. The company considers the purpose of training to provide employees with the spiritual development, skills, and capabilities needed for them. In this regard, the company conducts a training needs assessment, planning, implementation, and measuring its effectiveness. The managers of the units, according to the defined goals and strategies, and by holding meetings within the unit with the employees, try to identify their educational needs. Another educational approach of the company in the field of growth of employees' capabilities is the implementation of the socialization process, which is held according to the socialization instructions of new employees and training at the beginning of employment, by holding orientation courses and introducing newly hired employees to the company. The topics of which are: Introduction of MAPNA Group and MAPNA Boiler position in the group, company organizational chart, business model and strategies of the organization, models and social responsibility activities of the organization, familiarity with the company's products and processes, familiarity with occupational safety and health, welfare, human resources system and holding a tour of the production line of operational sites. In addition to the mentioned items, to grow spiritually and develop individual skills, the company has organized training seminars entitled Mental Health with the aim of improving the mental health of all staff. Also, with the aim of improving personnel skills, the training unit has defined general courses such as emotional intelligence, stress management, communication skills, as well as comprehensive self-care workshops and its implementation in different years and separately at different organizational levels.

	2018	2019	2020
Training courses to develop the capabilities of managers, bosses, and officials	3,830	2,182	747
Specialized courses	11,884	17,063	14,962
General courses	3,768	8,457	4,343
Workshops, seminars, and conferences	223	306	172
Total hours	1,948	27,702	20,224

Training type	Course	Performer_ hour	Description
Training related to organizational behavior and ethical codes, liaisons, and cultural promoters	EVC course	512 people - hours	Special for senior and middle managers
		36 people - hours	Special office officials
		50 people - hours	In the form of socialization courses for newly hired employees
Internal training		31085 people - hours	
External training	CMI Company Training	4080 people - hours	

## Collaborative management and use of opinion

Another effective factor in empowering MAPNA Boiler employees is the participatory management approach and the use of employee feedback in decision making, informing goals and strategies, and procedures related to employees. One of the manifestations of participatory management is the various working committees that are defined after determining specific missions and goals, the members of these committees have been selected from different organizational levels according to their roles, organizational positions, and individual skills. The number of mentioned committees reach 40 active committees. In addition, MAPNA Boiler can be used to exploit the employees’ opinions in the organization in various ways. The system of suggestions of the organization is one of the systems of employee participation in the affairs of the company. In MAPNA Boiler, with the aim of developing a culture of participation and creating creativity and innovation in employees, the approach of a comprehensive system of suggestions has been implemented. In this system, the suggestions of employees in relation to all matters of the organization are collected and reviewed and in addition to implementing value-added offers, the king will be paid to the staff in proportion to the offer. Another case of involving employees in the company affairs departments, the selection of representatives of organizational systems such as process systems, knowledge management, communication systems, etc. is in different units of the organization that employees can share their opinions about the mentioned systems with them so that these opinions can be transmitted to the custodians of the systems.

	2018	2019	2020
Per capita bid submission	3.51	3.58	3
Number of offers	3695	4020	3490
Percentage of group offers	56.1	54.35	48
Participation rate	82	86	80

## Sharing the strategic orientation of the organization with employees

MAPNA Boiler uses several approaches and actions to ensure the transfer and understanding of values, mission, vision, and goals by employees. The most important of these approaches are as follows:

- 1 Holding public meetings: Includes meetings of the CEO and employees at the beginning of each year, single meetings with the presence of esteemed CEO management and focusing on listening to the opinions, suggestions, and challenges of employees and conveying the goals and macro strategies of the organization, annual strategic management conference, CEO’s quarterly conference with all company personnel, holding various meetings of deputies with managers and employees such as internal meetings, business breakfasts, etc.
- 2 ICT-based information portals: Includes notification via email, internal portal, and sending SMS
- 3 Audio and video tools: Includes information through video wall, bulletin board, directional signboard, banner and brochure, company catalog, and exclusive publication of water and steam
- 4 Training: Includes strategic planning and organizational excellence training at all levels of the organization as well as in-service training
- 5 Incentive tools: Includes holding strategic employee awareness competitions and employee performance management system
- 6 Staff voice sessions: Meetings are held in the presence of the human resources manager to review staff feedback and related planned actions.



## Retirement System

In order to appreciate the employees who are just about to be retired, MAPNA Boiler Co. has considered a cultural system to appreciate them materialistically and spiritually. This system includes holding retirement ceremony in presence of senior managers, families and colleagues, and giving awards and bonuses to the retired employees. Also short-term contracts may be signed with the retired employees to transfer their knowledge and expertise to young employees in form of training and practice.

## Ensure responsible work-life balance for employees

Establishing a work-life balance for the employees is one of the goals of MAPNA Group to improve the quality life of employees. In this regard, the company has taken various actions including:

- Restricting overtime and holiday working hours and making Thursdays off to increase family attendance
- Donating restaurant card to staff for family use
- Organizing cultural and recreational events and activities for employees and their families
- Allowing the employees' families to visit company activities
- End of year celebrations and festivities in presence of families
- Offering sports services for staff's children
- Page allocation in company newsletter to staff families to inform staff and families
- Holding contests and awarding special prizes to staff families
- Donating gifts for marriage
- Allocation of leave to staff at family events such as marriage, childbirth and illness and death of relatives
- Changing the working shift of the stewards from 24-24 to 12-24
- Considering flexible working hours in Tehran office
- Payment of travel allowance subject to leave registration in case of family travel

The statistics of people who have used parental leave in 2019 and returned to work after the leave are as follows:

Type of leave	Quota	2020	Number of people	Female	Male	Number of days	Descriptions-days
Marriage	days 3	5	3	2	3	15	-
Childbirth	days 2	44	3490	0	44	85	Only men
Death of parents and close relatives	days 3	34	48	0	34	91	-
Giving birth	days 6	1	80	1	0	186	Only women

## Engaging employees in related programs

The company has used various approaches such as surveying employees, forming committees in various areas such as recruitment and employment, welfare, training, and the system of recruitment and utilizing their views in formulating and improving employee-related programs to prevent monopolizing decision-making. Most staff programs (such as formulating HR strategy and payroll) include representatives of organizational units in the form of committees or working groups such as the Council of deputies, the Welfare and Labor affairs Committee, the Disciplinary Committee, Training committee, suggestion system committees, recruitment committees, etc.



Method of receiving feedback	Application of feedback results
Measuring employees' attitudes	Designing strategies and plans for improving HR processes
Welfare opinion poll	Increasing the diversity, quality and facilities
Internal gatherings and seminars	Optimizing HR processes
HSE and supporting poll	Improving HSE processes
Personnel leave interview	Feedback to managers and designing corrective actions
Consultation meetings with deputies	Identifying needs of HR programs
Meetings for listening to employees' voice	Improving the efficiency of corrective actions

Based on feedback from various employee surveys, the company modifies various approaches to employees such as payroll, human resources, and HR processes and in this way benefits from the opinions of its employees.

## Ethics and preservation of human dignity

MAPNA boiler engineering and manufacturing company commits itself to creating a morally oriented environment while preserving human dignity. Ensuring the existence of justice, establishing equal opportunities, respecting diversity (ethnic, religious, cultural, etc.) meritocracy, preserving human dignity and observing ethical principles in the activities of the organization are defined as ethical or behavioral codes as model behaviors. In this regard, MAPNA Group Company in 1392 officially published its comprehensive ethics document and extracted more than 1200 codes of conduct in the form of 95 titles and communicated it to its subsidiaries. MAPNA Boiler & Equipment Engineering and Manufacturing Co, as one of the subsidiaries, has declared its adherence to the mentioned codes and in order to implement it, has prioritized these behavioral codes and by focusing on the key codes, changing them to the organization has put them on the agenda. These behavioral codes describe how to interact with different stakeholders based on the values of the organization. A committee called the Organizational Culture Committee is responsible for pursuing culture in the organization in this regard.



In MAPNA Group, I am committed to ethical codes under every conditions

Act upon MAPNA Codes

- We tell the truth and realities
- we do the right

What to do if we observed violation of the codes?

- Direct refer to the CEO
- Refer to the EVC expert in the company

## Organizational culture and evaluation of Denison culture

Organizational culture as a set of common beliefs and values affects the behavior and thinking of members of the organization and can be a starting point for movement and dynamism or an obstacle to progress. Since 2014, MAPNA Boiler Company's human resource management has been evaluating its dimensions based on the Denison model in two-year periods in order to evaluate and promote organizational culture. This model considers four characteristics that the interpretation of the situation of the organization in these dimensions is as follows.

### 1 Participation in work

This dimension emphasizes the level of employee participation in activities and decisions in the culture of the organization which leads to the voluntary commitment of individuals to participate in organizational programs without the need for external control, which includes empowerment, team building, and development of organizational participatory capabilities.

### 2 Compatibility

This dimension emphasizes the degree of internalization of organizational values, which leads to high internal commitment and compatibility of individuals with the organization without the need for external control, which includes coordination and coherence, agreement, and core values.

### 3 Adaptability

This dimension emphasizes the flexibility of organizational culture in adapting to the external environment. Adaptability makes the organization better respond to environmental changes, including organizational learning, customer orientation, and change.

### 4 Mission

This dimension emphasizes the extent to which there are specific goals in the organization and the alignment of activities with the goals. This goal-oriented leads to a better response of the organization to environmental changes, which include vision, goals and objectives, and strategic orientation.

## Disciplinary Committee and Anti-Corruption Approaches

To deal with ethical violations and possible corruption in the company, MAPNA Boiler Company has formed a disciplinary committee headed by the Director of Human Resources with the presence of representatives of staff and queues (including the production of sites and other centers) which deals with specific ethical violations and corruption at all levels of the organization. Some of the cases that have been identified as immoral in the company's disciplinary regulations are as follows:

### 1 Intentionally causing damage to the company's machinery or property and assets

### 2 Taking bribes, Tamper, and embezzlement

### 3 Abuse of administrative property and work tools at the disposal of the individual in order to provide personal resources

### 4 Disclosure of confidential content and documents for non-administrative use in accordance with the Company Confidentiality Agreement

### 5 Providing forged documents for employment or submission of any undocumented certificate in order to enjoy employment and job benefits

### 6 Conflict and beatings in the workplace against colleagues and clients

### 7 Tendency to social corruption that adversely affects corporate discipline regulations

### 8 Insult and disrespect to others, officials, and managers of the company

### 9 Performing any behavior contrary to social, religious, moral, professional, and organizational matters in the workplace

### 10 Failure to comply with the rules, regulations, and ethical charter of the company

It is worth mentioning that the activities related to corruption control in the company are limited to the activities of this committee due to the small number of cases and have not been further expanded.



## Diversity, equal opportunities, and justice

Respect for diversity, equal opportunities, and justice are the moral values that have always been considered in MAPNA Boiler and the company strives to protect the interests of all and create equal opportunities for them. Since diversity and equal opportunities are among the issues in social responsibility, MAPNA Boiler Company believes in this principle and tries to consider equal opportunities for all people. Therefore, language, gender, ethnicity, religion, etc. did not affect the provision of job opportunities, vertical and horizontal promotion, relocation, termination of service, determination of salaries and benefits and welfare facilities of employees and always the competence and performance of employees as the basis of decision making. Accordingly, to ensure equal opportunities in employment, promotion, reward, mission, training, welfare facilities, etc., several approaches such as recruitment and employment process, staff compensation, approved budget, and integrated welfare facilities at the level of all employees of the company are implemented and apply the relevant rules through regulations and procedures. In some cases, the company praises people who are in the minority. For example, celebrating the status of women and giving them gifts, and sending congratulations on the occasion of the beginning of the New Year to Christian colleagues is one of the cases mentioned in this approach. In accordance with macro strategies and human resource strategies, MAPNA Boiler has designed and implemented several programs in the form of human resource processes with the aim of establishing equal opportunities, acceptance of diversity, meritocracy, preservation of human dignity and observance of ethical principles that some of the most important ones in accordance with the relevant axes are presented in the table below.

Topic	HR approach or programs	implementation	Related process/procedure
Justice and equal opportunities	Obligation to adhere to distributive and procedural fairness and justice	from the beginning	Ethical Value Management / Comprehensive Ethical Document
	Educational needs assessment based on job description analysis	2007	The process of training and flourishing of employees
	merit pay loan performance, welfare, and treatment	from the beginning	Service Compensation Process / Performance Management Process
	Develop upgrading programs	2013	Promotion and demotion process / promoting regulations
	Possibility of submitting a proposal by all personnel	2010	Employee participation management process and related procedures
	Service compensation system	2012	Instructions for matching and determining salaries
	Participating in measuring employee attitudes	2009	
Diversity acceptance	Recruitment and employment based on the competence of job seekers	2009	Employee recruitment and dismissal planning process
	Absence of a law prohibiting recruitment and employment regardless of ethnicity, race, religion, gender, etc.	2009	The process of planning, recruiting, reviewing, and dismissing employees
Meritocracy	Possibility of promotion and career advancement without gender restrictions	2012	Promoting regulations
	360-degree evaluation of managers in line with personal development plans	2015	Staff development process
	Developing an organization competency model	2016	The process of developing cultural and leadership capabilities
	Development of career path system	2015	Staff development process / promoting regulations
	Focus on appointments from within the organization	from the beginning	Promotion and demotion process
	merit pay (all staff and performance-based)	Since the beginning	Employee performance management process/ executive method of calculation and merit pay of the year 2011
	Upgrading (all staff and performance-based)	2013	Promotion and demotion process /upgrade regulations
	Merit-oriented absorption	2016	Recruitment and employment process
	Changing the status of power supply staff	2015	Status conversion instructions
Preservation of human dignity and observance of moral principles	Using internal teachers	2007	The process of training and flourishing employees
	Obligation to maintain genuine respect and human dignity of colleagues	from the beginning	Comprehensive ethical document
	Development and implementation of disciplinary regulations	from the beginning	Labor relations or regulations
	Promoting organizational behavioral codes	2015	Behavior Code Booklet
	Employee departure management (appreciation of retirees)	2015	The process of planning, recruiting, and dismissing employees

The approach of creating equal opportunities is observed not only in employees but also in other stakeholders, and this approach has led to the growth of community stakeholder satisfaction in this regard in recent years.



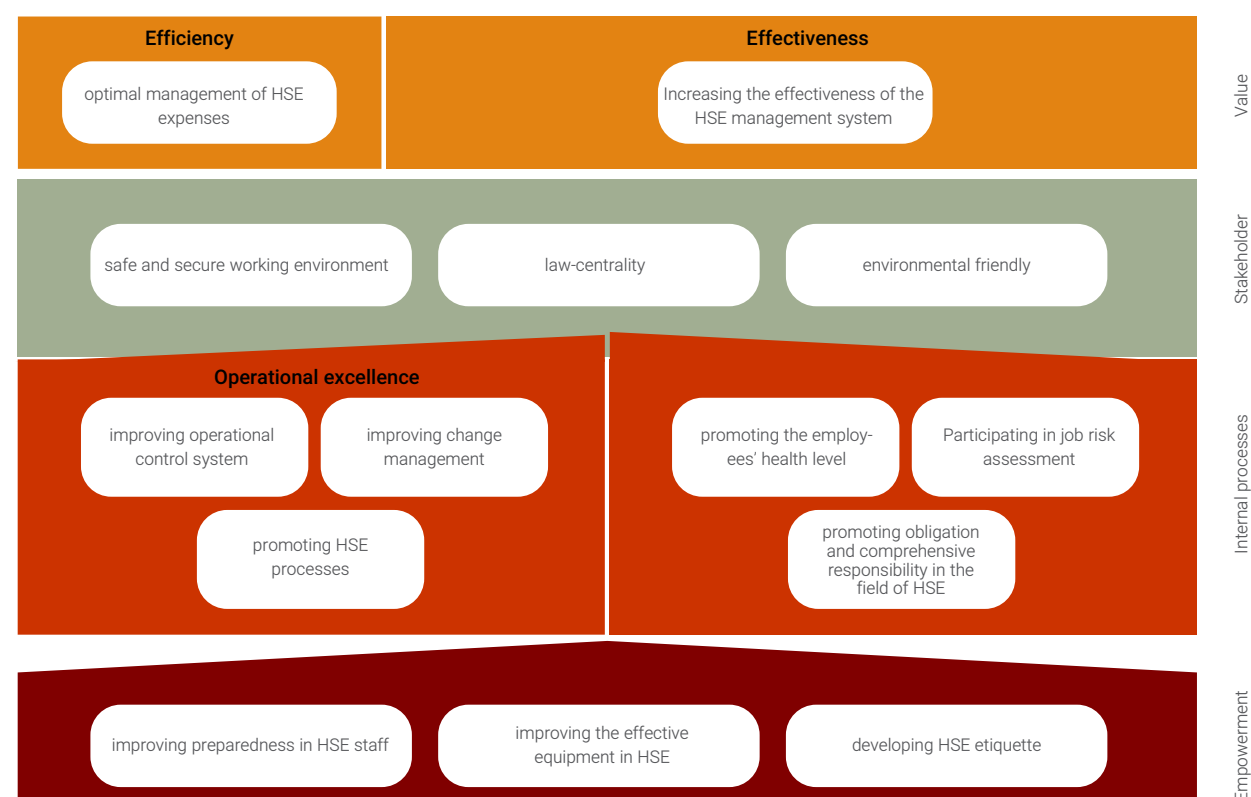
## Improving health and safety at the work environment

Preservation of the safety and health of our employees is one of MAPNA Boiler's top priorities. The company has defined and implemented several approaches to maintain and improve the safety and health of the workplace and its employees since its establishment regarding the nature of its projects and production activities. In this regard, the company has implemented OHSAS18001 and ISO14001 standards within the HSE process and has been able to maintain and improve the systems so far. Strategically discussing safety, the company has compiled a safety task plan and linked it to the corporate social responsibility map so that it can implement and track safety-related measures in the company's strategic management system. MAPNA BOILER has always tried to institutionalize the safety and health debate in the company by cultivating and creating awareness among employees as well as the creation of related motivational systems.

The company's HSE mission to protect employees includes the following:

- Protecting the mental and physical health of human capital
- Creating a safe, healthy, and tidy work environment

The HSE Strategy Map for 2020 to 2022 three-year horizon is as follows:



The HSE unit, as a task unit at MAPNA Boiler, is pursuing health, safety, and environmental issues. During the reporting period, due to the corona disease outbreak and the key role of the HSE in the management of this crisis, the mentioned unit is out of the subdivision of the Deputy of Planning and Systems and has become direct management under the supervision of the CEO. In addition, due to the importance of the issue, the HSE Committee is overwatching safety, integrity, and environmental affairs in the manufacturing and operating sites of the company and those of its contractors. The committee consists of directors and specialists in safety, health, and environment, and because of the importance of the subject, the director or his representative is a member of the committee.

The mission of this committee is as follows:

- Determining the HSE Strategic Policies and Energy Management
- Providing solutions to improve safety, health, environment, energy and fitness in the company
- Examining the major events and problems of the HSE, energy management and the fitness system

Emergency Response Team:

The Emergency Response Team is also a multifunctional structure composed of representatives of different units. The team attempts to deal with natural hazards and crises, and protects the health of employees in the event of emergencies. This team, which has representatives in all units of the company pursues the following goals:

- Preventing emergencies as much as possible
- Identifying the risks involved in disasters and preparedness against them
- Reducing potential loss to the company
- Increasing preparedness of reaction management team members during emergencies
- Increasing the awareness of emergency personnel on emergency preparedness

5S system

One of the environmental health systems in MAPNA Boiler is the 5S Fitness System. 5S is a management system whose aim is to reduce the aspects and consequences of operations by eliminating losses, reducing waste and ... systematically by following the schedule. This system is designed according to the needs of the various units of the company through the compilation of relevant documentation, Extensive cultivation, formation of working groups, auditing, defining and implementing projects and preventive and corrective actions are planned and implemented. Implementation of this system is a step towards creating a better environment for improving the health of employees. Some of the activities of this system are as follows:

- Defining standard workplace wellness policies in manufacturing and office spaces
- Employee awareness and definition of relevant incentive packages to implement a wellness system
- Defining standard coverage for all employees and contractors of the organization
- Construction of resting areas for the employees at manufacture lines (Tea Room)
- Organizing production line items by making pallets in different colors
- Standardizing the method of document removal
- Waste management in the company
- Controlling the equipment for production lines with label mounting
- Supervising cleanliness equipment and affairs to increase work environment safety coefficient

Some of the things are done by the HSE management in the company for safety, hygiene and employee health are as follows:

## 1 Implementation of Ergonomic principles in the Company

One of the executive plans defined to identify and prevent occupational diseases and reduce the dissatisfaction of colleagues, in line with the strategic goals of the company, is the “Job Posture Evaluation and Modification” approach. Participatory ergonomics begins with the formation of work teams and, after identifying workstations, assessing and managing risk, according to the nature of each job, offers appropriate corrective or preventive intervention plans in form of engineering and management plans. In the first phase of the process, Harp construction was modified by optimizing the chair design for welders and then by building the experimental platform.

Some examples of implementing the safety, health, and environmental approach

Description of activities	Year	Result
Establishment and continuous holding of a health committee to manage the crisis caused by the corona virus	2019-2020	Preventing the coronavirus outbreak
Reviewing the HSE Management Task Strategy	2019-2020	Improve HSE performance system
Buying digital thermometers, blood oxygen meters and masks at the lowest cost	2019	Control and prevention of coronavirus outbreak
Execution of self-declaration of employees, screening of individuals, development of health protocols, public and virtual trainings	2019-2020	Control and prevention of coronavirus outbreak
Staff thermometry, disinfection of floors, public places and commuting services on a daily basis	2019-2020	Control and prevention of coronavirus outbreak
Distribution of masks and hand sanitizers and surfaces	2019-2020	Control and prevention of coronavirus outbreak
Moving flammable and explosive paints to containers made in the area to reduce the risk of fire and possible damage	2020	Prevention of possible fires
Making air conditioning mask for painting inside the calcium tanks internally	2020	Reducing the risk of respiratory contact with contamination
Obtaining a health certificate for the Tehran office building art system	2020	Reduce the risk of electric shock
Follow up and supervise the construction of emergency stairs in Tehran office	2020	Preparedness in the event of an emergency situation
Calibration of load carrying magnet devices and their coding and tracking for periodic monitoring	2020	Ensuring the operation of magnet devices
Standardization, construction and installation of access stairs to the top of Harp assembly tables	2020	Securing personnel working conditions during harp assembly
Design and supply of appropriate and standard ladders to ensure the presence of people in workplaces at height	2020	Securing working conditions when working at height
Securing the local fans used in the workshops by installing protection, insulation, etc.	2020	Prevention of possible accidents
Obtaining a Shahin health certificate used to unload and load class f harps	2020	Ensuring the performance of the Shahin in the loading operation
Development of safety requirements for performing welding operations simultaneously with preheating operations by the stress relief device	2020	Securing working conditions
Follow up and build safe workplaces for people above the reservoir to expedite work and improve safety	2020	Securing working conditions at the top of the tank
Pursue modification and construction of parts and storage pallets in production halls to increase safety and optimal and effective use of public space of production workshops	2020	Securing working conditions
Finalizing the safety protection of the Jim Blog test machine and participating in the testing and approval of all the Jim Blocks used in the production set, etc.	2020	Increasing the safety factor of the tools used
Compilation and revision of 11 instructions, four executive procedures and 20 HSE checklists in the company's integrated management system	2020	Updating instructions and Execution methods
Determining a specific place to store loading tools and control the entry and exit of items at the company level	2020	Reducing damage to loading tools
Preparation and supply of rapid test diagnostic kits in coordination with the regional health network	2020	Update instructions and Execution methods

## 2 Recruitment and periodic examinations

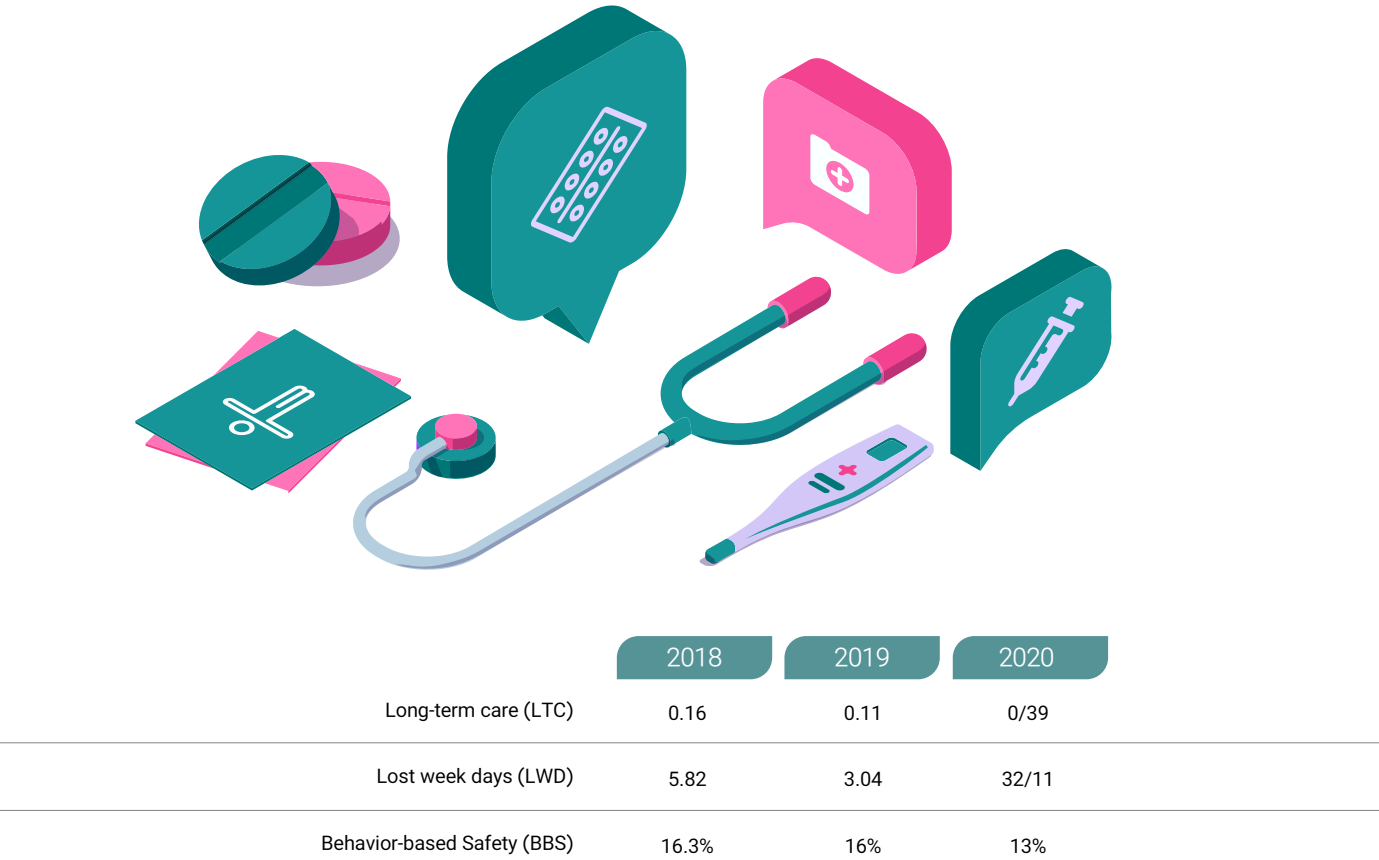
To ensure that the type of job is appropriate to the physical features of the individual, applicants must undergo a pre-employment examination before commencing employment, and the commencement of employment is subject to review and confirmation of their health. Periodic examinations are also conducted annually to maintain and improve the health of the workforce and prevent occupational diseases, and their effectiveness is monitored by comparing the results obtained with those of the previous year.

## 3 Monitor company meals to keep healthy

One of the things that is monitored by the company for the health of the employees is the metabolic health index of the company which is measured and analyzed with regard to the metabolic abnormalities caused by the nutrition and lifestyle of the employees of the company. The company's nutrition consultants monitor the type and serve of food and its accompanying items, and work on controlling the type and method of cooking to improve metabolic health indicators. These consultants also provide appropriate diets for staff if needed.

## 4 Hygiene and treatment

MAPNA BOILER is committed to protecting the health of its employees against diseases by paying them a social security premium, and in addition to its organizational law, it covers all employees with complementary health care that covers half the costs of this insurance. The other half is paid by the staff themselves. There is also staffing emergency unit available to tackle diseases in the company and a physician based in the company who can use all the health services if needed. The company also has an ambulance to send emergency patients to treatment centers in special cases.





## Encountering the coronavirus outbreak

To protect the stakeholders and control the crisis of the Coronavirus outbreak, MAPNA Boiler, in the early stages of the outbreak of this disease in the country, planned and implemented related activities to control the crisis. The company's major programs have been policy-made and implemented in the form of the following items:

## 1 Encountering the coronavirus outbreak

The first step in crisis control in MAPNA Boiler is to form the necessary structures to organize related activities. With the outbreak of this virus in the early stages, the Health and Counter Outbreak Committee was formed on June 2, 2019, for Coronavirus, consisting of the CEO and related senior managers. By convening more than 70 sessions, the committee has approved appropriate measures to control this virus in the form of more than 76 notifications and has notified the relevant units for implementation. The HSE management unit, as the trustee of this committee, is responsible for following up and controlling the executive activities. HSE management has also developed health protocols and guidelines related to issues such as how to attend the company and manage sick or suspected people to attend work. Some of the instructions are as follows:

- Preparation of instructions on how to deal with colleagues and returning to the specific workplace of suspicious individuals (in the form of this instruction, how to report the disease to the organization and the desired examinations and how to return safely to work is explained and communicated).
- Communicating the rules of how to attend (scheduling attendance, reducing staff, keeping distance, etc.) in restaurants and cooperatives and company elevators
- Communicating the rules of arrangement of organizational units in times of crisis (installing special buckets with doors, opening doors, etc.).
- Identifying and canceling or managing missions to high-risk cities
- Deleting the part of the paper correspondence within the company

## 2 Information and awareness

Another important part of controlling the relevant crisis is informing and noticing to spread the right news and prevent the spread of rumors. In this regard, the following has been done.

- Holding short-term training courses on the principles of preventing the spread of coronavirus for all staff and production staff
- Daily monitoring of reputable news sources and validation of published news
- Extensive information of news messages, content, and educational videos in the form of internal and external communication channels (Telegram, corporate portal, e-mail, bulletin boards, stands, etc.).
- Placing pamphlets and awareness messages in the required spaces in the company



### 3 Screening and scientific supervision and everyone's health

The company has tried to monitor the health of employees against the virus based on scientific principles. In this regard, the following activities have been performed:

- Thermometry and daily health assessment of all personnel
- Assessing the health of drivers of transportation services
- Extraction of infection and spread of risk index based on the parameters of disease symptoms, travel, contact with patients and communication with medical staff and prioritizing colleagues to monitor their behavior to the organization at risk of getting infected.
- Extraction of a disease risk index for underlying patients based on patients' self-reported parameters and records of HSE periodic tests and using risk coefficients published in global sources to prioritize sending risky colleagues to telecommuting, work shift, or forced leave to protect them
- Creating a mechanized infrastructure to complete the daily self-declaration of health and examining parameters such as symptoms, travel, contact with potential patients and underlying diseases, and preparation of a health database of colleagues
- Examination and dispatch of suspected colleagues to approved centers for medical testing and quarantine of colleagues with symptoms

#### Self-declaration form questions

- Have you had symptoms of dry cough or sneezing in the last two weeks?
- Have you had symptoms of fever and chills in the last two weeks?
- Have you had symptoms of shortness of breath or weakness during the last two weeks?
- Have you traveled abroad or in high-risk cities or contact with travelers (high-risk cities and abroad) in the last two weeks?
- Do you have a history of diabetes?
- Do you have a history of high blood pressure?
- Do you have a history of cancer and chemotherapy?
- Do you have a history of certain underlying cardiovascular diseases?
- Do you have a history of respiratory or lung disease?
- Do you have a history of specific diseases that weaken the level of the immune system, such as MS, etc.?
- Are first-degree relatives employed in hospital and medical settings?
- Have you been in contact with people with coronavirus in the last two weeks?

### 4 Creating the necessary infrastructure with a social distancing approach

In this set of measures based on social distancing, collective activities are reviewed and cases are carried out as follows:

- Creating the necessary infrastructure for staff telecommuting
- Creating the necessary infrastructure to hold face-to-face meetings through Skype for Business, Webex, etc.
- Canceling all missions to high-risk cities or by enforcing strict protocols
- Providing leave or telecommuting to colleagues suspected of being ill or disease
- Implement a social spacing plan in the restaurant and reduce the number of seats to one-third of the usual number
- Schedule restaurant attendance and spacing at lunch
- Separation of office desks in halls and units with high population
- Eliminating the fingerprinting capability of the traffic recorder and defining the card instead of in order to increase traffic speed and reducing the accumulation of cooperation

### 5 Supply and distribution of individual and corporate equipment to encounter the coronavirus

Providing the necessary equipment to promote personal and corporate health is another set of measures that are done as follows

- Supply and distribution of personal hygiene equipment to encounter the virus for colleagues (mask, hand sanitizer, hanger surface disinfectant, disposable cups, and tea).
- Supply and distribution of safe coating equipment for HSE, service, and restaurant personnel
- Supply and distribution of personal hygiene equipment to combat the virus for drivers (mask and disinfection spray)
- Supply and distribution of corporate health equipment (purchase of thermometers, shields, and filtered masks for vulnerable personnel, hand sanitizer in all sensitive parts of the company, infectious waste bins, replacement of packaged food and disposable containers, etc.)
- Provide special equipment for colleagues for the mission

## 6 Increasing environmental cleanliness

Increasing environmental cleanliness in the organization is done to reduce the possibility of contamination of surfaces and thus reduce the possible disease.

- Disinfecting all places within the company
- Disinfection of the Corporate equipment of partners
- Disinfecting the organization's vehicle services
- Eliminate raw, bulk, and open food lists and replace them with disposable items
- Installing plastic covers on restaurant tables and removing finger entry and disinfecting hands at the entrance
- Collecting glass cups and replace with disposable glasses
- Daily covering and disinfection of restaurant dishes
- Require safe coverage for safety and service personnel and restaurants
- Disinfecting the colleagues' clothes at the entrance of the organization with a disinfection tunnel



## 7 Development of virus control products

In addition to the mentioned cases, the company has used its technical capabilities to develop products to combat the coronavirus. Some of these products are made and offered for internal use and some of them are based on the external customers' needs follows:

product type	Application
Hospital Oxygenator Package	Design and production of hospital oxygenator package in addition to the importance and necessity of localization in the country to meet the needs of hospitals with the aim of creating value for society
Fog tunnel	The exploitation of this device for use in the company's entry points with the aim of disinfection
Automatic hand sanitizer	The exploitation of this device to reduce hand contact with disinfectants in the company's restaurants
UV disinfectant	Exploitation to reduce the consumption and effects of disinfectants and use for electronic devices





## MAPNA Boiler Responsible organizational Citizen

### MAPNA Group's ethical policy towards national interests and citizens

1. Respect for good neighborliness and respect for the rights of neighbors, such as the right to privacy, maintaining peace and mental tranquility, sensitivity to financial and spiritual resources of neighbors and trust in their property, confidentiality, and accountability to them is the basis of our interaction with neighbors.
2. The national interest and the well-being of the citizens are the main focus of our professional activities when participating in productive employment, production of goods and services. The observance of social justice in providing employment opportunities and creating opportunities for citizens to benefit from goods and services is one of the most important moral values of MAPNA.
3. It is our moral duty to take the lead in charity to help the needy, especially in critical situations, and participate in promoting the public welfare level.
4. Trusting the people, responding to citizens' criticisms and challenges, paying attention to public views, and dealing honestly and openly with the mass media is our motto.

6. Participating in the promotion of industry-related standards and product quality in order to increase product durability, save resources and avoid wasting existing resources, we consider it our duty to protect national interests.
7. We consider the effort to develop knowledge and promote the industry to get rid of any dependency and achieve self-sufficiency as a guarantee of national dignity.
8. We consider legality as respect for the rights of citizens and emphasize the rule of law and regulations in all professional matters, especially in fulfilling national rights and demands. We consider honest and effective cooperation with regulatory organizations as participation in the protection of national interests.
9. Respect for social norms, values, and divine rites is our moral creed
10. We respect the enjoyment of a beautiful environment as the right of our neighbors and citizens
11. We emphasize the support of academic centers and cultural institutions and participation in the cultural development of the country.
12. Under the slogan of lawful business, we will never trade with individuals or organizations that work against the interests of humanity.

MAPNA Boiler Company, as an organizational citizen, regards itself as responsible to the community and participates in various activities to communicate with the community and increase their satisfaction.



## Communication with associations and social institutions

One of the most important things in relation to society is to connect with associations and social institutions and to support them. In this regard, MAPNA Boiler Company communicates with and supports scientific and commercial associations. The company intends to expand its connections with social associations in the future.

Some associations and social institutions in interaction with the company

- Iranian Informatics Association
- Association of Oil, Gas and Petrochemical Engineering and Contracting Companies
- Iranian Oil Industry Equipment Manufacturers Association
- Iranian Industrial Equipment Manufacturers Association
- Iran-Tehran Chamber of Commerce, Industries, Mines and Agriculture
- Tehran Chamber of Commerce with Iraq



## Voluntary social actions

MAPNA Boiler Company strives to pay attention to the social dimensions of its social responsibility. Support community-based voluntary actions of employees and also adopt appropriate policies in the field of social crises and natural disasters. Voluntary actions are defined as codified efforts to motivate and empower employees to serve the community through their leadership.

This program has several benefits:

- Improving the image of the organization and communication with stakeholders by defining the leadership position at the local and national levels
- Developing and enhancing professional skills and leadership of employees
- Support for business-specific functions, mostly in the field of human resources and external relations
- Efforts to heal social problems among employees and the community





The voluntary social activities of the company during the reporting period were as follows

- Cash and non-cash donations to flood victims in the north of the country:

After the flood incident in the provinces of the country on Nowruz 98, to help the flood victims in the north of the country, the company collected cash and non-cash donations and sent them to the region under the supervision of the company's colleagues.

- Sending a lunch and rice and oil items to Mehr Madar Rehabilitation Center

In this event, MAPNA Boiler Company, on the occasion of the beginning of the holy month of Ramadan, by allocating a cost from the Boiler Mehr Afarinan Fund to prepare rice and oil items and a lunch for the Mehr Madar Rehabilitation Center for Boys.

- Holding a charity bazaar in the company

In this event, a charity bazaar of food, sweets, and desserts was held for colleagues within the company and the profits from the purchase was sent to the needy.

- Mehr Afarinan Fund for grants and loans for domestic colleagues.

Boiler Mehr Afarinan Fund was established by the MAPNA eco Committee in August 2017 to help the needy with the priority of the company's internal colleagues. In this plan, all employees voluntarily donate the amount they want to help those in need and their desired amount is deducted from their salaries every month and stored in a box in the company. Since the establishment of the fund, 425 employees have participated in this project. According to the fund's policies, people in need are identified with the priority of people within the company while maintaining confidentiality, and grants are provided as needed in the form of gratuitous payments or interest-free loans. The fund's payment statistics from the beginning of the fund until the publication of the report is as follows:

Activity Title	Amount of cost/person
Total number of clients to the fund	95
Number of eligible for assistance	75
Number of grants 23 items	274.983.200
Number of loans paid 53 items	2.345.000.000
Housing allowance	1.575.000.000
Treatment allowance	783.000.000
scholarship	50.000.000
Accident compensation allowance	30.000.000
Childbirth allowance	35.000.000
Supplementary insurance allowance	23.853.200
Subsistence allowance	93.130.000
Marriage allowance	30.000.000
Grant for the purchase of shelters for earthquake victims in Kermanshah	11.700.000
Preparation of food for rehabilitation charity	60.915.000
Helping the flood victims in the north of the country	338.230.000
Profit of holding a food festival	24.755.000



- Collecting donations from partners for the charity plan of MAPNA Group

In addition to the financial aid plan in MAPNA Boiler Company, another plan has been defined in the form of the MAPNA Group Company's charity plan that in this plan, all the partners of MAPNA Group Company and its subsidiaries are active. This project in the form of a committee of the same name collects cash donations from colleagues through withdrawals from the accounts of volunteer employees, distributed piggy banks, calls, instincts, etc and spends on activities such as building schools, helping charities, making vows, donation, slaughtering sheep, and so on. The plan also works on holding exhibitions and charities in favor of disadvantaged individuals. Employees of MAPNA Boiler Company also participate in these charity projects.

- Blood donation

One of the activities of MAPNA Boiler Company for the participation of the staff, production and contracting groups based in the organization in responsible activities, is a 6-month voluntary blood donation program. In this activity, which is carried out twice a year in February and July in cooperation with the Blood Transfusion Organization and the management of the HSE unit, groups based by the Blood Transfusion Organization take blood samples from volunteer employees. This program was canceled in the second half of 2019 due to the outbreak of coronary heart disease and maintaining the health of colleagues. During the two-year reporting period, 407 people participated in this project and donated blood.

- Collecting and sending plastic bottle caps to buy wheelchairs to Raad Al-Ghadir Institute

Containers containing collection of plastic bottles are placed in the company's units and restaurants, where colleagues throw the bottles of consumer bottles into them and collect them and send them to Raad Charity Company to buy a wheelchair. In addition to the social aspect, this activity can also help the environment in terms of separation and recycling of plastic materials.

- Purchasing a condolence stand from Mahak Charity

In some cases, the company tries to select suppliers of its consumer items in such a way that it can use the profits for the benefit of the needy. Purchasing condolence stands from Mahak Institute is one of the example of this.



MAPNA Group's ethical policy towards customers

1. Genuine respect and preservation of the human dignity of the customer in all circumstances is the clear example of our moral ideals.

2. Transparent, timely, accurate and complete information and effective advice and training are our answer to the right to seek information from customers and consumers.

3. Speed, accuracy, ease and quality in providing services and delivery of goods is by MAPNA Group.

4. Privacy and customer secrets and confidentiality are our professional policy

5. Criticism is the right of the customer and the consumer. Accountability, liquidity and compensation are the result of the organizations' performance is our creed.
6. We consider fairness in the contract and avoidance of any illegal trade as a condition of ethical business.

7. Adherence to commitments, especially in price, timely and flawless delivery of goods and services, is our organizational characteristic

8. We respect the views of the customer and the consumer and by diversifying the goods and providing services with flexibility and welcoming their needs and tastes, we emphasize the right of customers to choose

9. We consider providing pre-sales to after-sales services, along with observing quality standards, beyond professional duty, as a moral commitment.

10. Honest, fair, explicit confrontation and avoiding any deception is the motto of MAPNA Group



Customers, as one of the key stakeholders, are always considered by the company and the rights related to them are identified by the company and efforts are made to comply with it. MAPNA Boiler Company has been conducting surveys of customers and handling their complaints since 2006 and in this regard, the development of customer satisfaction and complaint management methods and its continuous improvement has been on its agenda. The company strives to establish a stable relationship with all customers in this regard. Therefore, in line with the values of the organization and creating a discourse based on openness, transparency, trust and respect, it uses different approaches in the form of the following table.

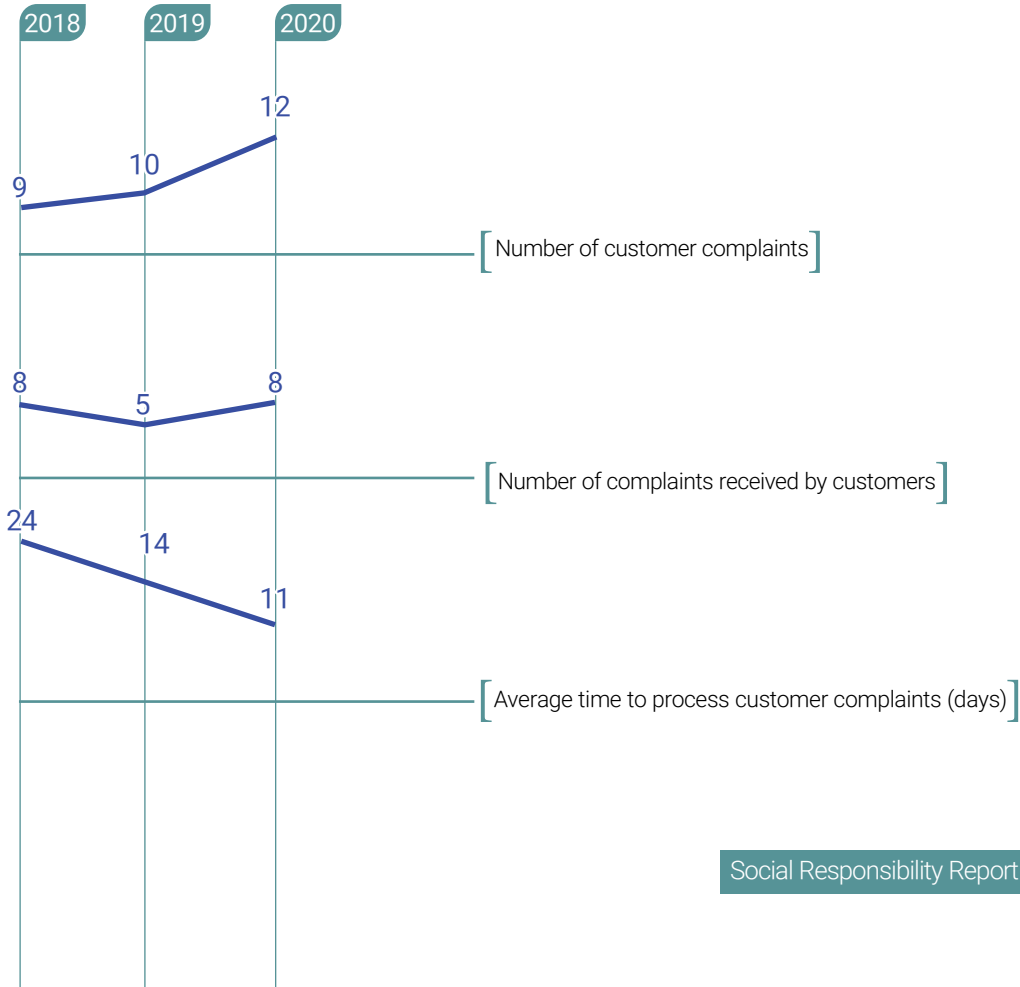
Approaches to the components of a sustainable relationship with customers

Approach title	Components of a stable relationship	Measuring the effectiveness and efficiency of approaches
Surveying customers and informing them of the results	<div> <div>Respect</div> <div>Transparency</div> <div>Trust</div> <div>Openness</div> </div> <div> <div></div> <div></div> <div></div> <div></div> </div>	<ul style="list-style-type: none"> <li>Satisfaction with proper response</li> <li>Customer satisfaction with the adequacy and transparency of the survey</li> </ul>
Clarification of the obligations of the parties in the memoranda	<div> <div></div> <div></div> <div></div> <div></div> </div>	<ul style="list-style-type: none"> <li>Satisfaction with the technical specifications of the contract</li> </ul>
Forming a customer satisfaction management committee	<div> <div></div> <div></div> <div></div> <div></div> </div>	<ul style="list-style-type: none"> <li>The average time to handle complaints</li> <li>Complaints response rate</li> <li>Speed of responding to the employer's complaint</li> <li>Quality of responding to employer complaints</li> </ul>
Holding direct meetings with customers about the causes of dissatisfaction	<div> <div></div> <div></div> <div></div> <div></div> </div>	<ul style="list-style-type: none"> <li>Satisfaction of all customers</li> </ul>
Observance of the requirements and standards desired by the customer	<div> <div></div> <div></div> <div></div> <div></div> </div>	<ul style="list-style-type: none"> <li>Satisfaction with the observance of employer standards</li> <li>Satisfaction with the observance of</li> </ul>

In addition to planning and implementing the above approaches, in order to empower employees in order to protect customer rights and develop a customer-oriented culture, while identifying and determining customer contact points, the company develops the resources, competencies, powers and information required by customers.



In recent years in customer perceptions, the following performance results are systematically evaluated and monitored in the form of operational processes.



1. Honest, frank, and genuine respect for suppliers is the motto of our ethics.
2. Fairness in concluding the contract, adhering to the provisions of the contract, and timely payment of claims, is our policy with suppliers
3. Benevolence, providing psychological security, protecting the professional position of suppliers, avoiding any harm, respecting the privacy of suppliers, confidentiality, and paying attention to the confidentiality of their information are our moral duty.
4. We owe what we have from the property, human resources, and intellectual property of the suppliers
5. Suppliers will always find us critical. Finding information about their views and criticisms and responding to them is our moral obligation

6. Spiritual support for suppliers, assistance and good cooperation in critical situations, and continuation of cooperation based on satisfaction is the organizational characteristic of MAPNA Group.
7. We will assist contractors and suppliers in developing professional ethics
8. We base our interaction with suppliers on the precise and clear articulation of the parties' expectations and commitments
9. The speed in carrying out tasks related to the rights of suppliers is our moral duty.
10. We emphasize the creation of information opportunities and fair competition
11. Appreciating the good cooperation of suppliers is a moral and God-pleasing value
12. It is our human duty to protect the legal rights of contractors
13. We consider the right of suppliers to have a competent and fair supervisor, and we consider fairness and scientific and professional criteria as the rule in monitoring, evaluating, and judging the activities of contractors.
14. We consider the predictability of the organization for suppliers as a guarantee of protecting their rights





Suppliers and partners are other stakeholders that the organization intends to treat them honestly and based on ethics. Paying attention to suppliers and partners and establishing a win-win and stable relationship based on trust and openness with suppliers is one of the issues that are considered in dealing ethically with them. Some of the approaches in ethical behavior with suppliers and stakeholders are shown in the table below

Approach title	Components of a stable relationship	Effective evaluation indicators
	RespectTransparencyTrustOpenness	
Meetings with suppliers	●●●●●●●●	• Satisfaction of suppliers • Percentage of in-house manufacturing development progress • Coefficient of contractors' accident intensity • Duration of the contract with suppliers
Transfer of technical knowledge and training of suppliers in the form of in-house development	●●●●●●●●	
Survey of suppliers	●●●●●●●●	
Provide feedback on supplier performance results	●●●●●●●●	
Providing safety and health services to contractors (production and executive)	●●●●●●●●	
Holding a trading commission and fair selection of suppliers	●●●●●●●●	
Concluding long-term contracts with suppliers	●●●●●●●●	

Clarification of the obligations of the parties to the contracts, modern and transparent method of transactions and providing the experience and information required by the supplier during the period of cooperation, are examples of ethical behavior with partners and suppliers. Measuring the satisfaction of suppliers is carried out with the aim of creating transparency and mutual trust in the company, and while receiving feedback from suppliers, appropriate programs are defined and implemented to strengthen the win-win and sustainable relationship.






# Environmental perspective, solutions development

Chapter 5

GRI  
Report

2021





Protecting the environment, participating in environmental practices, safeguarding the interests of future generations, and working towards the well-being of society are important principles emphasized by MAPNA Boiler. The company tracks its environmental requirements through health, safety and environmental management and related committees, including the HSE Committee and social responsibility Committee. The organization's voluntary activities in the field of environment and social welfare are also carried out as part of the activities of the MAPNA ECO Committee. As mentioned earlier, the committee's mission is to engage the colleagues, families, and MAPNA community to volunteer and cultivate social and environmental patterns of social responsibility for the organization. Voluntary actions of employees in the environmental field, such as the social sphere, are conducted to create awareness and culture that will improve corporate image.

## MAPNA Boiler& Green Industry

MAPNA Boiler's moral policy towards the environment:

1. Legislation and commitment to environmental standards, the use of environmentally friendly systems, active collaboration with environmental organizations and efforts to raise the standards are our professional and ethical responsibility.
2. Educating and promoting environmental protection culture in MAPNA Group's human resources, especially staff and contractors, public encouragement of environmental activities, and promoting a culture of non-use of high-pressure electricity flows in the human environment are our priorities.

3. We consider creating Green Space in the Environment Projects and participating in green national development as a step towards environmental protection.
4. The moral, financial, and scientific support of nature lovers and environmentalists is our moral duty.
5. Institutionalizing environmental concerns in project management, prioritizing prevention over treatment in environmental degradation issues, and continuous efforts to reduce environmental pollution and invest in the optimal management of oil, chemical and human waste is our ethical policy.
6. We consider saving resources and developing recycling programs as an important step in protecting the environment.

MAPNA BOILER constantly tries to control its environmental impacts in the working environment and beyond it, the company tries to implement its volunteer practices to protect the environment. The company also strives to raise environmental awareness among all its stakeholders and encourage them to commit to the environment. The following is a description of the company's different approaches to the environment.



## Green Products

One of the important goals of MAPNA BOILER, which is one of the core values of the organization and is included in the corporate sustainability charter, is the green industry and environmentally friendly product delivery. The company has always strived to take this into account in the manufacture of its products as well as in its technology transfer contracts. Some examples of this approach are as follows:

### 1 Purify and desalinate water

The company's entry into the water industry is based on the basic needs of the country and society for water and water purification and desalination systems with various capacities and applications are included in the products of MAPNA boiler engineering and manufacturing company. The manufacture of these products leads to an increase in water recycling in industrial environments and reduces its loss and reduces pollution of industrial effluents, as well as the supply of safe water for consumption and drinking. In addition to reducing effluent pollution, these products can help improve the environment by reducing freshwater movement and reducing damage to freshwater source ecosystems. The types of desalination and water purification systems that can be designed, supplied, and manufactured in the company are as follows:

- Membrane desalination systems for seawater and brackish water
- Demin water treatment systems and treatment plants using electro deionization software (no need to use chemicals)
- Condensate water treatment systems entering the boiler and de-oiling of condensate water in the refinery and petrochemical complex
- Pretreatment systems include substrate filters as well as DAF and UF
- Municipal effluent and wastewater treatment systems including BNR and MBR
- Industrial effluent and wastewater treatment systems
- Zero liquid discharge systems
- Blowdown water recovery of boilers

Part of the company's products in this field are container products that are used to meet the needs of remote or deprived areas of water treatment or to be used in temporary water treatment in crises and damaged areas. Containerization of the complex, in addition to ease of transportation, will lead to a reduction of installation time. In addition, it eliminates the need for the process of building a shed or building to install equipment. Some of the uses of portable water purification kits are:

- Drinking water supply in critical situations for small towns
- Water supply at the time of increasing seasonal consumption demand
- Process water supply at the time of commissioning of industrial units
- Industrial water supply in conditions of changing raw water quality
- Emergency water supply to industrial units in case of production stoppage
- Compensatory water supply in case of change in the quality of drinking water or industrial water

The categories of all these systems are:

- Purified water production complexes from brackish water, seawater, and treated wastewater for industrial use up to a capacity of 400 cubic meters per day in one container and up to a capacity of 2000 cubic meters per day in two containers
- Demin water production complexes from brackish water, seawater, and wastewater up to a capacity of 12 cubic meters per hour in one container and 40 cubic meters per hour in three containers
- Drinking water production complex from brackish water and seawater up to a capacity of 400 cubic meters per day in one container and up to a capacity of 2000 cubic meters per day in two containers



Depending on the type, quality, and flow of incoming water and required water, a suitable set including disinfection equipment, pre-treatment, main treatment, washing system, final treatment system (Demin, etc.) is offered to customers. There are several pre-filters in the designed sets, including pressurized sand filter, UF, self-cleaning filter, and disc filter. De-oiling in all sets is done by RO and the process of producing Demin water is the responsibility of EDI. All systems are equipped with electrical panels and controls, and if necessary, it is possible to use the remote monitoring capability of the complex on the GPRS platform. In the design made for these products, an attempt has been made to consider the optimal design along with flexibility for the diversity of incoming water simultaneously and ancillary equipment, such as generator diesel, can be provided for the power supply of these sets.



The recovery boiler is one of the main products of MAPNA boiler engineering and manufacturing company which is installed below gas turbines in various power plants, oil and gas, and petrochemical projects. This contributes to the atmosphere as well as increases efficiency by reducing the heat output of the gas turbine, reducing the smoke delivery temperature, reducing consumption of Fuel and gaseous pollutants. The following tables illustrate the role of the recovery boiler below different gas turbines and compare two simple and hybrid recovery modes. By exploiting each heat recovery boiler downstream of Class E gas turbine, about 186 million normal cubic meters of fuel are saved annually and 328,000 normal cubic meters of NO emission in the environment is prevented. It also reduces the temperature of smoke entering the environment from about 550 degrees to about 110 degrees Celsius. By adding steam cycle to gas cycles, heat is recovered from the combustion products output from the gas turbine. The commonly combined cycle power plant blocks in Iran mainly have a 2 \* 2 \* 1 arrangement which includes two gas turbines, 2 recycling boilers, and a steam turbine. By placing two recycling boilers in the

output of 2 160 MW gas turbines, it is possible to produce a total of 160 MW of electric power in the steam turbine by absorbing the thermal energy of the output smoke from these turbines; however, to produce such power, without heat recovery in the boilers, it requires the use of another 160 MW gas turbine and the combustion of 5.9 Kg / s of free fuel. In each block, by combining the cycle, as much as the production capacity of a gas turbine, heat marketing is done in recycled boilers and the efficiency of the cycle is much higher than the simple cycle and will reach 52%. In addition to the optimal use of thermal energy and reducing fuel consumption, the exhaust smoke from the boiler is delivered to the environment at a temperature of about 110 degrees, which is much lower than the simple cycle and has far fewer environmental consequences. By combining each simple cycle, nine and a half kilograms of fuel are saved per second in consumption, which is equivalent to 11/83 NM. The resulting daily savings are about NM 1 million, and each combined cycle saves NM 373 million per year in fuel consumption. In terms of pollution, in a simple gas cycle block that includes two gas turbines, 3.1 million kg of NO and

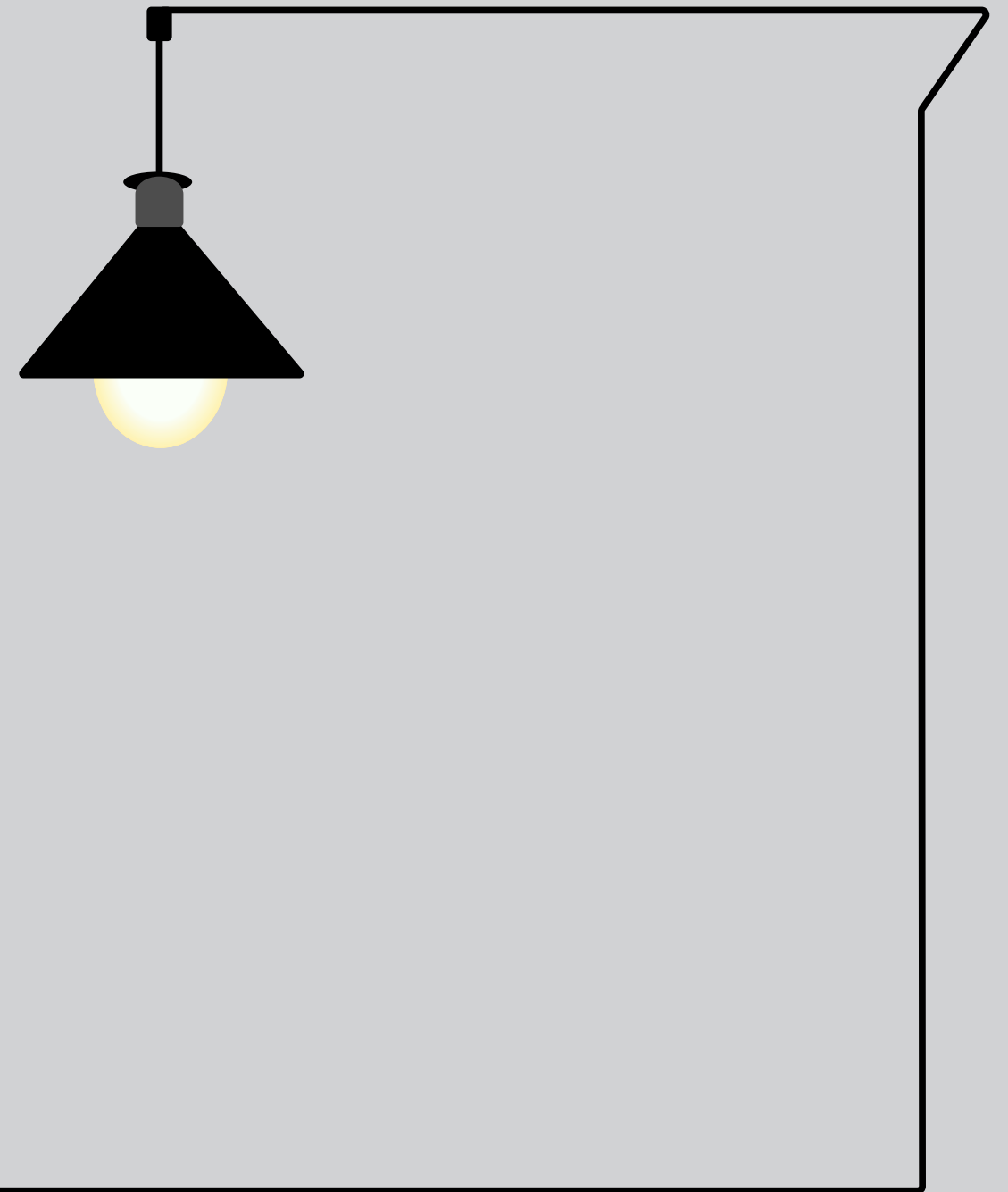
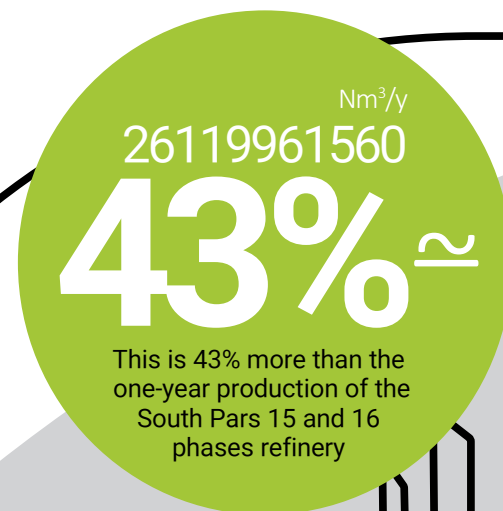
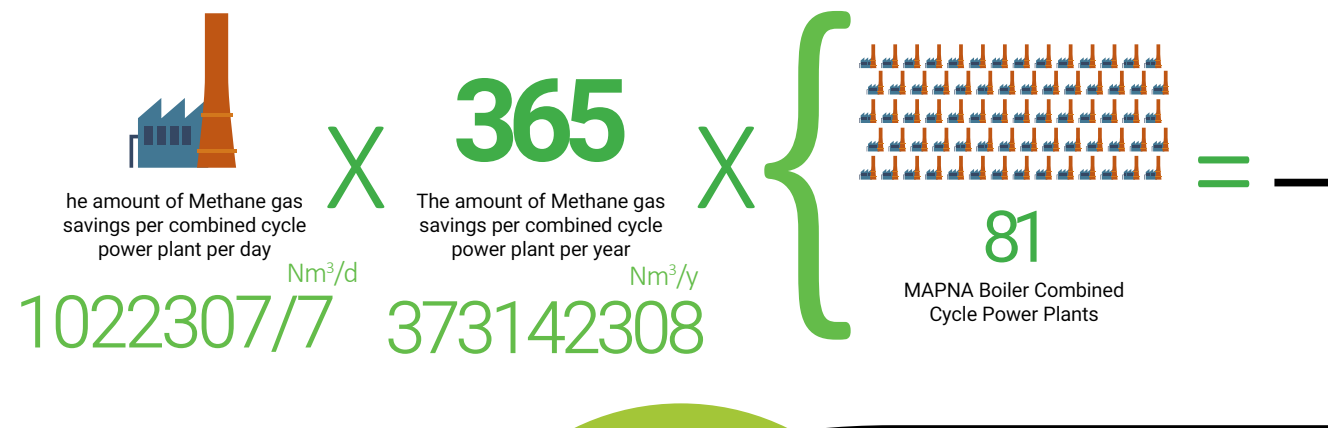
486 thousand kg of CO enter the environment annually. In other words, this amount of pollution is generated to produce 320 megawatts of electric power; that is, for every megawatt of electrical power generation in simple cycles, 4,062 kg of NO and 1,519 kg of CO enter the environment. If the simple cycle is combined, the amount of pollutants remains almost constant but power generation increases, and the emission of 650,000 kg of NO and 243,000 kg of environmental CO is practically prevented. So far, MAPNA Boiler Company has saved 30 billion normal cubic meters of fuel in consumption annually by constructing 162 units of Class E heat recovery boilers and has prevented the annual release of about 27 million normal cubic meters into the environment. By calculating the daily and annual consumption of the amount of fuel saved (equivalent to 2600 t /hr of pure methane), and comparing it with the amount produced in one of the phases of South Pars, significant results will be obtained from the amount of savings made. Regarding the increase of efficiency of simple class E cycles, it is about 31 to 33%, which reaches 47 to 52% with the combination of cycle efficiency.

In 2016, MAPNA boiler engineering and manufacturing company, by concluding a technology transfer and license agreement with John Cochryl Company, succeeded in upgrading the technology level of its recycled boilers and contributing to an increase in efficiency of up to 58%. This will lead to a reduction in fuel consumption and pollution reduction.

F-class turbine MGT-80		Comparative parameters	E-class Turbine MGT-70	
Combinatory cycle an HRSG and a gas turbine	Open cycle a gas turbine		Open cycle a gas turbine	Combinatory cycle an HRSG and a gas turbine
104 °C	579 °C	Outlet smoke temperature to the environment	550 °C	110 °C
445 MW	307 MW	The amount of power produced	160 MW	240 MW
2247 kg/year	3258 kg/year	NOx input to the environment per one megawatt of electricity	4072 kg/year	2715 kg/year
838 kg/year	1215 kg/year	CO input to the environment for one megawatt of electricity	1519 kg/year	1013 kg/year
18.7%		Increase the efficiency resulting from the conversion of the gas cycle to a combinatory cycle	18%	
124 kg/hr	180 kg/hr	The amount of fuel consumed per one megawatt of electricity	225 kg/hr	150 kg/hr

It is also possible to install a continuous monitoring system of pollutants in the exhaust for the purpose of monitoring the level of pollution in the combustion cycle resulting from combustion in the gas turbine as well as the ancillary burner (the major share of pollution is produced by the gas turbine rather than the ancillary burner).







## Green Building

Green and sustainable approach to building design is one of the ways to protect the environment by preserving natural resources, using clean and renewable energy instead of polluting the environment, using recycled materials, extending the useful life of the building and the possibility of future changes

without damaging the environment. In general, green construction is a way to increase the efficiency and efficiency of resources, energy, water and materials by selecting, designing, constructing, operating and maintaining a building that minimizes the harmful effects on human health and Environment.

Tehran office of MAPNA Boiler Company is also one of the green buildings. In designing this building, the LEED guide (Leadership in Energy and Environmental Design) has been used. Tips for following this guide at MAPNA Boiler Green Building are:



- Ice Bank's Cooling Energy Storage System
- Use of renewable energy sources such as solar cells and solar panels
- Use of thermal recycling system by receiving energy from the exhaust air
- Use of variable frequency drives for pump motors and fans
- Insulation of the side walls of the building
- Use of pre-insulated ducts
- Using Intelligent Building Management System (BMS)
- Use of special valves to reduce water consumption
- Use of aluminum reflectors on the facade to guide and use daylight
- Use of Lighting Management system (LMS)
- Using high-efficiency lights and low ductility
- Using prefabricated structures or bolt joints
- Use of recyclable materials in walls, ceilings, floors and joinery
- Use of water-based and recyclable paints
- Allocation of the lower floors of the building to public spaces such as restaurants and meeting rooms
- Using special profiles and glass to prevent heat exchange between indoors and outdoors
- Minimizing outdoor pop-ups
- Predicting green space on the roof



## Alternative ways to protect the environment

One of the most important approaches the company has always taken in environmental assistance is to improve environmentally friendly methods and processes. Some examples of this approach are as follows:



### 1 Eliminating the passive final stage

The final passive stage was eliminated at the end of the chemical washing process of the heat recovery boilers, which will reduce the Demin water consumption of about 300 cubic meters of start-up per boiler. Also, this action led to the complete removal of hydrazine from the chemical cycle of the power plant. The amount of hydrazine used per acid wash is about 300 kg per boiler. Ammonia consumption has also been reduced by 200 liters per boiler. These cases and their spread cause environmental damage, which has led to a significant reduction in the consumption of these substances.

### 2 Reverse osmosis recycling system

In Damin water treatment plants, a reverse osmosis recycling system is used. In this saline water system, reverse osmosis systems are desalinated in one step and about 65% of this water returns to the production water cycle. In this system, depending on the required Demin water capacity of the power plant for each module, water loss of 4 to 6 cubic meters per hour is prevented.

### 3 Turbocharger system in the process of desalination of seawater

Using a turbocharger system, which is a kind of energy recovery device, in the process of desalination of seawater, the pressure of saline water flow is used and leads to a reduction of plant power consumption by 1.1 kW per cubic meter of water. In the Lian project, the electricity-saving per day using this system is equal to 5.38 MW, which this amount of savings can provide electricity to about 6,000 households per month.

### 4 Using cryogenics tanks

In desalination projects for CO storage, instead of tanks equipped with chiller systems and cooling coils, tanks with special designs are used to store liquefied carbon dioxide. In this method, removing the chiller for use in cooling tanks saves electricity equivalent to 360 KW per day.

### 5 The term boiler components heat recovery

To continuously improve the design of recycling boilers and in its new design, a dehumidifier plus valves and related instruments have been removed and also, Lp DRUM and storage tank were provided, which, while increasing productivity and reducing material consumption, provided easier operation. Operational risks in this project have been eliminated due to the elimination of DEA\_ EVA and the elimination of economizer bends as high-risk points for demolition, which can also reduce the risk of environmental damage. On the other hand, considering the necessary systems for proper operation of the boiler in the case of operation with diesel fuel in gas turbines such as ECO system is one of these cases.

### 6 Modification of chemical processes of heat recovery boilers

Elimination of hydrazine and phosphate injection system to LP DRUM improves the chemical regime of the cycle and leads to a reduction in the consumption of chemicals or the elimination of harmful substances such as hydrazine or the use of a suitable alternative to it. In addition, it leads to a reduction in the amount of blow down and wastewater. Also, for the recycling of wastewater, a boulder recycling system has been installed, which makes the blow down water suitable for reuse in the water treatment unit and finally the cycle.

## 7 Reducing the weight of structures and equipment

Reducing the weight of materials and equipment in various aspects such as reducing the consumption of materials and energy, and the reduction of gas emissions and wastes resulting from the production of these materials can lead to a reduction in the negative impact and the environment. In this regard, the structure's weight and non-compressive parts have been reduced by approximately 90 tons and also the weight of the drum by approximately 22 tons per boiler in Niam design projects. Weight loss under pressure (from HS1 to HS3) has also been targeted at environmental issues and responsible consumption.

These actions can lead to the following:

- Reducing costs
- Reducing the cost of transporting raw materials and the final product, as well as reducing fuel consumption and pollution caused by it.
- Reduction of production processes and pollution from it (such as reduction of the gases caused by welding and so on)
- Reduction of water used in the hydro test process of equipment (factory/site)
- Reduce installation costs as well as the time used by machines during installation and reduce fuel consumption and pollution caused by it.
- Reduce water and chemical consumption during chemical washing as well as reduce effluents caused by it.

## 8 Supply and use of plasma shear machine (CNC)

MAPNA Boiler Co. used to employ a turning machine to shear the sheets used, which resulted in air pollution caused by the cutting fumes. Therefore, to control this pollution, a plasma shear machine equipped with a smart ventilation system was replaced to dramatically reduce environmental pollution in the production hall.

## 9 Ongoing studies

In addition to the measures taken, the following studies are being carried out to improve the environmental indicators, and based on their results, measures in this direction will be defined.

- Carrying out salinity distribution studies and considering the outfall system to ensure compliance with environmental permissible limits for desalination projects.
- Carrying out gas dispersion studies to ensure the spread of exhaust smoke from the boiler in accordance with environmental standards.
- Carrying out studies related to the Noise section to ensure compliance with the permissible limit for noise pollution
- Carrying out studies on the life of high-risk parts for fatigue and creep degradation mechanisms and ensuring boiler operation in the long term.

### Ethical Code No. 201

We protect and conserve energy, water, raw materials, and other natural resources and act in a way that saves energy and resources.

### Control measures in order to protect the environment

In order to fulfill its obligations and social responsibilities, MAPNA Boiler Company constantly monitors the environmental situation and defines related measures to control its effects on it. Some examples of these actions are as follows:

#### Water

Water is one of the most important elements in the ecosystem that is referred to as the source of life, and the lives of humans and other organisms in nature and the function of many industries and systems depend on it. The importance of water and its use in a dry region like Iran is doubled. MAPNA Boiler, therefore, recognizes the importance of always reducing water consumption through system optimization.

### Construction and development of the treatment plant

One of the common systems to improve water efficiency in companies responsible for water consumption is the establishment of water treatment systems. In these companies, based on water functions, treatment plants are created in various dimensions that reduce the final volume of water consumption by increasing refining and recirculating. In the past, MAPNA Boiler Company had a sanitary wastewater treatment system with a capacity of 120 cubic meters, and the output from the treatment was used to irrigate the green space. During the reporting period, the company, based on its ability to build treatment plants, developed an internal treatment plant for industrial use within the company. Accordingly, the Demin water output (without solutes) of the treatment plant is used for the hydrotest process. According to this measure, the amount of recirculating water in the company has reached about 90%.





## Water consumption management

MAPNA Boiler has taken the following measures to reduce water consumption:

- Purchase and replacement of smart water taps in all sanitary services
- Circulating water consumption in the hydrotest process
- Using the wind system to increase the efficiency of the cooling system of the induction bending device next to the water consumption
- Plumbing and use of treated water in irrigation of green space of the complex and the environment around the factory

## Water Conservation Culture

In addition to streamlining processes, the company also informs the personnel through the dissemination of environmental messages in order to cultivate and refine staff behaviors.

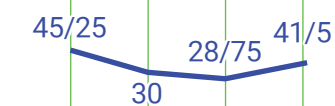


## Water consumption / product tonnage

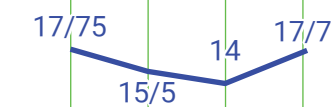
The amount of water consumption in recent years in the company is as follows, the downward trend can be seen. The increase in water consumption in 2018 and 2019 was due to the decrease in production tonnage.

## Principled disposal of effluents

As mentioned, the treatment plant built in MAPNA Boiler Company has made it possible to treat industrial wastewater and effluents to the highest levels. In this way, by recycling water, about 95% of water is supplied for irrigation, industrial and drinking if needed. Also, the parameters of the output effluent are in 100% compliance with the rules and standards of the Environmental Protection Organization. For standard monitoring of effluents, there are indicators including TSS, COD, BODTDS, coliform, etc. that can be used. All indicators related to effluent are measured and monitored in Magna Boiler Company and all of them are within the standard range.



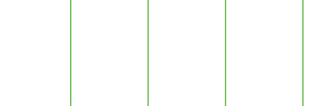
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[ BOD index ]



[ TDS index ]



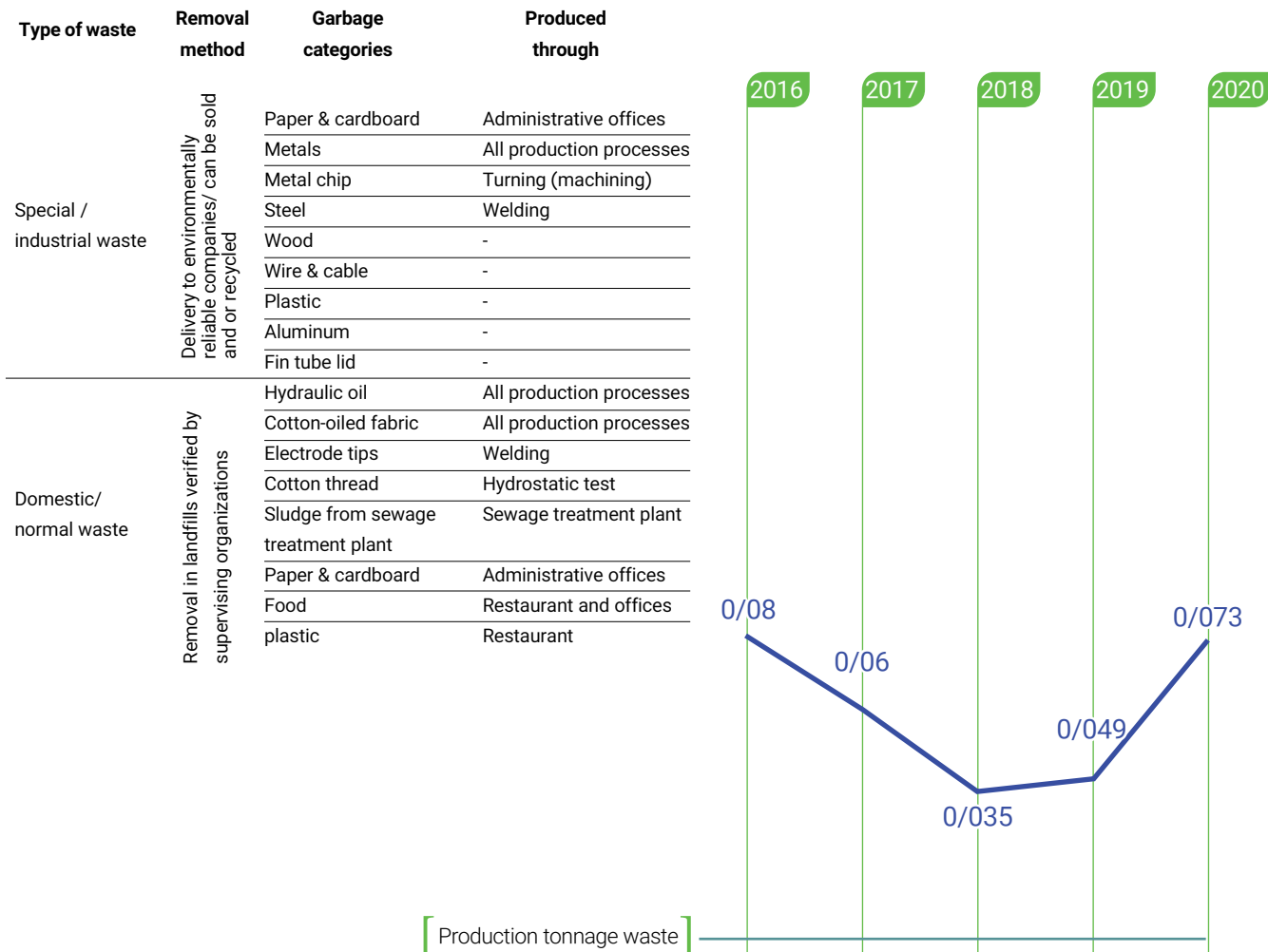
[ Index of gastrointestinal coliforms ]

## Waste and recycling

MAPNA Boiler Company has a comprehensive waste management program with the supervision of the EPA, with all waste in the company being separated from the source. The company has systematized how to manage its waste. MAPNA BOILER has contracted with the trusted environmental companies to fund its waste management, and seasonally submits a report to the Environmental Agency detailing how the waste is disposed.

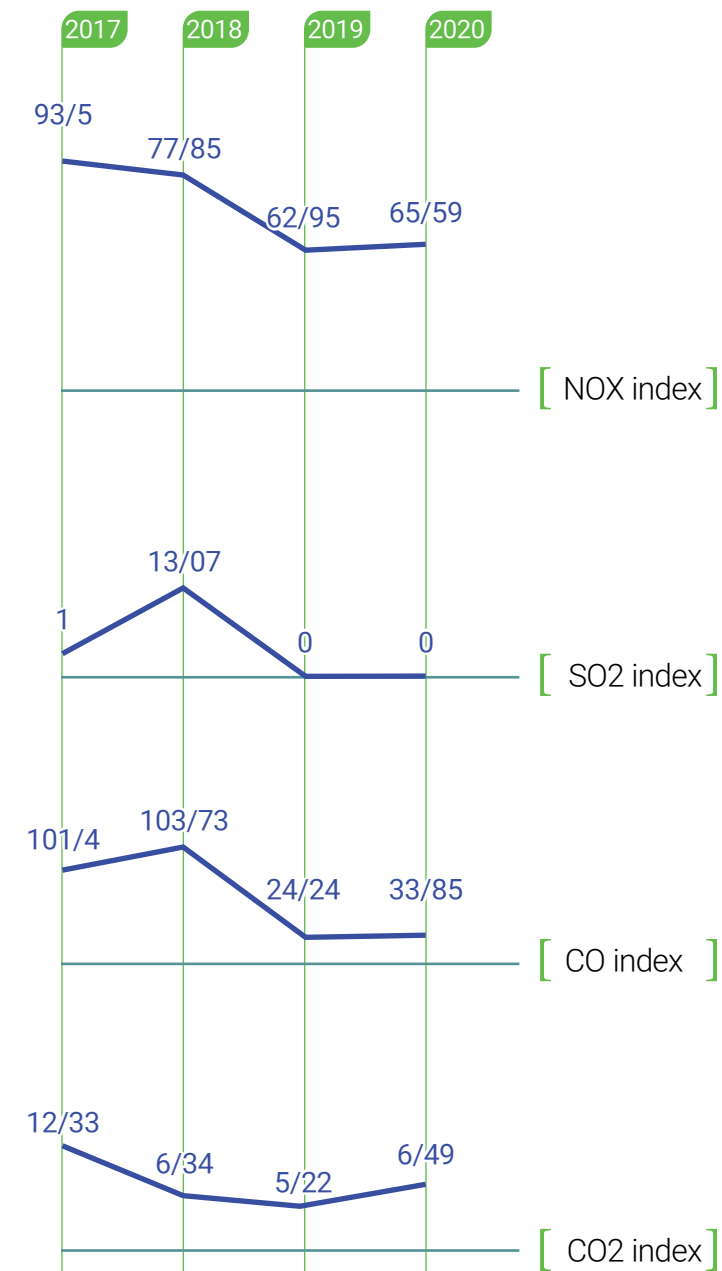
The types of company waste are as follows:

- Normal / Household Waste: This type of waste is transported and disposed of under contract with Waste Management Agency.
- Recyclable Waste (Waste): Recyclable waste produced in the company is considered by the Waste Committee and is then sold.
- Special and hazardous waste: In accordance with the environmental requirements of the EPA, special waste will be disposed of through the EPA. The company also delivers this type of waste to the EPA.



## Air Quality and emission of gasses

Air quality is one of the issues MAPNA Boiler focuses on in its operations, and seasonally measures and monitors related parameters through self-reported seasonal measurements. For environmental purposes, the company controls its emissions as minimally as possible, and measures and monitors greenhouse gas emission indices, which are always within the standard range or even below it.





## Energy

Because the energy in Iran is cheaper than in many other countries and imposes lower costs per job, energy efficiency is often neglected. MAPNA Boiler has established a systematic approach for managing energy in the company to improve its processes. In this regard, based on the overall goals of the integrated management system (optimum use of materials, natural resources, and energy), the energy management approach is based on ISO 50001 and the relevant

certification was obtained in 2014. In this approach, by setting up an energy task force (with the aim of implementing relevant policies) under the supervision of the HSE committee, all energy consumption metrics, consumption points, and potentials for consumption reduction are determined. Currently, with the installation of the metering system, the energy consumption of the equipment is recorded over defined time intervals and the results are analyzed. Based on a systematic

approach, energy management policies and goals are formulated and reviewed, and the Energy Management Policy and Policy Working Group manage the energy consumption based on the developed plans. In order to improve the energy consumption of the relevant workgroup, it develops and implements corrective and preventive measures for energy management machinery and equipment, some of which are as follows:

- Design and deployment of monitoring and measurement systems

Energy consumption data monitoring system for overhead cranes, heat treatment furnaces, CNC machines and providing energy saving solutions based on measured data monitoring with the priority of low-cost measures

- Design and implementation of the control system, Monitoring and data recording (SCADA) of power distribution substations

With the ability to measure current and voltage harmonics of three phases for different uses (office building floors) separately, measuring the volt-ampere hour of consumers, measuring the amount of virtual power consumption, recording the amount of blackout per minute for each consumer to Separate shape, record and display the amount of consumer demand and record and display the maximum daily demand to control consumption and define corrective measures to reduce it

- Design and implementation of monitoring and control system of factory water pumping station

Precise monitoring and control of the operation of drinking water pumps, the possibility of measuring and sampling of various variables, reducing the time of detection of water leakage (from at least one week to a maximum of one day), reducing the amount of water consumption recorded in the magnetic meter from 100 cubic meters to about 60 cubic meters by eliminating hidden leaks and annual savings of about 120 tankers (10 cubic meters)

- Remove the restaurant engine room from the consumption circuit and replace it with a workers' engine room

Based on the calculation of the heat load of the restaurant the consumption of sanitary hot water and the feasibility of the capacity of the engine house of the nearby house by removing the restaurant engine room from the consumption circuit and replacing it with the engine house of the worker, reducing electricity consumption by 4 kWh, and reduce burner gas consumption by 22 cubic meters per hour

- Changing the consumption of heat treatment furnace burners from diesel to gas

To reduce pollution and optimal energy consumption, changing the consumption of heat treatment furnace burners of diesel and gas was performed in 20 units

- Design and implementation of the intelligent control system of the deep well pump of Elahieh complex

Measurement of water level and well-filling speed by level detection sensors and design of pump operation schedule based on calculating water pumping time and well-filling speed and using maximum pump efficiency and maximum well water capacity of 120 cubic meters per day, Prevention the pump from drying out and burning, prevent the transfer of water to the factory at a rate of about 40 cubic meters per day

- Update and overhaul of DP heavy lathe

Increase the capability of the CNC machine with an accuracy of 0.01 mm and reduce machining time and a 20% reduction in power consumption and energy savings of up to 12 kWh per day

- Modification of the hydraulic system of the agglomerator

Increasing the efficiency of the device by about one and a half times, reducing the cost of electricity consumption of the device, increasing the safety of the device, and reducing the noise pollution of the device for the operator and equipment of the device, possibility of maintaining and repairing the device with much less cost and time, increasing the access time to the device for production, reducing maintenance and repair costs due to reducing the depreciation of parts in the device

- Design and manufacture of electronic argon gas control board Argon welding machines

Argon gas shut-off control by shunt flow feedback, control system parallelization with the possibility of the manual gas control command, reducing the cost of the control system by using the built-in power in the net unit, eliminating the costs of external controller exercises and saving at least 50% in gas consumption.

- Design and manufacture of Harp preheater

Intelligent process control to reduce energy consumption, control the angle of fire based on thyristor systems, reduce voltage to ensure the safety of the operator, control current based on the graph provided by plc, control the transformer temperature and prevent burning of elements in the thyristor control system

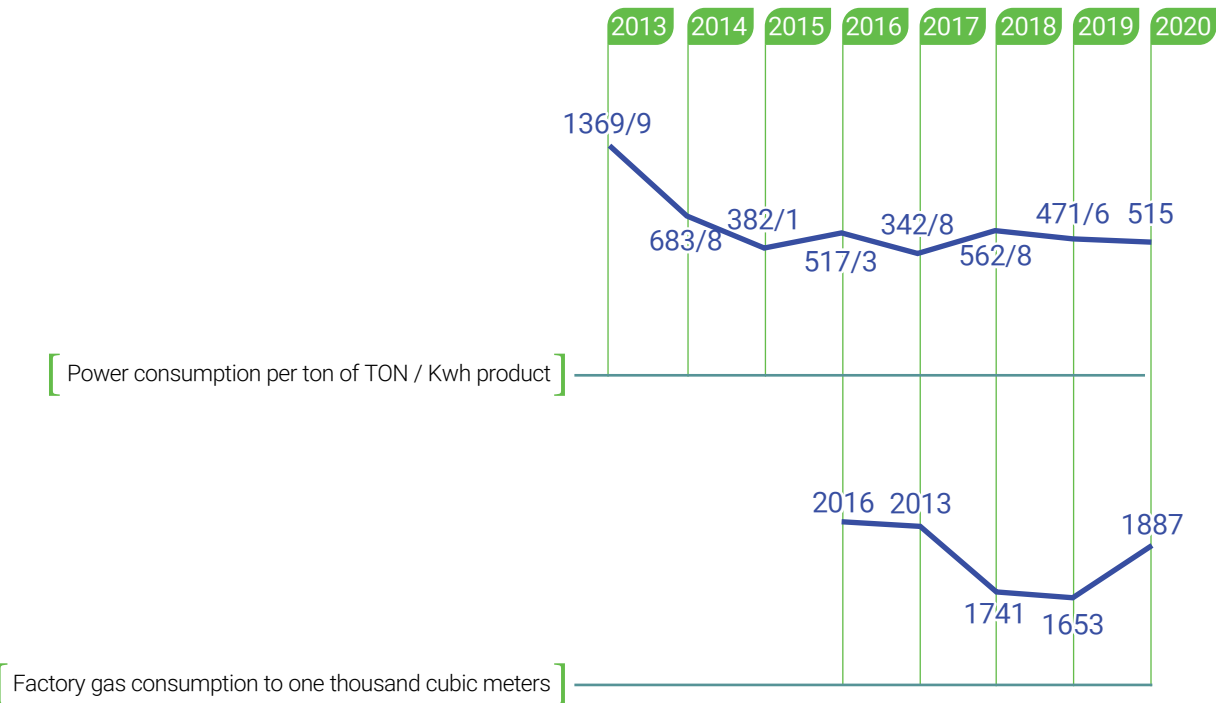
- Design of mechanism to reduce oxygen consumption of MESSER cutting machine

Eliminating repetitive processes, eliminating welding and grinding, reducing energy consumption and production costs of the organization, increasing the quality of the final product, and saving 50% oxygen

- Systemic actions

Review and formulate energy management guidelines, revise the energy baseline, identify and analyze salient aspects of energy, develop guidelines for building energy management culture, implement corrective actions based on energy policy, send a public call for energy saving to attract public participation and create a dashboard for monitoring performance and energy management

The production trend of the average energy intensity index has been declining in recent years. The reason for the fluctuations in recent years has been the decrease in production tonnage.



Overhead crane consumption management monitoring system



The most important measures taken in the direction of energy management system



Power consumption performance monitoring and management dashboard



Consumption management monitoring system of Ashkoda boring devices

Product effects

MAPNA BOILER always strives to take responsibility for managing the effects of its products throughout their lifecycle. In order to effectively manage the business, the company will implement all relevant health, safety, and environmental implications using Hazard Identification Approaches (HAZOP Study) and environmental risk/opportunity management and standards-based approaches, ISO 14001: 2015 and ISO 45001: 2018. Some examples of the above approaches can be found in the following stages of product development.

	Health / safety / environmental consequences	Examples and actions taken
Production	Gases and metal vapors from the welding process, dust, noise, ergonomic issues, non-ionizing and ionizing radiation, exposure to vibration, skin and respiratory contact, and a variety of solvents, chemicals, dangers of electric shock, falling objects while moving, fire hazard, explosion hazard, contact with sharp and sharp surfaces, contact with rotating machines (lathes and stones, etc.), production of ordinary, special, and industrial wastes, sanitary effluents, industrial effluents, Noise pollution, waste of resources and energy, soil pollution, energy costs	Use of ventilation systems, use of PPE, HSE course training, installation of electronic protection and eye system, modern inspections of production halls, development of work safety license instructions, formation of HSD specialized committees, encouragement and punishment system, observance of SDS provisions of chemicals, performing environmental measurements in the form of self-declaration plan, waste management from origin to disposal based on the comprehensive plan of waste management, construction of shot blast hall, identification of environmental laws and requirements, Implementation of the wastewater treatment system and use of treated water to irrigate green space, periodic PMs of equipment to reduce energy consumption, audit (periodic measurement) of energy, formation of the emergency response team, use of energy management solutions for the final product and product production process
Transportation	Falling and overturning of cranes/loads during loading and unloading, road accidents, severe damage to parts and their demolition, falls in canals due to non-observance of safe distances, environmental pollution due to leakage of chemicals sent to workshops, product waste and packaging, Energy consumption during transportation	Observance of product loading and transportation requirements, control of operator certification and machine documents, load chart control and crane health certification, preparation of lifting plan and method statement of high-risk operations, codification and notification of contract requirements for cargo contractors, observance of SDS provisions of chemicals, waste management, providing appropriate loading tools and equipment, observance of environmental requirements in transportation
Installation	Gases and vapors from the welding process, increase in air pollutants due to the use of worn-out machines, hazards of scaffolding, dust, noise, ergonomic problems and musculoskeletal disorders, non-ionizing and ionizing radiation, exposure to vibration, contact with solvents, chemicals, dangers of electric shock, falling objects while moving, risk of fire and explosion, contact with sharp surfaces, contact with rotating devices (stones, etc.), burns due to contact with hot surfaces, falling from heights, waste generation, waste of resources, Crop waste, environmental noise pollution, stumbling due to uneven surfaces, heat and cold stress	Implementing HSE standards, obliging contractors to comply with HSE and supervising their activities, creating an HSE inspection and management team on the site, measuring the art system and obtaining its approval, performing specialized calculations in selecting critical jobs, Holding specialized training courses for working at height (IRATA), obtaining health certificates for high-risk systems (cranes), preparing lifting plans and method statements of high-risk operations, compiling instructions for work safety licenses, purchasing appropriate safety equipment for working at heights, installing protection systems to prevent electric shock, installation of fire alarm system, purchase of equipment in compliance with environmental considerations, use of machinery with technical inspection and year of construction, holding general and specialized training during work, leveling traffic routes by equipment with graders and loaders, establishing systems of encouragement and punishment of personnel
Setting up	Detergents used before the operation, working at height, contact with hot surfaces and steam pipes, electric shock, fire, industrial effluent, heat, and cold stresses	Implementation of HSE standards in pre-commissioning, purchase of appropriate safety equipment for working at heights, installation of protection systems to prevent electric shock, installation of detectors, and equipping all places with fire extinguishers,
Using	Boiler exhaust gases, water consumption, hot exhaust air, oils and consumables, environmental noise, waste of resources and energy, heat and cold stress	Providing operating, maintenance, and repair instructions for users, mention safety, environmental and energy tips in operation instructions, heat recovery through harp exhaust vapors and reuse of drum exhaust water as boilers blow down, new systems in products such as desulfurization, value engineering, weight reduction, and harp efficiency, personnel power control to prevent heat capacity, Holding training



## Volunteer environmental practices

One of the key activities of the MAPNA ECO Committee is to address priority environmental volunteering within the company and the local community. The Committee on Environmental Affairs conducts relevant training at the regional level, implementing environmental programs and actions on environmental occasions (clean air, clean land, tree planting, etc.) and environmental protection and Cultivation measures in this regard. Restrictions on corona disease have led to a reduction in the number of voluntary programs in the organization during the reporting period. Some of the voluntary actions in this regard have been as follows:

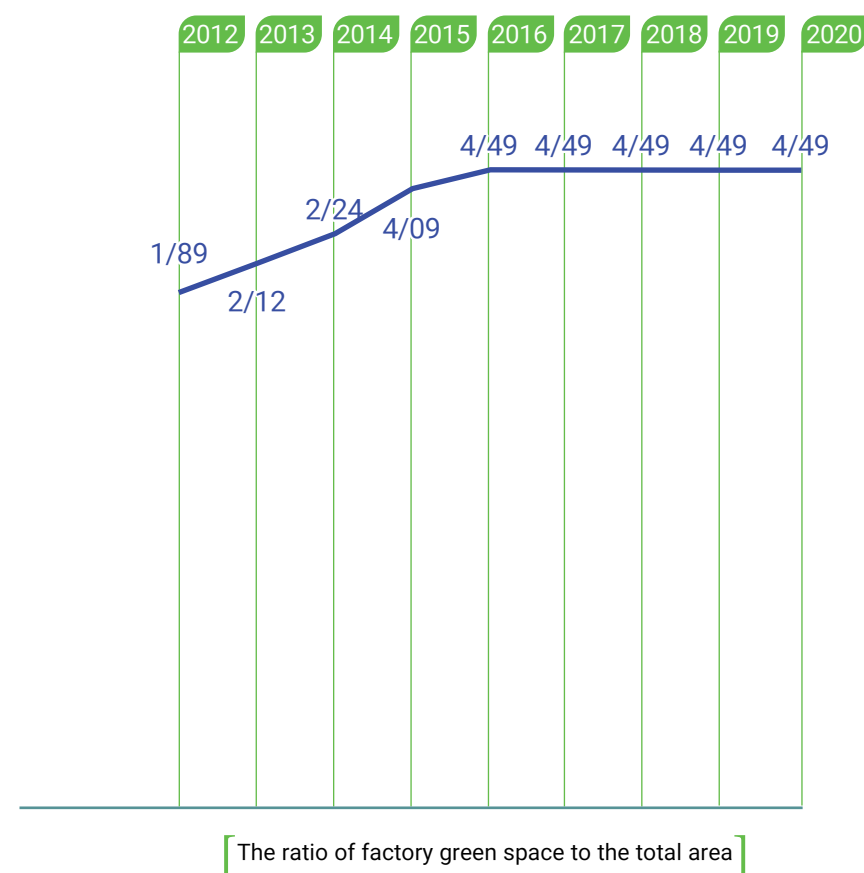
### Pay attention to the ecosystem of the area

MAPNA Boiler Company is trying to control its impact on the ecosystem of its activity place through various means and to this end, it is taking various voluntary actions. In this regard, the company controls the emission of greenhouse gases under the supervision of the Environment Organization and smoothly maintains them within the standard range, and takes the necessary improvement measures to reduce the emission of this type of gas, which is described in parts of the report. The company also controls the pollution of its effluents and through treatment and recirculating, reduces the amount of pollution in its effluents to a minimum and uses the recirculated water in its industrial and consumer processes.



Paying attention to animals in the operational areas of the organization to protect animals and reduce the impact on their health is one of the activities that is done with the help of interested colleagues and with a positive view of the company in line with social responsibilities. The organization strives to keep animals in its operational areas away from harmful activities. In the Urmia project, where the habitat of the Asian yellow deer, together with the employer of this project, Tadbirsazan Sarmad Company and the Environment Organization of West Azerbaijan, dangerous areas for the entry of this species were identified and by supplying materials with an approximate value of 2 billion Rials, fencing was done on the site to prevent this species from entering areas that could lead to damage to them.

A double-walled radiographic area of the company to prevent radiation to animals has been another measure to protect the animals in the area. The preparation of food containers for animals and the use of surplus food in the company's restaurant to charge the food containers, as well as the sterilization and treatment of the company's sick animals have been other things that have been done with the help of animal support colleagues. The company also strives to develop and maintain green space in its area of activity. MAPNA Boiler Company is sensitive to cutting down trees as environmental symbols and plants trees on some occasions annually. It also tries to improve the environment through measures such as snow removal and pruning of trees and weeds inside and outside the company.



It is worth mentioning that the company can not plant more green space inside the company due to the limitation of its internal space, therefore, the amount of green space has remained constant in recent years and some cases, in coordination with environmental organizations, trees are planted outside the company space.





Another category of the company's activities is related to creating a recycling cycle and waste disposal and cleaning the environment. In this regard, the company has placed the land as a waste field and separates the recyclable materials, and sells them by allocating waste and allocating its income to charity. In addition to the separation of recyclable materials, food waste is also used to feed animals. Other measures in this regard have been cleaning up the environment around the factory and installing garbage bins.



Another set has been actions related to environmental awareness and the culture of colleagues. Voluntary cleaning of the environment and garbage collection of Kavosh Boulevard, collecting plastic bottle caps, replacing plastic bags, buying with cloth bags, holding photography and painting competitions with environmental issues, and creating a culture of water consumption pattern and inserting awareness messages in Communication channels are among the voluntary cases in this regard.





## Environmental certifications

MAPNA Boiler Company has succeeded in obtaining numerous certificates, consents, and awards in the field of the environment due to its good performance in the field of environment. The standard requirements of the environmental management system, ISO 14001, is one of the items that the company has succeeded in implementing and certifying for its environmental excellence.

Also due to environmental measures and the absence of environmental pollution, this company has succeeded in obtaining the green industry certificate in 2014 and also obtaining the top green industry silver statue by the Environmental Protection Organization in 2017. In this event, the criteria for selecting green industrial units are environmental measures related to reducing air pollution, water pollution and noise pollution, waste and effluent management, green management system, effective maintenance of ISO 1401 certification, green product production, green space, HSE training, and role-playing in promoting environmental culture in line with social responsibility. It is worth mentioning that MAPNA Boiler Company did not have any environmental non-compliance in the field of soil, air, noise, water, and Effluent pollution during the reporting period.



Sub-index	Index title	page number	Presentation status
101	Establishment and foundation	16-17	Full
102-1	firm Name	16	Full
102-2	Field of activity of the firm, brand title, description of products and services provided by the company	16-24-25	Full
102-3	Address and main location of the company	19	Full
102-4	Geographical areas of the firm's activities	20-24	Full
102-5	The nature of the firm from a legal point of view (public, private and semi-private, etc.)	38	Full
102-6	Target market of products and firm size	26-27	Full
102-7	Activity area	24-25	Full
102-8	The number of staff in the company at the moment	35-90	Full
102-9	firm Supplier Chain	16	Full
102-10	Significant changes that have occurred in the firm since its inception	11-17-41-42	Full
102-11	How to take precautionary measures in the organization. Prevention of environmental impacts,	136-146-155	Full
102-12	Extra-organizational activities of the firm - interacting with stakeholders outside the firm	76-84-120-123	Full
102-13	Join the forums	84-120-121	Full
102-14	Statement of senior management (managers) or decision-makers of the firm that shows the orientation of the organization with the organization's sustainability strategies	4-5	Full
102-15	Key effects, threats, and opportunities (economic, environmental, social on all stakeholders and their expectations and their evaluation)	48-49-155-62-64-73	Full
102-16	Values, principles, standards, and norms of behavior (including the definition of ethical codes)	12-102-103	Full
102-17	Reporting consulting mechanisms based on work ethic and honesty	80-96-101-103-105	Full
102-18	Structure of the strategic system (including the committee of the highest body of the strategic system, the responsible committee for making decisions on economic, social, and environmental issues).	18-38-42-50-53	Full
102-19	Delegation of authority (including a description of the process of delegation of authority in economic, environmental, and social matters by the highest institution of the firm's strategic system to senior managers and other employees).	51-52-39	Full
102-20	Executive levels responsible for economic, social, and environmental issues	50-51	Full
102-21	Stakeholder advice on economic, social, and environmental issues	38-50-51	Full
102-22	Integration of the highest institution of the strategic system of the firm and its committees	38-39	Full
102-23	Head of the highest governing body of the organization	38-38	Full
102-24	Candidate process and selection of the highest institution of the strategic system	38-39	Full

Sub-index	Index title	page number	Presentation status
102-25	Conflict of interest	42-43-102-103-52	Full
102-26	Map of the highest institution of the strategic system in setting goals, values and strategy	40-41-50-53-38-39	Full
102-27	Knowledge and information is the highest institution of the strategic system of the firm	-	Lack of approach
102-28	Performance evaluation of the highest institution of the strategic system of the firm	38-39	Full
102-29	Identifying and managing economic, environmental and social issues	38-45-48-53	Full
102-30	Effectiveness of risk management processes	62	Full
102-31	Review of economic, environmental, and social effects	38	Full
102-32	The role of the highest institution of the strategic system in sustainability reports	52-38	Full
102-33	Dealing with the critical issue, the critical issue considered by the governing body	38-53-63	Full
102-34	The extent and nature of critical issues	38-53-64	Full
102-35	Reward policies	91-93	Full
102-36	Wage determination process	91-94	Full
102-37	Stakeholder participation in the reward system	-	Lack of approach
102-38	Annual wage rate	94	Full
102-39	Percentage increase of annual wage payment rate	94	Full
102-40	List of stakeholder groups (Help: Types of stakeholders include civil society, customers, employees, staff, trade unions, local communities, and suppliers).	43	Full
102-41	Group agreements (this principle indicates the percentage of employee participation in the firm)	-	Lack of approach
102-42	Identification and selection of stakeholders (based on the identification and selection of stakeholders interacting with the organization)	43	Full
102-43	Stakeholder interaction approach (all stakeholder approaches including the frequency of interactions, type and group of stakeholders and mentioning the interactions made in the reporting process)	80-85	Full
102-44	Important and key issues (identified important and key issues resulting from interaction with stakeholders and their concerns and how the organization responds and reports to these issues).	48-49	Full
102-45	Institutions involved in the financial statements (list of all institutions involved in the financial statements of the firm, for the purpose of transparency of the report and its availability to the public)	38	Full
102-46	Defining the contents of the report and its limitations (description of the process of preparing the content of the report and its limitations, how to define and implement the principles of the report, which includes how to identify issues and hypotheses in different areas)	4-6	Full



Sub-index	Index title	page number	Presentation status
102-47	List of main topics (list of topics identified in the process of preparing the content of the report)	48-49	Full
102-48	Review information	During the report-6	Full
102-49	Changes in the report (significant changes compared to previous reports)	During the report-6	Full
102-50	Reporting Courses (Mention Information and Reporting Courses)	6	Full
102-51	Last reporting date	6	Full
102-52	Reporting cycle (eg annual, biennial)	6	Full
102-53	Allocate communication channels to answer questions about the contents of the firm's report	6	Full
102-54	Set the report according to the GRE standard (this method is used in details or generalities)	6	Full
102-55	Mention the principles of GRI indicators	162	Full
102-56	External guarantees (firms can use various methods, internal and external sources, to validate their reports in order to comply with the GRI standard)	-	Lack of approach
103-1	Report important topics and its aspects	48-49	Full
103-2	Management approach and its components	45	Full
103-3	Evaluating management approaches	41-45	Lack of approach
201-1	Direct economic value in production by	58-64-68-73-94	Full
201-2	Financial consequences and other threats and opportunities in terms of weather repairs	-	Not applicable
201-3	Definition of profitable accrual plans and other discarded plans (suspended plans)	-	Not applicable
201-4	Funding received from the government	73	Full
202-1	Wage rate relative to the level of local standards and the minimum wage	-	Not submitted
202-2	The ratio of hiring senior managers from local communities	-	Not submitted
203-1	Invest in infrastructure and support services	64	Full
203-2	Significant indirect economic effects	70-73	Full
204-1	Ratio of costs paid to local suppliers	71	Full
205-1	Corruption risk assessment operations	-	Lack of approach
205-2	Communication and training related to anti-corruption practices and policies	-	Lack of approach
205-3	Confirmed events in the field of corruption and actions were taken against it	105	Full
206-1	Legal action against anti-competitive, anti-trust, and monopolistic practices	-	Not applicable

Sub-index	Index title	page number	Presentation status
301-1	Volume and weight of consumables List of recyclable (non-renewable) and non-refundable (non-renewable) consumables	150	Full
301-2	Recyclable raw materials	150	Full
301-3	Modified products and packaging (recycling)	-	Not applicable
302-1	Internal energy consumption of the firm	152-154	Full
302-2	External energy consumption of the firm	-	Lack of approach
302-3	Energy intensity of consumption efficiency index	154	Full
303-1	Water sources used	147-149	Full
303-2	Water resources are defined by the firm based on available and used water resources	147-149	Full
303-3	Reuse and re-read water consumption	147-149	Full
304-1	Use or proximity to workplaces in areas with high biodiversity value or protected areas	-	Not applicable
304-2	Significant impacts that the firm's activities, products, or services have on biodiversity	-	Not applicable
304-3	Is the place of activity of the company one of the areas under environmental management?	-	Not applicable
304-4	Define the activities and operations of the enterprise according to the consideration of endangered species	-	Not applicable
305-1	Direct emission of greenhouse gases	151	Full
305-2	Indirect energy consumption leads to greenhouse gas emissions		Lack of approach
305-3	Direct energy consumption leads to greenhouse gas emissions		Lack of approach
305-4	Emission intensity of greenhouse gases	151	Full
305-5	Reduce greenhouse gas emissions	138-141-151	Full
305-6	Emission of ozone depleting compounds	-	Not applicable
305-7	Emission of nitrous oxide, sulfur oxide, or other compounds	151	Full
306-1	Quality and status of wastewater treatment	149	Full
306-2	Types of waste effluent, sewage, and waste produced and its disposal methods	149-150	Full
306-3	Significant leakage sources	-	Not applicable
306-4	Dangerous waste transportation	150	Lack of approach
306-5	Water resources that are affected by the firm's effluent	-	Not applicable
307-1	Failure to comply with environmental laws and regulations	160-161	Full
308-1	New suppliers being evaluated for environmental criteria	70	Full
308-2	Negative effects of suppliers' activities on the environment	-	Lack of approach

Sub-index	Index title	page number	Presentation status
401-1	Recruitment and relocation the total number of employees and employment rate of new employees during the reporting period, age group, gender and locality (native/non-native total number and turnover rate), Transfer of 28 staff during reporting, age group Gender and locality (native/non-native)	35-90	Full
401-2	Benefits offered to full-time employees that do not include part-time employees. The benefits list includes full-time employees stating location. Such as life insurance, health care, disability support, parental leave, retirement, stock ownership, etc.	94-95	Full
401-3	Parental leave	100	Full
402-1	Minimum time to announce changes to employees, to apply changed procedures	-	Lack of approach
403-1	Official representative of the staff members of the Occupational Safety and Health Committee	109	Incomplete
403-2	Types of injuries and injury rates, occupational diseases, lost days, absenteeism, and work-related deaths (lost days mean working days, and the starting point is considered, for example, the day after the accident or three days later).	111	Full
403-3	Employees who are at greater risk for work-related injuries	110	Full
403-4	Formal agreements with trade unions regarding the health and safety of employees covered	94-110-11	Full
404-1	Average training hours per year per employee	97-98-111	Full
404-2	Staff Skills Transfer Programs (Knowledge Transfer Assistance Programs to facilitate employment and management, such as disability or dismissal)	98-99-101	Full
404-3	Percentage of employees whose performance is regularly improved and evaluated	-	Not submitted
405-1	Diversity (equal opportunities) according to the strategic system of the firm	106-107	Full
405-2	Basic wage rate and payment to men and women, basic wage rate and wage to men and women according to job classification, type of activity, and geographical area of activity, and if there is a definition of specific places of activity (which have different conditions)	-	Not applicable
406-1	Incidents of discrimination and remedial action	-	Not applicable
407	Organizations risk and collective agreements about operations and suppliers	-	Not applicable
408-1	Actions and operations in the direction of accidents caused by child labor	-	Not applicable
409-1	Combating forced labor (including the activities of firms and suppliers themselves)	-	Not applicable
410-1	Supervisors trained to protect human rights	-	Lack of approach
411-1	Incidents of violation of the rights of indigenous peoples	-	Not applicable

Sub-index	Index title	page number	Presentation status
412-1	Measures are taken to address human rights and assess the impact of human rights actions	-	Not applicable
413-1	Operations and involvement of the local community, impact assessment and development programs	80-70-71-38-39	Full
413-2	Operations with potentially negative impact on local communities	144-146-150-155	Full
414-1	New suppliers selected by social criteria	122-123	Full
414-2	Negative social impacts on the supply chain and subsequent actions	-	Lack of approach
415-1	Policy Partnerships Effective efforts pursued through centralized public policy participation and responsible lobbying	-	Lack of approach
416-1	Assessing the health and safety effects of products and services	155	Full
416-2	Accidents related to and caused by neglecting the health and safety of consumers' customers	-	Lack of approach
417-1	Marketing and Labeling Requirements Insert information on products and services with the firm, such as resources used or product combinations, information on the environmental and social impact of products or services, safe use of products and services, and percentage of products and services that are subject to evaluation	155	Full
417-2	Accidents and problems caused by non-compliance with the rules related to the labeling of products and services	-	Lack of approach
417-3	Accidents and problems due to non-compliance with marketing communications in accordance with the codes of ethics and the rules of the International Chamber of Commerce	-	Lack of approach
418-1	Approved complaints about violations of customer privacy laws	-	Not applicable
419-1	Non-observance of social and economic laws of the region (description and mention of the monetary value of fines paid and mechanisms for resolving these disputes)	-	Not applicable





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